WEB SITE DESIGN
FOR THE TRAINING CENTER
PUBLIC WATER CORPORATION - KHARTOUM SUDAN

By

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Postgraduate Diploma in Computer Science 2004

A Dissertation
Submitted in Partial Fulfillment of the Requirements
for the Degree of Master
In
Computer Science and Information

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September 2012
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Dr. AShraff Gsmalsid Abdallah
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Dedication

To

My husband who is the reason of my success always, pushes me forward, and supports me forever.

To

My daughters, brother and sisters who are my life.

To

My friends, and All my teachers,

Every one that support me
Acknowledgment

I would like to thank all those who have helped to make this web site a success. First I would like to thank Mr. Samir and Mr. Husham for their help and support. Thanks are also forward to Mr. Yahia who help in building the website.

Special thanks are forward to Dr. Ashraf Gismalseed for the advices and efforts.
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ABSTRACT

Public Water Corporation track of the Ministry of Irrigation and Water Resources is responsible for the development of policies, strategies and plans and calibrated standard and technical specifications, evaluation and technical supervision of water projects on the state level, as an obligation to develop policies, training and legislation, laws, and save the information so as to for sustainable development and to provide the human drinking adequate and safe water as well as animals. Water is a fundamental problem in many countries of the developing world and that in terms of proper planning and adequate knowledge of the actual needs and the basic technical background and method of follow-up of these activities, where mainly the absence of follow-up of projects and activities. This study aimed to follow up the development of human resources and training to be held at the training of the Public Water Corporation and inventory of all trainees in the areas of different water activities. The purpose of study is to find out a program of human resource development and training center of the Public Water Corporation PWCT In view of training and promotion potential of information to determine the actual needs and prepare reports as soon as required and to enable decision makers of the know-how and full knowledge of the training. The researcher to design and develop a database on the environment of the Internet to follow up the registration of trainees at the training using the language PHP and the design of cranes in the Photoshop program design pages and MYSQL system to build and manage the database. The site contains a number of screens for registration of the training programs and a database of the trainees and the next to offer some possibilities for Sudan water resources, etc. have made the study objectives follow-up training activity to achieve outstanding performance and effective in all water projects through to identify the problem and the weakness of resorting to the maintenance and design of path-making and implementation The evening can be prevented and to ensure achieving the desired results and to ensure maximum positive results and know the technical personnel in the water sector and to obtain this information easily.
تصميم صفحة إلكترونية
لمركز التدريب بالهيئة العامة للمياه
اعتدال الريح مالك الريح
جامعة الجزيرة – كلية الهندسة والتكنولوجيا
قسم علوم الحاسب
قسم علوم الحاسب
سعودية 2012

المستخلص

الهيئة العامة للمياه تتبع لوزارة البري والموارد المائية وهي مسؤولة عن وضع السياسات والاستراتيجيات والخطط والمعايير القياسية والمواصفات الفنية والتقنيات والآشبال التقليدي بين مشروعات المياه على المستوى الوطني. كما يقع على عاتقها وضع سياسات التدريب والتشريعات والقوانين وحفظ المعلومات وذلك لتأهل تنمية مستدامة وتوزيع الإنسان بمياه شرب صالحة ونقيه وأمنة، وكذلك الحيوان. تتمثل المياه مشكلة أساسية في كثير من دول العالم النامي وذلك من ناحية التنظيم السليم والتدابير الكافية بالاحتياجات الفعلية والخلفية الفنية الأساسية وطريقة متابعتها لهذه الأنشطة حيث يغلب غياب المتابعة للمشروعات والأنشطة. هدف هذه الدراسة هو متابعة مجال تنمية الموارد البشرية والتدريب الذي يتبع مركز التدريب بالهيئة العامة للمياه وحصر كل المتدربين في مجالات انتشاط المياه المختلفة. وقد هدف هذه الدراسة إلى معرفة وضع برنامج تنمية المواد البشرية ومراكز التدريب بالهيئة العامة للمياه ويعزز PWCT ويدعم عرض مكالبات التدريب وتعزيز المعلومات لتحديد الاحتياجات الفعلية وأعداد تقارير بالسرعة المطلوبة وتحقيق أهداف الهدف من الدراية وирующوان الكاملة للتدريب. قام الباحث بتصميم وتطوير قاعدة بيانات على بيئه الإنترنت لمتابعة تسجيل المتدربين بمركز التدريب باستخدام لغة تصميم المراقب PHP وبرنامج MySQL لبناء وإدارة قاعدة البيانات. احتوى الموقع على عدد من الشاشات لقاعدة بيانات مكان التسجيل للبرامج التدريبية وقاعدة بيانات لمتدربين وعجل عرض بعض الأمكانيات السوداء عن موارد مياه وخلافه وفقاً لهدف الدراسة. بمتابعة النشاط التدريبي لتحقيق الأداء المتميز والعقلية بجميع مشروعات المياه من خلال التعرف على المشكاة وضع اللجوء إلى صيانة وتصميم، مسار القرارات والتعليم والمسؤلي التي يمكن تذكيرها، والتأكد من تحقيق النتائج المرجوة وضمان تحقيق أقصى النتائج الإيجابية يجب التعرف على الكوادر الفنية الموجودة بقطاع المياه والحصول على هذه المعلومات بسهولة.
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Chapter One

Introduction

1.1. Background

The Sudanese government encouraged and supported its departments to make use of the Internet in their everyday work. An incentive based policy, in which employees and departments efforts are acknowledged should be setup. Nowadays website becomes an essential part of every profession, and makes strong impact on the image of company. It is very important when a modern, well presented website is now expected for most services and organizations, to explained the products and services offered, and provide background and general contact information and website online transactions.

The researcher are trying to catch up the world in which many developing this proposal to design a system based on the internet for capacity building in drinking water sector in Sudan. Public Water Corporation is responsible for Technical examination of the water utilities, to guarantee the functioning and maintenance of the same, according to the scientific standards and fix the standards of services at the whole Sudan, and to Co-ordinate with the international and local organizations, to direct them to the areas of actual needs of water on the approval of the competent bodies.

PWC Keep the information relating to the drinking water, and publish the same to disseminate the public good. PWC collect the periodical and annual reports from the states and analyze the same, and draft them in the national report, which shows the general status, to facilitate the sound decision making, and responsible lay down the appropriate training policies of the corporations employees.

1.2 Problem Statement

The main problem of the research focus on a mechanism to tackle and overcome is summed in the lack of a system of training and evaluation of the water sector human resources, and establish specialized training programs for water sector on the states and different municipalities. This situation has led to contradiction of the data related to numbers of engineers, technicians, administrators and labors of the sector, this problem prevails as a result of inaccuracy transparency and it continues because there in no authority which can follow the qualifications of water sector staff related to
operation and maintenance which became a dilemma in the current situation of Sudan, also lack of budget and an information system to support researches and studies to propose feasible and successful projects to produce safe drinking water in quantity and quality among situations where the water sector administrations face deficiency of standards and criterion for good specifications beside the overstaff. Shortage of training lead to the failure of the decision makers to promote the activities of water sector and its resources. The other problem is the unavailability of the statistics of the human resources as a result of absence contact between the center and the states under the rules of local governance.

1.3 Research Objectives:

- Developed a customized training system for governmental institute such as water, etc.
- Reduce the cost of HR management system.
- To exchange experiences locally, regionally, nationally with peers.
- Provides the Statistics of experts, specialists, and consultants.
- Provide data & information to support decision makers in policies.
- To enhance the capacity building in water sector in Sudan.
- This study aims to supports the decision makers to understand the conditions of water in the states which will encourage transaction of experienced staff which enable the states to provide safe drinking water leading to stability and peace.

1.4 Methodology of the Study

- For the purpose of the Research, Researcher have used System analysis and Design Approach with more focus on Object-Oriented analysis and Design as Technique for Analysis and Design. In addition of traditional Historic and analytical Methods and Data Collection.
- Designed some of Web Pages for Database to monitor the training center activities and the types of the courses and data
of trainees by using design language PHP, Dreamweaver and Photoshop programs.

- Using MYSQL to construct and manage the database system.

