

# **OFFDESK**

## **PROJECT REPORT**

**SUBMITTED IN THE PARTIAL FULFILLMENT FOR THE REQUIREMENT OF THE AWARD  
OF DIPLOMA IN COMPUTER ENGINEERING**

### **SUBMITTED BY**

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**Ms. Isha Mankar**

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### **GUIDE**

**Mr.M.A.Rahman**



**DEPARTMENT OF COMPUTER ENGINEERING**

**GOVERNMENT POLYTECHNIC, NAGPUR**

**(An Autonomous Institute of Government of Maharashtra)**

**(2020-2021)**

# GOVERNMENT POLYTECHNIC, NAGPUR

(An Autonomous Institute of Government of Maharashtra)



## CERTIFICATE

This is certify that,

<b>Ms. Sania Ahmed</b>	<b>(1813001)</b>
<b>Ms. Amna Patel</b>	<b>(1813002)</b>
<b>Ms. Isha Mankar</b>	<b>(1813037)</b>
<b>Ms. Rutuja Pethe</b>	<b>(1813047)</b>
<b>Ms. Sakshi Tikle</b>	<b>(1913805)</b>

**Of term** EVEN 2020 of Computer Engineering department students have submitted their Project report on

### **OFFDESK**

During academic session 2020-2021 as a part of project work prescribed by Government Polytechnic, Nagpur for the partial fulfillment of the requirement of diploma in Computer Engineering, Sixth Semester . The project work is the record of students own work and is completely satisfactory.

**Mr.M.A.Rahman**

**GUIDE**

**Mr. S. P. Lambhade**

**HOD**

**External**

**Dr. Manoj B. Daigavane**

**Principal**

# **GOVERNMENT POLYTECHNIC, NAGPUR**

## **CANDIDATE'S DECLARATION**

We hereby certify that the work which is being presented in the project report entitled **OFFDESK** by us in partial fulfillment of the requirement for the award of diploma in Computer Engineering, Govt. Polytechnic, Nagpur submitted to department of Computer Engineering is record of our own work carried out during Academic session 2020-21 (Even 2020) guided by **Mr.M.A.Rahman**

### **Signature and Name of the students**

**Ms. Sania Ahmed**

**Ms. Amna Patel**

**Ms. Isha Mankar**

**Ms. Rutuja Pethe**

**Ms. Sakshi Tikle**

## **ACKNOWLEDGEMENT**

We would like to place on record my deep sense of gratitude to our guide, **Mr. M.A.Rahman** Dept. of Computer Engineering for his/her generous guidance, helpful and useful suggestions, continuous encouragement and supervision throughout the course of present work.

We express our sincere gratitude to **Mr. S. P. Lambhade**, Head of Department of Computer Engineering for his stimulating guidance. The success of any work depends on efforts of many individuals. We would like to take this opportunity to express our deep gratitude to all those who extended their support and have guided us to complete this project work.

We are extremely thankful to **Dr. Manoj B. Daigavane**, Principal, for providing us infrastructural facilities work in, without which this work would not have been possible.

### **Signature and Name of the students**

**Ms. Sania Ahmed**

**Ms. Amna Patel**

**Ms. Isha Mankar**

**Ms. Rutuja Pethe**


**Ms. Sakshi Tikle**

## ABSTRACT

### ***Topic : Offdesk***

*Internal Assessment can be very tedious for teachers , managing thousands of student records can sometimes be Herculean . Offdesk allows teacher to manage all the data required for internal assessment at one place .The teachers and the students will be provided with their respective username and password. Teachers can conduct MCQ test , upload study materials , give grades and view submissions for their respective courses. Students can upload assignments , view study materials and take MCQ tests . The Internet Independence property makes Offdesk more distinctive as they can download various study material without internet .The only requirement is that the server node and the client node should be on the same network. No special training is required to work on Offdesk . Offdesk provides us with a simple yet interesting GUI .*

## SPONSORSHIP LETTER



To,

No. 9372650660  
Date:- 15<sup>th</sup> April 2021

The Head of Department  
Department of Computer Engineering  
Government Polytechnic, Sadar, Nagpur – 440001

**Subject : OffDesk Project Sponsorship.**

Ref :- 1. Telephonic conversation dated 05<sup>th</sup> April 2021 with the students of OffDesk project.  
2. Students project letter dated 07<sup>th</sup> April 2021

Sir,

With reference to the above cited subject, we would like to inform you that we will be in requirement for the project "OffDesk", as per discussion with the students of this project . I assure that we will be providing support to the students for the requirements and data / information provider and will extend support for data collection and provide the prototype for the project which will be helpful for the students for project development.


