**Guía**

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| Riphah |

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**Final Approval**

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**Declaration**

We hereby declare that this document “**Guía**” neither as a whole nor as a part has been copied out from any source. It is further declared that we have done this project with the accompanied report entirely based on our efforts, under the proficient guidance of our teachers especially our supervisor **Mr. Ubaid Ullah Aleem**. If any part of the system is proved to be copied out from any source or found to be the reproduction of any project from anywhere else, we shall stand by the consequences.

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**Dedication**

We humbly dedicate the proposed system to faculty team that manages the supervision system of students. To make their work more easier and efficient.

**Acknowledgment**

First of all, we are obliged to Allah Almighty the Merciful, the Beneficent, and the source of all Knowledge, for granting us the courage and knowledge to complete this Project.

[Students will acknowledge here anyone who has helped in the project. It can include Supervisor(s), Teachers, Classmates, Friends, and Family]

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**Abstract**

Previously, web servers provided static content for a website, However, the development of dynamic web applications that allow organizations to use Internet power to improve services has made great strides over the years. This project describes the development of an online computer technology management system at the Riphah International University Faisalabad. It is designed to simplify the specific system and administration tasks. Get information quickly and easily. Find and manage. It is more efficient than the existing manual system. The web-based student management system is an important tool for achieving this goal. Guía significantly reduces the amount of time students spend on projects or dissertations compared to the regular use of pens, paper, and old-fashioned e-mail. By activating the student management system without controlling time and space. Currently, students use a manual system to search for supervisors who sometimes have no knowledge or information about their academic standing. With Guía, students can achieve all the outcomes of the manual system that is currently in work without much hectic and it will also be significantly less time consuming.

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**Chapter 1:**

**Introduction**

* 1. **Background**

In today’s world, access to information has made a breakthrough with the development of technology, which has allowed the online system to become a new management system. In recent years, the demand for online systems has grown rapidly. There is an online system. Worked well to remove paper copies, forms, protocols and requirements. The online system reflects the need for communication between users and the system. As one of many partners and sources of information, UTP benefits from an effective online time management system. Communication between project coordinators and final year teachers requires an effective communication environment to provide supervisors, examiners, and students. Misunderstandings or lack of information can delay the implementation of projects. Therefore, the Guía is very convenient because it offers the best management solutions of the previous FYP manual system. This system reflects the need to increase the efficiency of the process and management system. This project is web based. Guía implements a web based solution to ensure environmental management.

* 1. **Motivations and Challenges**

The RIUF has grown tremendously over the years, expanding its faculties and departments due to the new establishment as well as the much information that students choose in their search for career and academic opportunities at this university. As a result, a large increase in the number of students, the interaction between lecturers and students is normal. Faculty of Information Technology and Computer Science The decline of the entire university without exception. Lecturer-student ratio is also declining. Therefore, the manual system currently in operation is not the same as in essence to take supervisors at the request of students or to meet supervisors with the aim of improving lecturer-student interaction. The existing system of manual monitoring management faces several challenges:-

* Time Consumption - the current system needs the students to have to go in person to get appointments with their respective supervisors or co-supervisors in order to get suggestions or advices on any particular matter. All this consumes a lot of time of the students as well as the in charge faculty members.
* Workload – The current manual system is maintained either by the staff itself or the members of the main office. This increases the workload on faculty members unnecessarily.
* The previous system does not hold any record of the systems that were previously developed by the students. Even if they do, those records aren’t made public for the new students which could help them in coming up with the ideas.
* Urgent demand for better communication between the teachers and students. The previously system lacks that as mainly the in charge faculty members are often busy or even if they aren’t they are mostly in a hurry and cannot pay much attention.
  1. **Goals and objectives**
* The new system proposes specific proposals for adressing the limitations of the currently running system as well as improving those limitations with the use of technology. The new system is aiming to improve what the previous system does and add some new capabilities which would help both students and faculty members.
* The system keeps into consideration a very basic need that the current system lacks which is the ability to communicate efficiently outside the campus. The system also sets a criteria by which the in charge supervisors could observe the work of each group member.
* The system also propose different ways of deployment. That is deploying the system modules in phases or stages and not all at once. This could be more effective in means of efficiently testing the system so that any error doesn’t disturb the faculty and students causing them more hectic. It will surely be more cost-effective to deploy the system all at once.
* The new system can be merged with the RIUF website which could look like an extension to the old portal that is currently designed to manage the students campus record which includes results and attendance etc.
* Since the new system will be merged with the database of the RIUF Students Portal, the relevant details of the students will automatically be fetched so that the supervisors can have a look before taking control over the group.
* The notifications panel will also be integrated in the new system so that any update regarding FYPs could be share with the students using official channels. The students will be mailed once there is any update posted.
* The new system also gives students the ability to present multiple project proposals all at once so that the supervisor could decide if there is any project which fulfills their requirement. Also, they could provide remarks on those proposals so that students can improve their previous idea.
  1. **Solution Overview**

The exhaustiveness of the current system can be eliminated significantly with the use of the new proposed system because it would automate the most hectic tasks such as searching for supervisors from block to block of the University’s campus roaming around departments and if rejected, repeating the whole process again. The new system would efficiently present the students proposals to the intended supervisors. Keeping track of what each student is doing is also made easy in this new system. Some extensive models would also allow the supervisors to assign tasks to each student so that they could not only keep track of the students work but also control their working.