1.5 Dissertation outlines

The research consists of five Chapters. Chapter one introduces the problem and the objectives of the study. Chapter two consists of literature review of capacity building mechanisms and introduce the internet and Web Pages. Chapter three includes design and implementation with focus on system analysis and screen designs. Chapter four includes the results and discussion. Chapter five views the conclusion and recommendations.
Chapter Two

Literature Review

2.1 Introduction

Government of Sudan has conducted the significant efforts to improve the critical water supply situation. According to the Quarter Century Strategy for Water Supply Plan (2007-2031), the specific objectives of the strategy are to achieve by the end of the strategy period, a consumption rate of 50 liter/capita/day and 150 liter/capita/day for rural and the urban population respectively. On the other hand, Public Water Corporation (PWC) was the responsible and organizational authority for water supply projects in Sudan before. However, after decentralization policy of the Government of Sudan, the responsibilities on operation and maintenance for the water supply facilities have been transferred from Public Water Corporation to State Water Corporation (SWC). There is an urgent need in Sudan to improve water resources management and water services, and to accelerate sustainable investments in the water sector, at the pace of demographic trends by, application of new technologies for ground water and surface water assessments and studies to contribute in sustainable utilization of the available water resources, despite current efforts and initiatives in the water sector, many barriers need to be removed in order to accelerate sustainable investments.

New, concrete support and approached is needed at the local level inline of IWRM and climate changes. Distance learning and exchange of information can also contribute to capacity building in water management and sustainable water investments. These activities can also provide a framework for Sudan. Through a network of national institutions and on-going projects of technical cooperation in the water sector, along with other international partners, can organize and facilitate exchange of capacities, experiences and relevant information with potential multiplier effects. The Program facilitates water information exchange and training through consultations; establish a network of national and local institutions involved in the water sector; enhance an exchange of information and experience between all actors in order to develop an adaptable effective and wide methodology and mobilize funding for sustainable development programmes; and lead to the creation of a PWC training Centre to train government officials and trainers, as well as educate actors/users, public and private, in the water delivery
chain. The shift in emphasis to integrated management of water resources, on an ecosystem basis, requires the introduction of a new set of tools for resource management, tools that are flexible, protective and can take account of extreme differences, both in socioeconomic conditions, and in natural variability of aquatic ecosystems.

2.2. The importance of capacity Building

Building capacity is essential for any long-term strategy for sustainable development. Capacity building is the sum of efforts to nurture, enhance and utilize the skills and capabilities of people and institutions at all levels—nationally, regionally and internationally—so that they can better progress towards sustainable development. At the basic conceptual level, building capacity is about empowering people and organizations to solve their problems rather than attempting to fix those problems directly. When capacity building is successful, the result is more effective people and institutions better able to provide products and services on a sustainable basis.

The principal objective of capacity building for sustainable water resources management is to improve the quality of decision-making, sector efficiency, and managerial performance in the planning and implementation of programmes and projects. More specifically, capacity building for sustainable water resources management is designed to improve the capabilities of assessing water resources; facilitate better planning in the context of national development planning; and promote financially and environmentally sustainable, more efficient delivery of water services. Water is a key resource that is essential for economic development, agricultural productivity, industrial growth, and human well-being. The availability of a clean, safe, and secure water source has been, and will always be, a major concern for human populations.

2.3. Capacity Building Involves

more than just funding:

- Human resources.
- Technical resources.
- Management and evaluation resources.
- Financial resources.
- Mobilizing resources.
- Engaging stakeholders.
- Partnerships with the community.
- Building coalitions.

2.4. Methods & Techniques of Capacity Building

Figure 2.1 methods & techniques of c/b inform the main methods how to transfer knowledge to improve the situation.

2.5. Needs of Capacity Building

- Water scarcity is the primary cause of conflict in Sudan.
- Increasing of the population create the lack of drinking water.
- Lack of training for the staff of States Water Corporation.
- Significant shortfall of qualified staff.
- Protect of the Water resources scarcity.
- To contribute on establishing peace through sustainable water services for the all population in states.
- Poor management system of water institution.
- Water charges have been increasing further exacerbating tensions between groups. Current coverage of potable water is well below Sphere standards, in terms of quantities available and quality together
with distance to sources this act as chronic problem to the community in the targeted areas.
- This quantity is not enough for human consumption and below the minimum requirements for human consumption in emergency situation.
- Needs Training of community members including women in operation and maintenance of water facilities.
- More focus on personal hygiene promotion at basic schools is essential to ensure hygienic and proper use of facilities.
- Poor infrastructures of water service.

### 2.6 Capacity Building Requirements

The main subjects should be covered in a water resources management strategy for capacity building are:

- The demographic, social and economic conditions and policies of Sudan.
- water quantity and quality issues.
- infrastructure and services for water delivery in different sectors.
- water laws and regulations.
- institutional reform including decentralization and river basin management.
- human resources development.
- the role of economics including water pricing and incentives.
- environmental issues.
- health considerations.
- stakeholder participation.
- an action plan including programmes and projects

As can be appreciated, human resources are central to both the preparation and implementation of a water resources management strategy. Therefore, education and training programmes must be tailored to the sectoral, intersectoral and multidisciplinary aspects of the water sector.
2.7 Public Water Corporation Training Center (PWCT)

2.7.1 Introduction

Training Centre began the development of human resources for the water sector to the Convention between the Government of Sudan, represented by the Ministry of Irrigation and Water Resources represented the Public Authority for Water and the Japanese Agency for International Cooperation (JICA), representing the Government of Japan, for training in the fields of technical workers in the water sector at the level of the northern Sudan states.

Since the provision of sufficient water for drinking is one of the most fundamental issues of the Republic of Sudan, according to the strategic quarter cornea of the distribution of water was the most important objectives of the strategy is to get 50 liters/day per person in rural areas and 150 liters/day in cities by the end of the strategy period in 2031 the other hand, the General Authority for Water is responsible for water projects in Sudan, but after applying the policy of decentralization moved the operation and maintenance of water facilities of the General Authority for water to water bodies state.

And the limited role of the public water in the Technical Supervision on the water projects of national and coordination with jurisdictions to attract international aid and supervision of the government's policy on water-related state agencies and the development of human resources capacity by Proportion of the different sources of water States and the small number of engineering and technical staff have occurred a lot of water problems such as lack of pumps and generators, and became the sector suffers from a lack of sufficient experience for the maintenance of water equipment newly imported for the operation of water plants and that their experience is limited only to the maintenance of pumps, reciprocating in addition to the operating and maintenance techniques not available to those States and the percentage of these situations have decided the General Authority for water to train engineers and
technicians and all the workers moving the states and it has been a center of training for these purposes.

2.7.2 Objectives of PWCT

Aims to improve and increase the capacity of staff of the center and the first to develop a plan for training, implementation, and evaluation and therefore it is expected to achieve the Center the following objectives:

- develop a comprehensive plan for training for industry engineers and technicians of Sudan.
- create a distinct administration for the management of training courses for workers against U.S. water bodies.
- refine and improve performance status Iatmdaly implementation of a number of courses.
- The training courses which implemented by PWCT should be based on its mid-term/long-term human resource development plan.
- Model states to be as a pilot activities collaboration with PWCT and SWC.
- establishment of monitoring system within PWC and pilot SWCS for training course implementation.
- establishment of training units in the states to organized the training needs and programs.

2.7.3 Structure of PWCT

Figure 2.3 shows the structure of PWCT which include the head of the center and assistant of director and two main department one is administration and finance, and department of training course management.
2.7.4 Activities of PWCT

The center preparation and implementation of training courses and preparation of training curriculum and the reality of the problems facing the water sector in Sudan is also associated with a help of lecturers from universities in this sector with experience in the field of water. The Center since its establishment in June 2008 and so far 2011 organized a number (28) training course for (443) trainees from various states of Sudan, in cooperation with six of Japanese experts, officers of the Japan International Cooperation Agency (JICA). The course are:

i. Operation and maintenance of water plants (4 sessions)
ii. Water supply facilities (5 sessions)
iii. Data management (GIS) (5 sessions)
iv. Wells management (3 sessions)
v. Organizational management (3 sessions)
vi. Pipe network system management (3 sessions)
vii. Water Quality Analysis (2 sessions)
viii. Procurements and storage management (1 session).
ix. Hydrometric for surface water resources management (1 session).
These courses aim to raise the efficiency of engineers and technicians in the fields of maintenance and operation of the stations, urban water and how to maintain the contents of the station management and how to recognize problem-solving related to operation and maintenance and exchange of experiences in the areas of Sudan are similar and create a focus of cooperation between all the specialist water in Sudan, including the pattern of training followed at the training center.