I also assure that after completion of the project and after successful testing of the project we will accept the project.

Name of students involved in this project development :

Name of students	Enrolment No.
1.Sania ahmed	1813001.
2.Amna Patel	1813002.
3.Isha Mankar	1813037.
4.Rutuja Pethe	1813047.
5.Sakshi Tikle	1913805.

As per the discussion students assures for submitting the project by 1<sup>st</sup> JULY 2021.

Thanking you,



C-Tel Solutions

Yours Sincerely,

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# **Chapter 1**

## **INTRODUCTION**

## **1.1 Introduction**

What is Offdesk ?

The internal assessment helps to give credit in the final assessment. It helps students in continuous learning. Gives teachers an opportunity to evaluate the students. Grading with accuracy and fairness can take a lot of time, it's the most time-consuming and tedious parts of a teachers job. Students has to carry innumerable assignments and practicals for distinct subjects for their internal assessment.

OFFDESK is especially developed for teachers and students. It will reduce the manual work of a student and a teacher in the internal assessment. It offers a very simple and suitable GUI and is easy to use . Each teacher and a student will be provided by a unique username and password , by which they can log in into the system. A teacher can conduct numerous MCQ quiz for the enrolled students and can record their scores accordingly. These students will be able to take the MCQ quiz created by the teacher . Teacher can also grade students on the basis of their submissions of assignments and practicals uploaded by them, a teacher can also reject these submissions if he finds it lousy. Teacher can upload study materials for their respective courses too. This system is very convenient and reliable for maintaining records related to internal assessment. In this way Offdesk is quite substantial for internal assessments.

## **1.2 Motivation**

It is said that “Need is the Mother of all inventions” so is ours. So, “What Motivation Drives us to Form this Project? ” We observed in our daily routine that a lot of time gets wasted during lectures for checking assignments and practicals, also it's quite hard for students to carry these many submissions while travelling to the college. As we all are in the race of minimizing the time.

A lot of times our teachers face difficulties in assessing students assignments, practicals and grading them, conducting regular quiz on each chapter ,so we felt that manually doing these things isn't productive at all and came with a idea of our project. We hope our project to be a step further in Automation. Offdesk is designed to bring a positive change to the routine and to minimize the time and the work of the faculties and the students. Being Computer Engineering Students we wanted to contribute towards our own department, by solving the problems that we faced. This is what our motivation that carried us forward to making it an actual real time project.

### **1.3 Objectives**

“Offdesk” is web based application developed for: Carrying out things related to internal assessment. To bring a positive change to the routine and to minimize the time and the work of the faculties and the students. It allows all the material to be stored centrally. Faculties can create MCQ tests, and view practicals and assignments for grading students conveniently. The students can appear into these MCQ tests and view study materials for respective courses. This system can be very serviceable in different organizations for efficient internal assessment.

### **1.4 Brief Description of the System**

This system is basically designed to ease the work of teachers as well as students for internal assessment. In our project there are three users ADMIN, TEACHER, STUDENT. At the admin end once the admin had logged in,he can access distinct features that are provided in the admin module , he can create users for Offdesk . Some of them will be teachers while others will be students. Admin can also create courses that will be allotted to distinct users. He have the right to view all the study materials and the assignments. He will be able to update any kind of details of respective users, he will be able to delete users too .

Our Second user is the Teacher. Teacher have to login into the system by their respective username and password. Teacher can view his/her profile,create edit and delete the MCQ quiz, view student assignments , and grade the students accordingly.Teacher can accept and reject the assignment if he found it poor , he can upload study materials related to specific course. He can also view list of enrolled student of the particular course. He has the right to change password and logout from the system.