The system when once up and runs for a while, it should be evaluated exhaustively like any other online management system. The system’s maintenance must be rigorous. The faculty members and students should also be kept updated with any new enhancements or change in structure of the system.

**Chapter 2:**

**Literature/Market Survey**

**2.1 Introduction**

The system is being developed by the students of Computing Department of the Riphah Internation University Faisalabad (RIUF) . The aim of this new system is to gradually solve the issues that the RIUF FYP students are currently facing. The problem is the amount of hectic that students have to face to hire these supervisors for their supervision and then keeping them up to date with their projects, also the workload on the faculty staff is also too much.

**2.2 Technologies Overview**

The World Wide Web (WWW) is a platform for people around the world. Receipt and distribution of knowledge and information. The internet has also become popular Depending on the effectiveness of its use as an administrative tool Many institutions. This technology is the key to the concept of network development System. Website programming is used to determine the structure of a web system Control page activity, web design techniques make it userfriendly Interface. Provides fully programmed web pages to the client through hosting On a web server that allows you to send to any web browser Requested by the client via HTTP. It must have some components Considered in the development of an online system.

**Programming Language**

One of the most important factor that is to be considered before designing/developing a website is to select the language that you want to use. A programming language is basically the language that a computer understands. We use a programming language to communicate with the system. It is used to communicate with the machine, By creating a set of programs, applications, scripts or other instructions we control the systems behaviour . Attractions and sounds everything that we see on our screens are result of the instructions that are coded using these programming languages.

**Client-Side Scripting**

In Client-side scripting, scripts are used to present data or features on a webpage and they are interpreted by client browsers. JavaScript is one of such scripts and works in most of today’s modern web browsers. It helps in making your web pages interactive and engaging with animations, audio controls, video playbacks etc., without having to reload a page or constantly requesting server resources. This allows you to minimize page refreshes which makes for a more seamless user experience for your visitors.

**HTML**

As a client-side scripting language, JavaScript helps deliver web pages in a more interactive way. HTML is then used to describe your pages and how they should look. Once you have HTML, it’s time to bring in some visual appeal with CSS. Since JavaScript runs on your browser as an interpreted language, there are no compile times or compilation steps involved as when using Java server side. The nice thing about working with JavaScript as a Client Side scripting language is that once you write code to load up elements within a web page it’s just going to do what you want it to do every time you load up that specific page because it’s located on your own computer and not on any remote server.

**JavaScript**

The building blocks of client-side scripting HTML are simple, but when you string them together and add some logic to go with it, you can make great things happen. The most popular client-side scripting language is JavaScript, which has been around since 1995. JavaScript's popularity comes from its support for DOM manipulation and AJAX (Asynchronous JavaScript And XML), along with its ability to be used on multiple platforms and devices. You can write a complete app using only client-side scripting HTML alone! It's helpful to know your toolset before deciding how you want to structure your work.

**Server-Side Scripting Web Server**

The Apache HTTP Server is a powerful, open source web server that provides a foundation for serving your website content. The popularity of Apache can be attributed to its wide range of features and excellent security, as well as its ability to serve dynamic content with CGI scripts. For example, many JavaScript applications are created using CGI (Common Gateway Interface), which is an interface that allows external applications to communicate with servers through client-side scripting HTML language. When you want your scripts to interact directly with users or retrieve information from databases and then display it on web pages, you will often use a language like Java or ASP on your server side.

**Laravel Framework**

Laravel is a totally free framework of PHP and what nice it's an open-source Framework. Code Igniter Framework: Code Igniter is an Open Source PHP application framework with a very small footprint, yet with all the power and flexibility that you would expect from a full-featured development framework.

A web application with a well-written server-side component can be extremely robust and reliable. Once you move data processing away from your user’s browser, you create opportunities for greater efficiency and reliability. Data validation that happens on your server will result in more accurate information being returned to your users than if it occurred on their computers. If a client computer is hacked or suffers from poor internet connection, web applications running on a secure server won’t suffer as much downtime as those running entirely in-browser. All in all, it means more security and less chance of your site crashing—which leads to better customer satisfaction scores and higher profits for your business!

**Apache HTTP Server**

The Apache HTTP Server is an open source web server written in C and used by over 60% of all websites on Internet. It has proven to be reliable, fast, secure and efficient. Since its initial release in 1995 it has evolved into a mature, cross platform application deployed worldwide. It currently powers just over half of all websites on Internet as of July 2013 (51.7%).

**SQL DATABASE**

SQL stands for Structured Query Language. It is known as the language that is used for communicating with the database. Using SQL, a developer can make databases and access the data, insert new data and manipulate the existing data on the server. The standard SQL commands which are very necessary in communication with the database are “SELECT”, “INSERT”, “UPDATE” and “DELETE”.