Trainers have been given different programs of education and technology training to their awareness of the importance of the transfer of expertise in training to various levels to take advantage of them, note this in the training courses in several stages, where the training is repeated at least three times and be gradual.

![Figure 2.3 Theoretical and practical training](image)

**To achieve sustainability and development:**

- **Strengthened Coordination mechanism for better planning and budgeting**
- **Better provision of public services to the people**

![Figure 2.4 Practical training using high technology equipment](image)
2.8 Introduction of Internet and Web Pages

The world has witnessed a surge capability in the field of communications and technical grades are easy in the field of telecommunications and associated services, where it was to take advantage of the technology steady in the computer and software technology required to be processed even facilitated to deliberate and take advantage of expanding the information itself. The international trend prevailing today in the work of government and institutional support are essential and growing the maximum benefit from the Internet as an attribute essential to building the information society in its development, which depends mainly on information and communication networks and computers.

Sudanese experience in the computerization of various systems is at the beginning of the road and this requires further efforts related to the advancement of infrastructures of information and increase awareness of the average citizen of the importance of dealing with the information on the bench, digital and openness to the world through the Internet to build gates service of the services provided over the Internet and of in government sites on the Internet. Web sites are a group Web pages related to each other play an important role in communication between users of the Internet, as well as its special role in providing the necessary services to the beneficiaries of government and private institutions and become a service interface enables visitors to identify the information and achieve direct contact.

Most Web sites are in the form of start page displays the content of that site, also contains hyperlinks to pages or the pages of other Web sites. Different objectives of the web sites some of which is to define the region of what is certain to advertise products, including what sells, and there are sites to chat or forums for discussion and conversation among users of the Web. There is what is known as blogs are Web sites where the author lists what he wants to write about it and other topics Visitors can also respond to what he writes.
2.8.1 The internet Site Requirements

2.8.1.1 Network Knowledge

Is a collection of hardware components and computers interconnected by communication channels that allow sharing of resources and information. Where at least one process in one device is able to send/receive data to/from at least one process residing in a remote device, then the two devices are said to be in a network.

Networks may be classified according to a wide variety of characteristics such as the medium used to transport the data, communications protocol used, scale, topology, and organizational scope.

The rules and data formats for exchanging information in a computer network are defined by communications protocols. Well-known communications protocols are Ethernet, a hardware and Link Layer standard that is ubiquitous in local area networks, and the Internet Protocol Suite, which defines a set of protocols for internetworking, i.e. for data communication between multiple networks, as well as host-to-host data transfer, and application-specific data transmission formats.

Computer networking is sometimes considered a sub-discipline of electrical engineering, telecommunications, computer science, information technology or computer engineering, since it relies upon the theoretical and practical application of these disciplines.

2.8.1.2 Internet Knowledge

The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless and optical
networking technologies. The Internet carries a vast range of information resources and services, such as the inter-linked hypertext documents of the World Wide Web (WWW) and the infrastructure to support email.

2.8.1.3 mechanism of connecting to Internet

The communications infrastructure of the Internet consists of its hardware components and a system of software layers that control various aspects of the architecture. While the hardware can often be used to support other software systems, it is the design and the rigorous standardization process of the software architecture that characterizes the Internet and provides the foundation for its scalability and success.

The Internet standards describe a framework known as the Internet protocol suite. The internet layer enables computers to identify and locate each other via Internet Protocol (IP) addresses, and allows them to connect to one-another via intermediate (transit) networks. Last, at the bottom of the architecture, is a software layer, the link layer, that provides connectivity between hosts on the same local network link, such as a local area network (LAN) or a dial-up connection. The model, also known as TCP/IP, is designed to be independent of the underlying hardware, which the model therefore does not concern itself with in any detail. Other models have been developed, such as the Open Systems Interconnection (OSI) model, but they are not compatible in the details of description or implementation; many similarities exist and the TCP/IP protocols are usually included in the discussion of OSI networking.

2.9 World Wide Web (Internet) Application

Internet has developed and informative because it allows subscribers to move freely between sites. Where we find used in the following areas:

- Financial services and banking
• used for learning and research
• Press
• to upgrade to the best levels of scientific and practical development.
• Terms of it being a large repository of information used to search for jobs.
• Shopping and commerce.
• Review the latest breaking news and market news and economic updates.
• Means of communication with sound, image and e-mail.
• Application in entertainment and access to programs and games.
• There are other uses, including use of the network in the government to provide services to citizens or to pay electricity bills, water, phones, for example, home, corporate, tourism, etc...

2.10 Web Site

Web Page Contain a collection of objects such as text, images, graphics, mobile and fixed, as well as sounds and other. Browser is a program to display the information on the Web sites and pages in which you can find any information or access to any site on the Internet, the most famous Internet Explorer browsers (Microsoft Internet Explorer), Mozilla Firefox, website also written as Web Site, web site, or simply site, is a set of related web pages containing content (media), including text, video, music, audio, images, etc. A website is hosted on at least one web server, accessible via a network such as the Internet or a private local area network through an Internet address known as a Uniform Resource Locator. All publicly accessible websites collectively constitute the World Wide Web.

2.11 Web Design Language

Languages design web pages for different orders in different languages being applied properly and in the right place to give you the desired result. But there are many languages Responsible for designing web pages on different stages appeared to old
and new languages and these are some of them: -

HTML & CSS & JAVASCRIPT & XML & PHP & ASP & XHMMML

2.11.1 HTML

Hyper Text Markup Language (HTML) is the predominant markup language for web pages. HTML elements are the basic building-blocks of web pages. HTML is written in the form of HTML elements consisting of tags, HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items:

• Hyper Is the opposite of (linear), which means in this case to move from any point to any other point without going in the specific itinerary.
• Text Means the text.
• Markup Is what is done by providing.
• Language Means of language, what HTML is the markup language used English words.
• Hypertext it enables to create a hyperlink in a page so that they are interdependent and interrelated information smoothly.
• Universality contents and the HTML pages are stored as text only; we can open it from any device or operating system, and can be displayed in all kinds of browsers.

2.11.2 XML (Extensible Hypertext Markup Language)

is a family of XML markup languages that mirror or extend versions of the widely-used Hypertext Markup Language (HTML), the language in which web pages are written. While HTML (prior to HTML5) was defined as an application of Standard Generalized Markup Language (SGML), a very flexible markup language framework, XHTML is an application of XML, a more restrictive subset of SGML. Because XHTML documents need to be
well-formed, they can be parsed using standard XML parsers—unlike HTML, which requires a lenient HTML-specific parser.

XHTML 1.0 became a World Wide Web Consortium (W3C) Recommendation on January 26, 2000. XHTML 1.1 became a W3C Recommendation on May 31, 2001. XHTML5 is undergoing development as of September 2009, as part of the HTML5 specification.

2.11.3 PHP

is a general-purpose server-side scripting language originally designed for Web development to produce dynamic Web pages. It is one of the first developed server-side scripting languages to be embedded into an HTML source document rather than calling an external file to process data. The code is interpreted by a Web server with a PHP processor module which generates the resulting Web page. It also has evolved to include a command-line interface capability and can be used in standalone graphical applications. PHP can be deployed on most Web servers and also as a standalone shell on almost every operating system and platform free of charge. A competitor to Microsoft's Active Server Pages (ASP) server-side script engine, and similar languages, PHP is installed on more than 20 million Web sites and 1 million Web servers.

PHP was originally created by Rasmus Lerdorf in 1995. The main implementation of PHP is now produced by The PHP Group and serves as the formal reference to the PHP language. PHP is free software released under the PHP License, which is incompatible with the GNU General Public License (GPL) due to restrictions on the usage of the term PHP. While PHP originally stood for Personal Home Page, it is now said to stand for PHP: Hypertext Preprocessor, a recursive acronym.

2.12 Design Tools

Is easy to use programs from which to design web pages and most of these programs:
2.13 Internet Protocols

Protocols are a set of rules and procedures used to contact the mission of determining the rules and procedures that control the communication and interaction between different computers on the network. Network uses a set of protocols such as TCP / IP an acronym for Transmission Control Protocol / Internet Protocol in order to transfer data across the network. IP (IP) Shortcut (Internet Protocol) is a protocol or decree of how the exchange of information between two parties on the information network. There is a protocol of his mission to bring web pages is called the control protocol in the TCP data transfer protocol that ensures that the data has been sent correctly and access before data is sent across the network must be labeled, and the protocol that the data Bannouna called HTTP. Therefore be followed by a page with http:// It means that the Internet uses the HTTP protocol to fetch this page.