Our Third user is Student. Student have to login into the system using the username and the password. Student can change the password using the change password feature. He/she can view his/her profile. Student can upload the assignment and practical and solve the MCQ quiz created by teachers for their courses. Student can view and download the study material uploaded by the teacher for a particular course. Student can view his/her rejected assignment and practical if any and also resubmit it. Student can logout from the system through the logout feature.

# **Chapter 2**

## **LITERATURE SURVEY**



## **2 LITERATURE SURVEY**

In current tech era, technology has been taken almost all the necessary steps which were used to be done by human. Almost all the equipment has become automated with the help of advanced technology. We live in a world where technology is having great impact from corporate life to our personal life. Even in small retail shop to giant one all the paper works has been replaced with fully automated system to make it more user friendly. If we look to the education sector we can see some of the universities having their own system for the students where students can perform things related to college work.

The existing way of taking internal assignment is more time consuming and it is also most tedious task for the teacher to conduct various activities for internal assessment and for student to carry their assignment with them. We need a platform where teachers can upload study materials, conduct exams and student can access it easily. So before developing any such application it is necessary to make sure it is user friendly to be accessible by students and teachers both. Many systems and applications have been developed in this regard to solve this problem, but almost none of them fulfil the whole requirements. Today's fast paced world is overloaded with new and ever changing technologies, to cope up with these technologies and constant rise in the user demands one need to maintain a very high quality of each and every product being launched. The software industry is no different and is constantly striving hard to develop and maintain high quality software. Many more such software is available in market but they are tedious and complicated with complicated user interface.

In this Chapter, we have gathered reviews conducted by the researchers about some projects that have been developed and are some what similar to our project.

1] Dhaval Patel founder of educloud discovered educloud app to Plan, Manage, Communicate & Collaborate day to day academics. EduCloud is cloud based educational application that can be accessed from anywhere, any time. Educloud helps managing your academics details and share among valuable person. Teachers can also share web references for Assignments. Take attendance online & offline and receive realtime notification. Simply select class, subject, deadline and just add the assignment. Students will immediately get notified about new assignments added and can submit assignment. Auto notification to Students & Parents for upcoming exams & results. It has custom Grade Boundary and auto results calculation functionality.

2] In 2014, Mr Rochelle and Zach Yeskel members of Google's announced Google classroom which is free web service developed for schools that aims to simplify creating, distributing and grading assignments. Sharing files between teachers and students. Teachers can create, distribute and mark assignments all within the Google ecosystem. Teachers can monitor the progress for each student by reviewing revision history of a document, and after being graded, teachers can return work along with comments and grades. The apps let users take photos and attach them to their assignments, share files from other apps, and support offline access.

Advantages:

1. Easy to use and accessible from all devices.
2. Effective communication and sharing.

Disadvantages:

1. Editing problems.
2. Limited integration options.

3] In 2002 martin dougiamas developed moodle to help educators create online courses with a focus on interaction and collaborative construction of content. Moodle is a free and open-source learning management system used for blended learning, distance education, flipped classroom and other e-learning projects in schools, universities, workplaces and other sectors. It has developed a number of features now considered standard for learning management systems, such as a calendar and a gradebook.

Advantages:

- 1.Workplace safety training.
- 2.Online learning and continued education opportunities

Disadvantages:

- 1.Administration is difficult, confusing and not user friendly.
- 2.User management.

# **Chapter 3**

## **SYSTEM ANALYSIS AND DESIGN**

### **3.1 Analysis**

Analysis is a process of collecting and interpreting facts, identifying the problems, and decomposition of a system into its components.

System analysis is conducted for the purpose of studying a system or its parts in order to identify its objectives. It is a problem solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose.

The various tasks in the system analysis include the following.

- Understanding application.
- Planning.
- Scheduling.
- Developing candidate solution.
- Performing trade studies.
- Performing cost beneficiary analysis.
- Recommending alternative solutions.
- Selling of the system.
- Supervising, installing and maintaining the system..

This system is very serviceable for teachers in analyzing students internal assessments by conducting MCQ Test ,taking assignments and uploading study material . It is a system that provide a platform to carry out all the things related to internal assessments of students in colleges and institutes.