**MySQL**

It is an open source server system that is specifically designed to work with databases. MySQL is flexible to use on popular platforms such as Windows, Linux and Mac OS. It supports standard SQL. It is used by majority of well known organizations such as Facebook, Google, Twitter, Adobe and Wikipedia. This is the reason that is one of the world’s best known database server system. It has a very high performance which is the reason that it attracts many developers. It is very reliable and also easy to use.

**2.3 Summary**

Guía is based on latest technologies that will not only help it in proving reliable but also the performance in terms of speed will also be enhanced. The project is made using Laravel Framework and its packages are famous for their functionalities. Guía takes advantage from couple of these packages which are also listed in the project’s composer file. Many of these packages have been put into use to make the SQL search queries relatively faster than the normal way of fetching record. This would result in teachers and students getting near to instant search results upon their queries.

**Chapter 3:**

**Requirement Analysis**

**3.1 Introduction**

As software development is a process that takes place on a larger scale, so the work is initiated by building the requirements for the whole system elements, followed by the provision of other sets under this software requirements. Overview of this program it is necessary as the software must interact with other elements such as hardware, users and other resources. Very basic and an essential requirement for the presence of software in any framework, system information. As an editor you need to know the requirements in to build a system, to decide how to work system and selection of the most appropriate software system. Sometimes, system information helps I program designer to maximize output.

The following chapter will cover all the functional and non-functional requirements of the proposed system. Functional requirements are the main functionalities of a system that can be performed by the system. On the other hand, non-functional requirements are the quality attributes of the system like security and usability. Hence, the system will cover both functional and non-functional requirements.

Requirement analysis is the process of understanding user expectations for a better and improved system. To develop a better and improved system, understanding the functional and non-functional requirements is the most important part of the Software Development Life Cycle. Further detail is given in the following sections.

**3.2 Problem Scenario**

The problem like it is mentioned in the previous two chapters is the amount of physical workload on students, teachers as well as the managing faculty members. Students have to roam around from department to department in search for supervisors, supervisors have to reschedule their day in order to manage some spare time in campus, the managing staff has to look after the progress of the ongoing FYP session manually. Another problem is the lack of database that holds the record of previous FYP projects as it will help in generation of new ideas or improve/enhance the work that is done by the previous students.

**3.3 Functional Requirements**

In this section, some of the functionalities of our system would be explained. Some of the features of our proposed system are going to be explained in the following section.

**One time Admin Setup**

Since the role of the admin in any management system is to restrict the access of users that are on different roles and to manage rare scenarios which might prove to be the reason by which the users on the system might lose access to their accounts, such authority should not be in many hands which is why there should be a one time admin setup which would destruct or stop working right after an admin account is created.

**Multiple Moderators**

The admin should be able to create multiple moderator accounts so that the overall managing work is distributed, thus proving to be more efficient and less hectic for the faculty staff.

**Profile Setup**

Supervisors and Students must have to set up their profiles so that the supervisors can know exactly the type of student they will be supervising while on the other hand the students can understand the requirements of each and every supervisor they are looking forward to hire.

**Multiple Project Proposals**

The students should be able to submit multiple project proposals to their intended supervisor so that the probability of rejection decreases, as it is more likely that one of the multiple proposals might come in the interest of their intended supervisor.

**Proposal Rejection/Acception**

The supervisors must be able to accept or reject the student proposals

**Member Requests**

Students should be able to send member requests to other students in order to form a group.

**3.4 Non-Functional Requirements**

In this section, some of the quality attributes of non-functional requirements are going to be explained in the following.

**Compatibility of system**

In client-side scripting (CSS), the browser interprets and renders scripts written in HTML, JavaScript, and CSS. In server-side scripting (PHP), the web server takes user input, interprets scripts and other code, and returns HTML to the browser that the user can view. The Apache HTTP Server is an open source web server that is compatible with all major operating systems and platforms including Windows, Mac OS X, Linux, UNIX, Solaris and more.

**Usability of system**

Apache is currently one of, if not the most popular web server in use on Internet-connected computers. It is used on some of world's biggest websites and can scale to meet needs which might make your head spin. The project began as a fork of a freely available precursor server (called apache) by several students who were studying at the University of Arizona, hence its name. Today Apache is considered one of, if not the foundation stone upon which much of modern internet services are built and continues to be actively maintained by an open community of programmers. If you’re looking for a solid web server that can handle anything from basic websites to large e-commerce sites without breaking a sweat then Apache is certainly worth considering.

**Availability of system**

The Apache HTTP Server is popular due to its simple use and setup, easy update management, and user-friendly documentation. It runs on Linux, Windows NT, UNIX systems such as BSD variants, AIX and Solaris. Server-Side Scripting allows an enterprise to expand and add more functionality than just HTML. Client-Side Scripting allows customization of a web page that is not possible with Server-Side Scripting. HTML can be accessed from any computer, whereas Server-Side Scripting needs to be installed and only accessible by computers on a local network.

**Robustness and Reliability**

This resource will always be available to you. Do not erase or change anything on it unless specifically told to do so by a trainer. This is a graded item. If you are successful in meeting its requirements, then you will pass that portion of your assessment and may continue to other items. If you are unsuccessful, then you must try again until passing before moving forward.