Figure2.5 how data send throw protocols from client to server and receive the responses.

![Diagram](image.png)

Figure2.5 Data send and receive throw protocols

2.14 Internet Application in the field of training

Technology enhanced training and has the goal to provide socio-technical innovations also improving efficiency and cost effectiveness for training practices, regarding individuals and organizations, independent of time, place and pace. Communication technologies are generally categorized as asynchronous or synchronous.
2.14.1 Information and Communication Technologies (ICT)

ITC have the potential to make a fundamental difference to the lives of people all over the world. By creating access to information, enabling communication and facilitating transactions, technical solutions can help reaching development objectives in various sectors. ICT can provide accessible data for rational decision making with respect to water issues both in politics and corporate management.

E delivery of modern information and technology related to water services and support through the Internet, and are shaping the concepts of water, design, development, evaluation and application of all the methods developed, emerging, and the use of them by communication technology and information Employees working in this area intensive effort to get to the information network in the areas of water plants, agricultural and economic development and food security worldwide in order to develop a comprehensive international network of water resources, economic and food service to Internet users across the world especially in Sudan and is a great opportunity that can be used in the field of communications and information technology for the development.

2.15 Role of IT in developing water services

- importance of information technology in achieving optimal use of the productive efficiency of water resources.
- building water databases to include information on water resources (water, human) and information on water activities.
- development of water scientific research and utilization of scientific research results in raising the productivity of water methods for the transfer and resettlement of modern techniques of producers and consumers.
- Create web sites for scientific research centers on the Internet constantly provide the latest research results that are reached. So as to
enable researchers, experts and interested parties to contact and communicate with the most recent scientific and technical crops.

- role of remote sensing in providing water information to take advantage of remote sensing technology in the water sector, which can be used in the provision of water information on the monitoring of ground and surface water.

- Technology GIS system in the provision of water information and the importance of this system and its integration in the management and analysis and show the information of the spatial dimension and characteristics such as information and topographical include natural features such as plants, mountains, and the limits of the beaches, and information service as data networks, irrigation, sanitation and urban planning and possess the advantage of analytical and allows the possibility of using techniques complement the global positioning system GPS and other technologies.

- referencing digital local weather and climate atlas using modern software.

- The computer uses in the installation, and configuration because of its importance in cost reduction.

- use of modern technologies and informatics in an inventory and classification of contaminated water and diseases and their importance in early detection of these diseases, the contributes to strengthening the capacity of control and access to better water production.

### 2.16 Computers Support the awareness of water importance

The computer's role in extension education as it provides the excitement and thrill element also provides the interaction between the provider of water and water customers addition to his role as Assistant in the operations management and conservation, evaluation and development of extension programs, and these uses: Assists in the preparation and design of posters and pamphlets water extension attached pictures and charts, preparation of
lectures, seminars and important topics through the program in the form of Power point slides that are full of pictures and diagrams and geometric shapes and the presence of the character movement, sound and light, which raises the attention.

- help showcase the threads that are stored on Compact disk, flashes and video file compression and conversion to Compact disk where the television and video work together.
- It also helps in editing programs can benefit them in the preparation of films for water crops and water uses, sanitation , diseases and all aspects of water works and activities advisor.
- help in keeping statistical information on various types of water quality analysis and integrated water resources management and water discharge ,consumption ,demand of human and livestock.

2.17 Site Map Definition of PWCT

A site map (or sitemap) is a list of pages of a web site accessible to crawlers or users. It can be either a document in any form used as a planning tool for web design, or a web page that lists the pages on a web site, typically organized in hierarchical fashion. This helps visitors and search engine bots find pages on the site.

While some developers argue that site index is a more appropriately used term to relay page function, web visitors are used to seeing each term and generally associate both as one and the same. However, a site index is often used to mean an A-Z index that provides access to particular content, while a site map provides a general top-down view of the overall site contents. A site map, sometimes written "sitemap," is an overview of the pages within a website. Site maps of smaller sites may include every page of the website, while site maps of larger sites often only include pages for major categories and subcategories of the website. While site maps can be organized in a variety of ways, most use an outline form, with pages arranged by topic. This gives visitors a good overall picture of how the site is organized and clearly defines all the resources the website has to offer.
2.18 Methodology

In this study languages and tools used are HTML, PHP, and Dreamweaver for designing and MY SQL for building and manage databases.

2.19 System Screens

The study introduces a web site for Public Water Corporation Training Center(PWCT).
Figure 2.7 Home page for Public Water Corporation Training Center (PWCT).

Figure 2.8 The Background of PWCT
The PWCT organizational structure consists of two departments; Department of Training Course Management and Department of Administration respectively.
The Department of Training Course Management supervises seven training courses each of which is under the tutelage of the chief course coordinator. The Department of administration consists of four divisions which are the division of KTC Management, Division of training residence, Division of Administration and division of finance.

Figure 2.11 PWCT Structure
Figure 2.12 PWCT Master plan

Figure 2.13 PWCT Vision
Figure 2.14 PWCT Evaluation
Chapter Three
Design and Implementation

3.1. Introduction

Systems analysis is the study of sets of interacting entities, including computer systems analysis. Analysis is defined as the procedure by which we break down an intellectual or substantial whole into parts. System analysis is used in every field where there is a work of developing something. Analysis can also be defined as a series of components that perform organic function together, Systems analysis researchers apply methodology to the analysis of systems involved to form an overall picture, the view outlines a phased approach breaks systems analysis into 5 phases:

i. Problem analysis
ii. Scope definition
iii. Requirements analysis
iv. Logical design
v. Decision analysis

3.2 Description of the Existing System
The Training Center is under umbrella of Public Water Corporation which follows the General Authority for Ministry of Irrigation & Water Resources, PWC Responsibilities is technical supervision on all water projects and the development of standards for water quality and equipments, and focusing on the training of water sector staff, but the lack of financial support & budget influence the implementation of proper training plan, and Where the plan was placed randomly without considering to the basic and urgent needs, and there is no priorities, for the selection of training programs and trainees and also there no system for the evaluation for the feedback of the training. Before the establishment of training center the communication means between the center and the target areas is very poor and till now the registration of trainees data is a problem.

3.3 System Analysis

System analysis is a way to introduce the operational system, requirements of new system and the whole detailed expected system.

3.3.1 Requirements

i. Building a secure database.

ii. Ability to create users, storing, changing and restoring their information in the database.

iii. Only authorized users must be login in database.

iv. Querying about training programs, and trainee.

3.3.2 Data Specification

![Figure 3.2: Data flow diagram of the system to be developed.](image-url)
Keywords

Info1 : trainees data, training program data, lecturer and experts data, states data, organization data.

Info 2 : reports

Output1 = {acceptance details, starting date}

Output2 = {trainees registry}

Output3 = {schedule report}

Final report = {final activity result}
Keywords

Info1 = {trainees list + States list+ training programs list}

Info2 = {qualify person +non reasonable person }

Output1= {trainees list + acceptance}

Output2 = {updated acceptance}

Final report = {trainees lists+ final acceptance}

2.3.3 Processing Specification

following steps describe the processing algorithm:

i. Start

ii. The main triggering point of the system is the starting of needs.

iii. Annual plan preparation which includes:

   a) Detection for the all states.

   b) Detection of main training programs.
c) Detection of state demand.
d) Detection of reasonable training program.

iv. procedures.
v. If the trainee is reasonable then accept, otherwise change it with another one
vi. Accept.
vii. A report as result.
viii. The end.

The main process of the system implementation is illustrated by the Flow Diagram shown in Figure 3.5.
Figure 3.6 Trainees Registration
3.3.4 Resources

In this study languages and tools used are HTML, PHP, and Dreamweaver for designing and MySQL for building and manage databases.

3.3.4.1 HTML

HTML an initialize of Hyper Text Markup Language is the predominant markup language for web pages. HTML is the primary format used on the World Wide Web. HTML can display Web pages with a wide range of colors, shapes, and objects. Although not a true programming language, HTML has increased in power over the years. It provides a means to describe the structure of text-based information in a document by denoting certain text as links, headings, lists, and so on, and to supplement that text with interactive forms, embedded images, and other objects. HTML is written in the form of tags or elements surrounded by angle brackets. HTML can also describe, to some degree, the appearance and semantics of a document, and can include embedded scripting language code (such as JavaScript) which can affect the behavior of web browsers and other HTML processors. The reasons for choosing WYSIWYG HTML editors (What You See Is What You Get) is that they are frowned upon by expert web developers (or anyone who thinks he/she is an "expert" developer). In fact,

The main advantages of WYSIWYG HTML editors as the researcher see them; anyone can create web sites and put them online, create web sites quickly, no prior programming knowledge required - no need to know what HTML code looks like and provide a platform to start learn HTML.

PHP is a computer scripting language originally designed for producing dynamic web pages. The name PHP is a recursive acronym for PHP: Hypertext Preprocessor. PHP is used mainly in server-side scripting, but can be used from a command line interface or in standalone graphical applications.
The reason to using PHP language is that its code can be inserted directly into the HTML that makes up a website. When a visitor comes to the website, the code is executed. Because PHP is a server side technology, the user does not need any special browser or plug-ins to see the PHP in action. The beauty of PHP lies in its simplicity, it is easy to understand and learn. Especially for whom had a background of programming such as C, JavaScript and HTML. PHP also runs on various platforms including most UNIX, Macs and Windows versions. PHP offers many levels of security to prevent malicious attacks. These security levels can be adjusted in the initial file. Another key advantage of PHP is its connective abilities. PHP uses a modular system of extensions to interface with a variety of libraries such as graphics, XML, encryption, etc. In addition, programmers can extend PHP by writing their own extensions and compiling them into the executable or they can create their own executable and load it using PHP, dynamic loading mechanism.

3.3.4.2 My SQL Database Management System

My SQL ("my S-Q-L" or sometimes "my sequel") is a multithreaded, multi-user SQL database management system (DBMS) which has, according to My SQL AB, more than 10 million installations. The basic program runs as a server providing multi-user access to a number of databases.

It was originally financed in a similar fashion to the JBoss model, My SQL was owned and sponsored by a single for-profit firm, the Swedish company My SQL AB, which holds the copyright to most of the codebase. The project's source code is available under terms of the GNU General Public License, as well as under a variety of proprietary agreements.

My SQL is popular for web applications and acts as the database component of the platforms (Linux/Mac/Windows-Apache). Its popularity for use with web applications is closely tied to the popularity of PHP. PHP and My SQL
are essential components for running popular content management systems, which is written in PHP and uses a My SQL database.

3.4 System Design

Systems design is the process or art of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. One could see it as the application of systems theory to product development.

3.4.1 Database Specification

Proposed System to maintain PWCT Trainees Database

Proposed Database Tables:

1. Trainees Tables
2. States Table
3. Organization
4. Section/Department
5. Qualifications
6. Positions
7. Courses
8. Lecturers
9. Experts
10. Counterparts
Table 3.1 Trainees Table

<table>
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<th>Field Name</th>
<th>Field Type</th>
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<th>Attributes</th>
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<tbody>
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<td>Primary key</td>
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Table 3.2 State Table

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<tr>
<td>State Contact Email</td>
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Table 3.3 Organization Table

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<tr>
<td>State ID</td>
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<td>11</td>
<td>Not null</td>
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<td>Org Contact Person</td>
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<td>Not null</td>
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<td>Integer</td>
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<td>Not null</td>
</tr>
<tr>
<td>Org Contact Email</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>Org contact Fax</td>
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Table 3.4 Section / Department Table

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<th>Length</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD ID</td>
<td>Integer</td>
<td>11</td>
<td>Primary Key</td>
</tr>
<tr>
<td>SD Name</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>State ID</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>Org ID</td>
<td>integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>SD Contact Person</td>
<td>Varchar</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>SD Contact Phone</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>SD Contact Email</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>SD contact Fax</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
</tbody>
</table>

Table 3.5 Qualifications Table

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Type</th>
<th>Length</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qu ID</td>
<td>Integer</td>
<td>11</td>
<td>Primary Key</td>
</tr>
<tr>
<td>Qu Name</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>Qu Institute</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
</tbody>
</table>
### Table 3.6 Position Table

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Type</th>
<th>Length</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position ID</td>
<td>Integer</td>
<td>11</td>
<td>Primary Key</td>
</tr>
<tr>
<td>Position Name</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>Position Level</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
</tbody>
</table>

### Table 3.7 Courses Table

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Type</th>
<th>Length</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course ID</td>
<td>Integer</td>
<td>11</td>
<td>Primary Key</td>
</tr>
<tr>
<td>Course Name</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>Course EX ID</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>Course CP ID</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>Course Start Date</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>Course End Date</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
</tbody>
</table>

### Table 3.8 Lecturers Table

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Type</th>
<th>Length</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE ID</td>
<td>Integer</td>
<td>11</td>
<td>Primary Key</td>
</tr>
<tr>
<td>LE Name</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>LE Level</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>LE Qualification</td>
<td>Varchar</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>LE Phone</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>LE Fax</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>LE Email</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>LE Organization</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
</tbody>
</table>
### Table 3.9  Experts Table

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Type</th>
<th>Length</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EX ID</td>
<td>Integer</td>
<td>11</td>
<td>Primary Key</td>
</tr>
<tr>
<td>EX Name</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>EX Phone</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>EX Email</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
</tbody>
</table>

### Table 3.10  Counterparts Table

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Type</th>
<th>Length</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP ID</td>
<td>Integer</td>
<td>11</td>
<td>Primary Key</td>
</tr>
<tr>
<td>CP Name</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
<tr>
<td>CP Phone</td>
<td>Integer</td>
<td>11</td>
<td>Not null</td>
</tr>
<tr>
<td>CP Email</td>
<td>Varchar</td>
<td>225</td>
<td>Not null</td>
</tr>
</tbody>
</table>
Chapter Four

Results & Discussion

4.1 Overview of the Problem:

The researcher seek for building a system for public water corporation training center in the Ministry of water Resources to help the training center system and the trainees to improve the quality of work procedure by saving the time, money and work in transparent manner. The functions of this research are:

- Registration of trainees information.
- Login for ordinary users.
- Insert training programs for trainees.
- Login for administrators.
- Registered new trainees.
- Changing user’s password.
- Querying about training program.

4.2 Overview of the Solution

To build a Registration system for training, the database was built for system. It consists of ten tables to store our system information with ability to restore and retrieve the data. The database connects with the web site by the code written in “config.inc” file.
Figure 4.1 training courses and schedule link view registration site

Figure 4.1 View Registration site

Website Data Diagram – Forms

Figure 4.2 course registration form, this is main form for the participants which accept data checking by the administrator.

Figure 4.2 Course Registration form
Figure 4.3  Authentication form used by administrator to link the database.

Figure 4.3  Authentication form

Figure 4.4  Trainees form design to modify or delete and check the data just by the administrator.

Figure 4.4  Trainees form
Figure 4.5 is the main form for course candidatures which accepts data from them to be filtered, and when accepted, the course co-coordinator will send acceptance e-mail to them about the issues related to the course.

Figure 4.5 Add new Trainees form

Figure 4.6 form saves data about the candidatures location and contact information. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.6 Insertion States Data
Figure 4.7 form saves data about the candidatures organization and contact information. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.7 form of Organizations

Figure 4.8 form saves data about the candidatures organization (Department level) and contact information. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.8 Insertion form of Departments
Figure 4.9 form saves data about the candidatures qualification to submit the related course. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.9 Insertion form of Qualifications

Figure 4.10 form saves data about the candidatures position in his/her department. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.10 Insertion form of Position
Figure 4.11 form saves data about the available course defined or proposed by the PWCT. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.11 Insertion form of Courses

Figure 4.12 form saves data about the lecturer and his/her CV data which related to the selected course. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.12 Lecturers Data Form
Figure 4.13 form saves data about the experts that manages and supervises the courses with the co-coordinator. This form will be managed by the site administrator, not to be viewed publically.

Figure 4.13 Expert Data Form

Figure 4.14 coordinator data form saves data about coordinator that coordinates and supervises courses with experts. This form managed by the site administrator.

Figure 4.14 Coordinator Data Form
4.3 Results

The web site which is designed is clear and easily can be used by every one to explore it. The special side for trainees also easy to use. By this system the administrators can easily contact, update and delete trainees from the database, control users work, by tolerant the mistakes responsibilities to whom that fill the form. The tools which are used was very useful.
Chapter Five

Conclusion and Recommendations

5.1 Conclusion

People measured in the future by the ability to control the new technologies and adapt and take advantage of them, in Sudan it's required to keep up with the world in this technology as much as possible and take advantage of them in the presentation of the potential of Sudan's vast natural resources is the availability of water and arable land and the availability of human resources. From this point of the site design to the Public Water Corporation Training Center, this is the road map towards e-government. Due to the flexibility of the base model data presented in this study by a researcher where the information will be accessible to users of the site and easily as required in a timely manner, helping to reduce costs and save time to get the information.

5.2. Recommendation

In order to develop this system as the following could be recommended:

- The ability to control the data feeding by splitting the system into centralized and decentralized structure between the HQ and branches.
- Designing a professionally and secured site to be admin by main and sub administrators.
- A high-speed and reliable server for hosting this site.
- Giving the trainee the chance to select his own course, or even propose a course.
- On-line training courses according to the department request.
- The ability to download and review courses material
Continuous updating of the information with the addition of updated constantly.

Add a copy of the website in Arabic, which contributes to the wider dissemination.

Also recommends the application of this system to discover the scope of weakness in order to address them.

Benefit from the development of the area of the site's users to take their views on the site and the necessary information that must be added.

The capacity development needs to cover at least the whole States related government sector; it will look at the needs of both the SWC needs and the staff training needs both in technical and non-technical areas at all levels in seems sustainable water services for Peace building.

Providing water technical personnel for the use of human expertise information technology and computers with high efficiency and to contribute to the development of all areas.

The need to encourage and attract investment to the water sector IT
References

   Access time: 9:00 am Date: 7/8/2012
   Access time: 2:00 pm Date: 12/8/2012
6. Paper of capacity Building (International Conference for Greater Darfur) Year 2011. (Presented by Mrs. eatidal & Mr. satti)
   Access time: 10:30 am Date: 3/9/2012
   Access time: 12:05 pm Date: 9/9/2012
   Access time: 4:00 pm Date: 5/9/2012
    Access time: 12:00 pm Date: 7/9/2012
14. HTML and CSS Author name Robart Scally – 2005.
Appendix (a)

Procedures and Control of Issuing a Registry of Trainees

The target group of trainees should make many procedures to achieve the goal of PWCT

1. Prerequisites
   a) Filling the form of training.
   b) Insure Age should not be more than 45 years.
   c) All the information should stamped by the Director of department.

2. Procedures
   a) Review the completion of its updated with the requirements mentioned above.
   b) Coordinators classified the information according to training program demands.
   c) Make sure of fulfilling the form with real information.
   d) Contacts the trainees after acceptance by transferring e-mail include username & password to login trainees area.
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Untitled Document</title>
<style type="text/css">

body { 
  font: 100%/1.4 Verdana, Arial, Helvetica, sans-serif;
  background: #4E5869;
  margin: 0;
  padding: 0;
  color: #000;
}

/* ~~ Element/tag selectors ~~ */
ul, ol, dl { /* Due to variations between browsers, it's best practices to zero padding and margin on lists. For consistency, you can either specify the amounts you want here, or on the list items (LI, DT, DD) they contain. Remember that what you do here will cascade to the .nav list unless you write a more specific selector. */
  padding: 0;
  margin: 0;
}

h1, h2, h3, h4, h5, h6, p {
  margin-top: 0; /* removing the top margin gets around an issue where margins can escape from their containing div. The remaining bottom margin will hold it away from any elements that follow. */
  padding-right: 15px;
  padding-left: 15px; /* adding the padding to the sides of the elements within the divs, instead of the divs themselves, gets rid of any box model math. A nested div with side padding can also be used as an alternate method. */
}
a img { /* this selector removes the default blue border displayed in some browsers around an image when it is surrounded by a link */
  border: none;
}

/* ~~ Styling for your site's links must remain in this order - including the group of selectors that create the hover effect. ~~ */
a:link, a:active, a:hover { 
  color:#414958;
}
text-decoration: underline; /* unless you style your links to look extremely unique, it's best to provide underlines for quick visual identification */
}
a:visited {
  color: #4E5869;
  text-decoration: underline;
}
a:hover, a:active, a:focus { /* this group of selectors will give a keyboard navigator the same hover experience as the person using a mouse. */
  text-decoration: none;
}
/* ~ this container surrounds all other divs giving them their percentage-based width ~ */
.container {
  width: 80%;
  max-width: 1260px; /* a max-width may be desirable to keep this layout from getting too wide on a large monitor. This keeps line length more readable. IE6 does not respect this declaration. */
  min-width: 780px; /* a min-width may be desirable to keep this layout from getting too narrow. This keeps line length more readable in the side columns. IE6 does not respect this declaration. */
  background: #FFF;
  margin: 0 auto; /* the auto value on the sides, coupled with the width, centers the layout. It is not needed if you set the .container's width to 100%. */
}
/* ~ the header is not given a width. It will extend the full width of your layout. It contains an image placeholder that should be replaced with your own linked logo ~ */
.header {
  background: #6F7D94;
}

/* ~
.sidebar1 {
  float: left;
  width: 20%;
  background: #93A5C4;
  padding-bottom: 10px;
}
.content {
  padding: 10px 0;
  width: 80%;
  float: left;
}
/* ~ This grouped selector gives the lists in the .content area space ~ */
.content ul, .content ol {


padded: 0 15px 15px 40px; /* this padding mirrors the right padding in the
headings and paragraph rule above. Padding was placed on the bottom for space between
other elements on the lists and on the left to create the indentation. These may be adjusted as
you wish. */
}

/* ~~ The navigation list styles (can be removed if you choose to use a premade flyout menu
like Spry) ~~ */
ul.nav {
    list-style: none; /* this removes the list marker */
    border-top: 1px solid #666; /* this creates the top border for the links - all others are
    placed using a bottom border on the LI */
    margin-bottom: 15px; /* this creates the space between the navigation on the
    content below */
}
ul.nav li {
    border-bottom: 1px solid #666; /* this creates the button separation */
}
ul.nav a, ul.nav a:visited { /* grouping these selectors makes sure that your links retain their
button look even after being visited */
    padding: 5px 5px 5px 15px;
    display: block; /* this gives the link block properties causing it to fill the whole LI
containing it. This causes the entire area to react to a mouse click. */
    text-decoration: none;
    background: #8090AB;
    color: #000;
}
ul.nav a:hover, ul.nav a:active, ul.nav a:focus { /* this changes the background and text color
for both mouse and keyboard navigators */
    background: #6F7D94;
    color: #FFF;
}

/* ~~ The footer ~~ */
.footer {
    padding: 10px 0;
    background: #6F7D94;
    position: relative; /* this gives IE6 hasLayout to properly clear */
    clear: both; /* this clear property forces the .container to understand where the
columns end and contain them */
}

/* ~~ miscellaneous float/clear classes ~~ */
.fltrt { /* this class can be used to float an element right in your page. The floated element
must precede the element it should be next to on the page. */
    float: right;
    margin-left: 8px;
}
.fltlf { /* this class can be used to float an element left in your page. The floated element must precede the element it should be next to on the page. */
    float: left;
    margin-right: 8px;
}
.clearfloat { /* this class can be placed on a <br /> or empty div as the final element following the last floated div (within the #container) if the #footer is removed or taken out of the #container */
    clear:both;
    height:0;
    font-size: 1px;
    line-height: 0px;
}

</div><!--- end .container -->
</body>
### Qualifications

<table>
<thead>
<tr>
<th>Qual. Name</th>
<th>Institute Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Mohammed Ali</td>
<td>ABC Institute</td>
</tr>
</tbody>
</table>

### Form Code

```php
<?php require_once('../Connections/WCT_database.php'); ?>

<?php
if (!function_exists("GetSQLValueString")) {
    function GetSQLValueString($theValue, $theType, $theDefinedValue = "", $theNotDefinedValue = ")
    {
        if (PHP_VERSION < 6) {
            $theValue = get_magic_quotes_gpc() ? stripslashes($theValue) : $theValue;
        }

        $theValue = function_exists("mysql_real_escape_string") ?
        mysql_real_escape_string($theValue) : mysql_escape_string($theValue);

        switch ($theType) {
            case "text":
                $theValue = ($theValue != "") ? "" . $theValue . "" : "$\text{NULL}";
                break;
            case "long":
```
case "int":
    $theValue = ($theValue != '') ? intval($theValue) : 'NULL';
    break;

case "double":
    $theValue = ($theValue != '') ? doubleval($theValue) : 'NULL';
    break;

case "date":
    $theValue = ($theValue != '') ? "" . $theValue . "" : 'NULL';
    break;

case "defined":
    $theValue = ($theValue != '') ? $theDefinedValue : $theNotDefinedValue;
    break;
}
return $theValue;

mysql_select_db($database_WCT_database, $WCT_database);
$query_rsQual = "SELECT * FROM qual_table";
$rsQual = mysql_query($query_rsQual, $WCT_database) or die(mysql_error());
$row_rsQual = mysql_fetch_assoc($rsQual);
$totalRows_rsQual = mysql_num_rows($rsQual);

?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />

<title>Untitled Document</title>

<style type="text/css">
<!--
body {
    font: 100%/1.4 Verdana, Arial, Helvetica, sans-serif;
    background: #4E5869;
    margin: 0;
    padding: 0;
    color: #000;
}

/* ~~ Element/tag selectors ~~ */
ul, ol, dl { /* Due to variations between browsers, it's best practices to zero padding and margin on lists. For consistency, you can either specify the amounts you want here, or on the list items (LI, DT, DD) they contain. Remember that what you do here will cascade to the .nav list unless you write a more specific selector. */

    padding: 0;
    margin: 0;
}

h1, h2, h3, h4, h5, h6, p {

    margin-top: 0; /* removing the top margin gets around an issue where margins can escape from their containing div. The remaining bottom margin will hold it away from any elements that follow. */

    padding-right: 15px;

    padding-left: 15px; /* adding the padding to the sides of the elements within the divs, instead of the divs themselves, gets rid of any box model math. A nested div with side padding can also be used as an alternate method. */
}

74
a img { /* this selector removes the default blue border displayed in some browsers around an image when it is surrounded by a link */
    border: none;
}

/* ~~ Styling for your site's links must remain in this order - including the group of selectors that create the hover effect. ~~ */

a:link {
    color: #414958;
    text-decoration: underline; /* unless you style your links to look extremely unique, it's best to provide underlines for quick visual identification */
}

a:visited {
    color: #4E5869;
    text-decoration: underline;
}

a:hover, a:active, a:focus { /* this group of selectors will give a keyboard navigator the same hover experience as the person using a mouse. */
    text-decoration: none;
}

/* ~~ this container surrounds all other divs giving them their percentage-based width ~~ */

.container {
    width: 80%;
    max-width: 1260px; /* a max-width may be desirable to keep this layout from getting too wide on a large monitor. This keeps line length more readable. IE6 does not respect this declaration. */
}
min-width: 780px; /* a min-width may be desirable to keep this layout from getting too narrow. This keeps line length more readable in the side columns. IE6 does not respect this declaration. */

background: #FFF;

margin: 0 auto; /* the auto value on the sides, coupled with the width, centers the layout. It is not needed if you set the .container's width to 100%. */
}

/* ~ the header is not given a width. It will extend the full width of your layout. It contains an image placeholder that should be replaced with your own linked logo ~ */

.header {
    background: #6F7D94;
}

/* ~ These are the columns for the layout. ~

1) Padding is only placed on the top and/or bottom of the divs. The elements within these divs have padding on their sides. This saves you from any "box model math". Keep in mind, if you add any side padding or border to the div itself, it will be added to the width you define to create the *total* width. You may also choose to remove the padding on the element in the div and place a second div within it with no width and the padding necessary for your design.

2) No margin has been given to the columns since they are all floated. If you must add margin, avoid placing it on the side you're floating toward (for example: a right margin on a div set to float right). Many times, padding can be used instead. For divs where this rule must be broken, you should add a "display:inline" declaration to the div's rule to tame a bug where some versions of Internet Explorer double the margin.

3) Since classes can be used multiple times in a document (and an element can also have multiple classes applied), the columns have been assigned class names instead of IDs. For example, two sidebar divs could be stacked if necessary. These can very easily be changed to IDs if that's your preference, as long as you'll only be using them once per document.
4) If you prefer your nav on the right instead of the left, simply float these columns the opposite direction (all right instead of all left) and they'll render in reverse order. There's no need to move the divs around in the HTML source.

*/

.sidebar1 { 
    float: left;
    width: 20%;
    background: #93A5C4;
    padding-bottom: 10px;
}

.content { 
    padding: 10px 0;
    width: 80%;
    float: left;
}

/* ~~ This grouped selector gives the lists in the .content area space ~~ */

.content ul, .content ol { 
    padding: 0 15px 15px 40px; /* this padding mirrors the right padding in the headings and paragraph rule above. Padding was placed on the bottom for space between other elements on the lists and on the left to create the indentation. These may be adjusted as you wish. */
}

/* ~~ The navigation list styles (can be removed if you choose to use a premade flyout menu like Spry) ~~ */

ul.nav { 
    list-style: none; /* this removes the list marker */
border-top: 1px solid #666; /* this creates the top border for the links - all others are placed using a bottom border on the LI */

margin-bottom: 15px; /* this creates the space between the navigation on the content below */
}

ul.nav li {
    border-bottom: 1px solid #666; /* this creates the button separation */
}

ul.nav a, ul.nav a:visited { /* grouping these selectors makes sure that your links retain their button look even after being visited */
    padding: 5px 5px 5px 15px;
    display: block; /* this gives the link block properties causing it to fill the whole LI containing it. This causes the entire area to react to a mouse click. */
    text-decoration: none;
    background: #8090AB;
    color: #000;
}

ul.nav a:hover, ul.nav a:active, ul.nav a:focus { /* this changes the background and text color for both mouse and keyboard navigators */
    background: #6F7D94;
    color: #FFF;
}

/* ~~ The footer ~~ */

.footer {
    padding: 10px 0;
    background: #6F7D94;
    position: relative; /* this gives IE6 hasLayout to properly clear */
clear: both; /* this clear property forces the .container to understand where the columns end and contain them */

/* ~~ miscellaneous float/clear classes ~~ */

.fltrt { /* this class can be used to float an element right in your page. The floated element must precede the element it should be next to on the page */
    float: right;
    margin-left: 8px;
}

.fltlft { /* this class can be used to float an element left in your page. The floated element must precede the element it should be next to on the page */
    float: left;
    margin-right: 8px;
}

.clearfloat { /* this class can be placed on a <br /> or empty div as the final element following the last floated div (within the #container) if the #footer is removed or taken out of the #container */
    clear:both;
    height:0;
    font-size: 1px;
    line-height: 0px;
}

-->

</style><!--[if lte IE 7]>

<style>

.content { margin-right: -1px; } /* this 1px negative margin can be placed on any of the columns in this layout with the same corrective effect */
ul.nav a { zoom: 1; } /* the zoom property gives IE the hasLayout trigger it needs to correct extra whitespace between the links */

</style>
<!-[endif]--></head>
<body>
<div class="container">
<div class="header"><!.. end .header --></div>
<div class="sidebar1">
<ul class="nav">
<li><a href="../trainees.php">Trainees</a></li>
<li><a href="States.php">States</a></li>
<li><a href="organization.php">Organizations</a></li>
<li><a href="Department.php">Departments</a></li>
<li><a href="Qualification.php">Qualifications</a></li>
<li><a href="Position.php">Positions</a></li>
<li><a href="Courses.php">Courses</a></li>
<li><a href="Lectures.php">Lectures</a></li>
<li><a href="Experts.php">Experts</a></li>
<li><a href="Counterparts.php">Co-ordinators</a></li>
</ul>
</div>
<div class="content">
<h1><a href="#">Qualifications</a></h1>
<p><a href="Qual_add.php">Add New Qualification</a></p>
</div>
</div>
</body>
<table>
<thead>
<tr>
<th>Qual. Name</th>
<th>Institute Name</th>
<th>Edit</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>$row_rsQual['name']</td>
<td>$row_rsQual['instit']</td>
<td><a href="#">Edit</a></td>
<td><a href="#">Delete</a></td>
</tr>
</tbody>
</table>

```php
<?php do { ?></td><td nowrap="nowrap">$row_rsQual['name']</td> <td nowrap="nowrap">$row_rsQual['instit']</td> <td nowrap="nowrap">[Edit](#)</td> <td nowrap="nowrap">[Delete](#) </td><?php } while ($row_rsQual = mysql_fetch_assoc($rsQual)); ?></table>
```
<?php require_once('../Connections/WCT_database.php'); ?>

<?php
if (!function_exists("GetSQLValueString")) {
    function GetSQLValueString($theValue, $theType, $theDefinedValue = "", $theNotDefinedValue = "")
    {
        if (PHP_VERSION < 6) {
            $theValue = get_magic_quotes_gpc() ? stripslashes($theValue) : $theValue;
        }
        $theValue = function_exists("mysql_real_escape_string") ? mysql_real_escape_string($theValue) : mysql_escape_string($theValue);
        switch ($theType) {
            case "text":
                $theValue = ($theValue != "") ? "" . $theValue . "" : "NULL";
                break;
            case "long":
            case "int":
                $theValue = ($theValue != "") ? intval($theValue) : "NULL";
                break;
            case "double":
                $theValue = ($theValue != "") ? doubleval($theValue) : "NULL";
        }
    }
    $theValue = GetSQLValueString("Omar Mohammed Ali Disease Prevention and Control Center");
    $theValue = GetSQLValueString("TWA");
    $theValue = GetSQLValueString(" inserted record.");
?>
break;

case "date":
    $theValue = ($theValue != "") ? "" . $theValue . "" : "NULL";
    break;

case "defined":
    $theValue = ($theValue != "") ? $theDefinedValue : $theNotDefinedValue;
    break;
}
return $theValue;

$editFormAction = $_SERVER['PHP_SELF'];

if (isset($_SERVER['QUERY_STRING'])) {
    $editFormAction .= "?" . htmlentities($_SERVER['QUERY_STRING']);
}

if ((isset($_POST['MM_insert'])) && ($_POST['MM_insert'] == "form1")) {
    $insertSQL = sprintf("INSERT INTO qual_table (name, instit) VALUES (%s, %s)",
        GetSQLValueString($_POST['name'], "text"),
        GetSQLValueString($_POST['instit'], "text")));
    mysql_select_db($database_WCT_database, $WCT_database);
    $Result1 = mysql_query($insertSQL, $WCT_database) or die(mysql_error());
    $insertGoTo = "Qualification.php";
    if (isset($_SERVER['QUERY_STRING'])) {
        $insertGoTo .= (strpos($insertGoTo, '?')) ? "&" : "?",
        $insertGoTo .= $_SERVER['QUERY_STRING'],
    }
}

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header(sprintf("Location: %s", $insertGoTo));

?>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Untitled Document</title>
<style type="text/css">
body {
  font: 100%/1.4 Verdana, Arial, Helvetica, sans-serif;
  background: #4E5869;
  margin: 0;
  padding: 0;
  color: #000;
}
/* ~~ Element/tag selectors ~~ */
ul, ol, dl {
  /* Due to variations between browsers, it's best practices to zero padding and margin on lists. For consistency, you can either specify the amounts you want here, or on the list items (LI, DT, DD) they contain. Remember that what you do here will cascade to the .nav list unless you write a more specific selector. */
  padding: 0;
  margin: 0;
}
h1, h2, h3, h4, h5, h6, p {
margin-top: 0; /* removing the top margin gets around an issue where margins can escape from their containing div. The remaining bottom margin will hold it away from any elements that follow. */

padding-right: 15px;

padding-left: 15px; /* adding the padding to the sides of the elements within the divs, instead of the divs themselves, gets rid of any box model math. A nested div with side padding can also be used as an alternate method. */

a img { /* this selector removes the default blue border displayed in some browsers around an image when it is surrounded by a link */

    border: none;
}

/* ~~ Styling for your site's links must remain in this order - including the group of selectors that create the hover effect. ~~ */

a:link {

    color:#414958;

    text-decoration: underline; /* unless you style your links to look extremely unique, it's best to provide underlines for quick visual identification */
}

a:visited {

    color: #4E5869;

    text-decoration: underline;
}

a:hover, a:active, a:focus { /* this group of selectors will give a keyboard navigator the same hover experience as the person using a mouse. */

    text-decoration: none;
}

/* ~~ this container surrounds all other divs giving them their percentage-based width ~~ */

.container {


width: 80%;

max-width: 1260px;/* a max-width may be desirable to keep this layout from getting too wide on a large monitor. This keeps line length more readable. IE6 does not respect this declaration. */

min-width: 780px;/* a min-width may be desirable to keep this layout from getting too narrow. This keeps line length more readable in the side columns. IE6 does not respect this declaration. */

background: #FFF;

margin: 0 auto; /* the auto value on the sides, coupled with the width, centers the layout. It is not needed if you set the .container's width to 100%. */

}  /* ~~ the header is not given a width. It will extend the full width of your layout. It contains an image placeholder that should be replaced with your own linked logo ~~ */

.header {

    background: #6F7D94;

}

/* ~~ These are the columns for the layout. ~~

1) Padding is only placed on the top and/or bottom of the divs. The elements within these divs have padding on their sides. This saves you from any "box model math". Keep in mind, if you add any side padding or border to the div itself, it will be added to the width you define to create the *total* width. You may also choose to remove the padding on the element in the div and place a second div within it with no width and the padding necessary for your design.

2) No margin has been given to the columns since they are all floated. If you must add margin, avoid placing it on the side you're floating toward (for example: a right margin on a div set to float right). Many times, padding can be used instead. For divs where this rule must be broken, you should add a "display:inline" declaration to the div's rule to tame a bug where some versions of Internet Explorer double the margin.
3) Since classes can be used multiple times in a document (and an element can also have multiple classes applied), the columns have been assigned class names instead of IDs. For example, two sidebar divs could be stacked if necessary. These can very easily be changed to IDs if that's your preference, as long as you'll only be using them once per document.

4) If you prefer your nav on the right instead of the left, simply float these columns the opposite direction (all right instead of all left) and they'll render in reverse order. There's no need to move the divs around in the HTML source.

/*
.
.sidebar1 {
    float: left;
    width: 20%;
    background: #93A5C4;
    padding-bottom: 10px;
}
.
.content {
    padding: 10px 0;
    width: 80%;
    float: left;
}
/* ~~~ This grouped selector gives the lists in the .content area space ~~~ */
.
.content ul, .content ol {
    padding: 0 15px 15px 40px; /* this padding mirrors the right padding in the headings and paragraph rule above. Padding was placed on the bottom for space between other elements on the lists and on the left to create the indentation. These may be adjusted as you wish. */
}
/* ~~ The navigation list styles (can be removed if you choose to use a premade flyout menu like Spry) ~~ */

ul.nav {
    list-style: none; /* this removes the list marker */
    border-top: 1px solid #666; /* this creates the top border for the links - all others are placed using a bottom border on the LI */
    margin-bottom: 15px; /* this creates the space between the navigation on the content below */
}

ul.nav li {
    border-bottom: 1px solid #666; /* this creates the button separation */
}

ul.nav a, ul.nav a:visited { /* grouping these selectors makes sure that your links retain their button look even after being visited */
    padding: 5px 5px 5px 15px;
    display: block; /* this gives the link block properties causing it to fill the whole LI containing it. This causes the entire area to react to a mouse click. */
    text-decoration: none;
    background: #8090AB;
    color: #000;
}

ul.nav a:hover, ul.nav a:active, ul.nav a:focus { /* this changes the background and text color for both mouse and keyboard navigators */
    background: #6F7D94;
    color: #FFF;
}

/* ~~ The footer ~~ */

.footer {
    padding: 10px 0;

background: #6F7D94;
position: relative;/* this gives IE6 hasLayout to properly clear */
clear: both;/* this clear property forces the .container to understand where the
columns end and contain them */
}
/* ~~ miscellaneous float/clear classes ~~ */
.fltrt { /* this class can be used to float an element right in your page. The floated element
must precede the element it should be next to on the page. */
    float: right;
    margin-left: 8px;
}
.fltlft { /* this class can be used to float an element left in your page. The floated element
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    height:0;
    font-size: 1px;
    line-height: 0px;
}
-->
</style>!---[if lte IE 7]>
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columns in this layout with the same corrective effect. */
ul.nav a { zoom: 1; } /* the zoom property gives IE the hasLayout trigger it needs to correct extra whitespace between the links */

</style>

<!-[endif]-->

<body>

<div class="container">

<div class="header"><!-- .header --></div>

<div class="sidebar1">

<ul class="nav">

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<li><a href="Counterparts.php">Co-ordinators</a></li>

</ul>

</div>

<div class="content">

<h1><a href="">Add New Qualification</a></h1>

<table width="148" border="1">

</table>

</div>

</div>

</body>