### **3.1.1 Problem Definition**

The internal assessment helps to give credit in the final assessment. Also, it reduces the burden and tension related to the final examination. In addition, it acts as a link which provides data related to student's performance. This gives teachers an opportunity to evaluate the students. Moreover, it helps students in continuous learning. Grades are used as evaluations of student work, it's important that grades accurately reflect the quality of student work and that student work is graded fairly. Grading with accuracy and fairness can take a lot of time, which is often in short supply for college instructors.

It's the most time-consuming and tedious parts of a teachers job. When you have upwards of 200 students a day, depending on your job assignment, this can mean multiple hours of nothing but staring at the same answers over and over again. This system developed will reduce the manual work and the time complexity need to generate the test. This system makes the MCQ test within a minute. Carrying numerous practicals and assignments of numerous courses for a student is a tedious task and storing them at one place in an organization is a hectic job done by a teacher. This system will make these tasks quite easier. The teachers and the students will be able to perform these tasks very efficiently and profoundly.

### **3.1.2 Objectives**

The main objective of OFFDESK is to provide a platform to carry out all the things related to internal assessment. The purpose of the project is to build an application to reduce the manual work of a student and a teacher for carrying out internal assessment. It allows all the resources to be stored centrally. The teacher can conduct MCQ tests, view practicals and assignments to grade students efficiently. Students will be able to take MCQ tests and view study materials uploaded by teachers for their respective courses. OffDesk can be Very serviceable in different organizations for efficient internal assessment.

### 3.1.3 Feasibility Study

Feasibility Study: Feasibility analysis begins once the goals are defined. It starts by generating broad possible solutions, which are possible to give an indication of what the new system should look like. This is where creativity and imagination are used. Analysts must think up new ways of doing things- generate new ideas. There is no need to go into the detailed system operation yet. The solution should provide enough information to make reasonable estimates about project cost and give users an indication of how the new system will fit into the organization. It is important not to exert considerable effort at this stage only to find out that the project is not worthwhile or that there is a need significantly change the original goal. Feasibility of a new system means ensuring that the new system, which we are going to implement, is efficient and affordable. There are various types of feasibility to be determined.

**Economically Feasibility:** Development of this application is highly economically feasible. The only thing to be done is making an environment with an effective supervision. It is cost effective in the sense that has eliminated the paper work completely.

**Technical feasibility:** The technical requirement for the system is economic and it does not use any other additional Hardware and software. Technical evaluation must also assess whether the existing systems can be upgraded to use the new technology and whether the organization has the expertise to use it. We only need to Install XAMPP, MySql database and the sublime text in the server system. And at the user end any browser that needs to run this system.

**Operational Feasibility:** The system working is quite easy to use and learn due to its simple but attractive interface. User requires no special training for operating the system. Technical performance include issues such as determining whether the system can provide the right information of the students for respective courses , and whether the system can be organized so that it always delivers this information at the right place and on time using intranet services.

### **3.1.4 Requirement Analysis**

#### Hardware Requirements

- Processor – Intel Pentium 4 or above
- Speed – 1.06 GHz or Above
- RAM – 1GB or Above
- Hard disk – 240 GB or Above

#### Software Requirements

- Windows 7 or above
- Apache Xampp 7.4.3 or Above.
- Sublime Text 3.
- MySql
- PHP MyAdmin.

### **3.2 Design**

Software design is the process of envisioning and defining software solutions to one or more sets of problems. One of the main components of software design is the software requirements analysis (SRA). SRA is a part of the software development process that lists specifications used in software engineering. If the software is "semi-automated" or user centered, software design may involve user experience design yielding a storyboard to help determine those specifications. If the software is completely automated (meaning no user or user interface), a software design may be as simple as a flow chart or text describing a planned sequence of events. There are also semi standard methods like Unified Modeling Language and Fundamental modeling concepts. The main difference between software analysis and design is that the output of a software analysis consists of smaller problems to solve. Additionally, the analysis should not be designed very differently across different team members or groups. In contrast, the design focuses on capabilities, and thus multiple designs for the same problem can and will exist.



Depending on the environment, the design often varies, whether it is created from reliable frameworks or implemented with suitable design patterns. Design examples include operation systems, web pages, mobile devices or even the new cloud computing paradigm.

### 3.2.1 Proposed Design

- Use Case Diagram

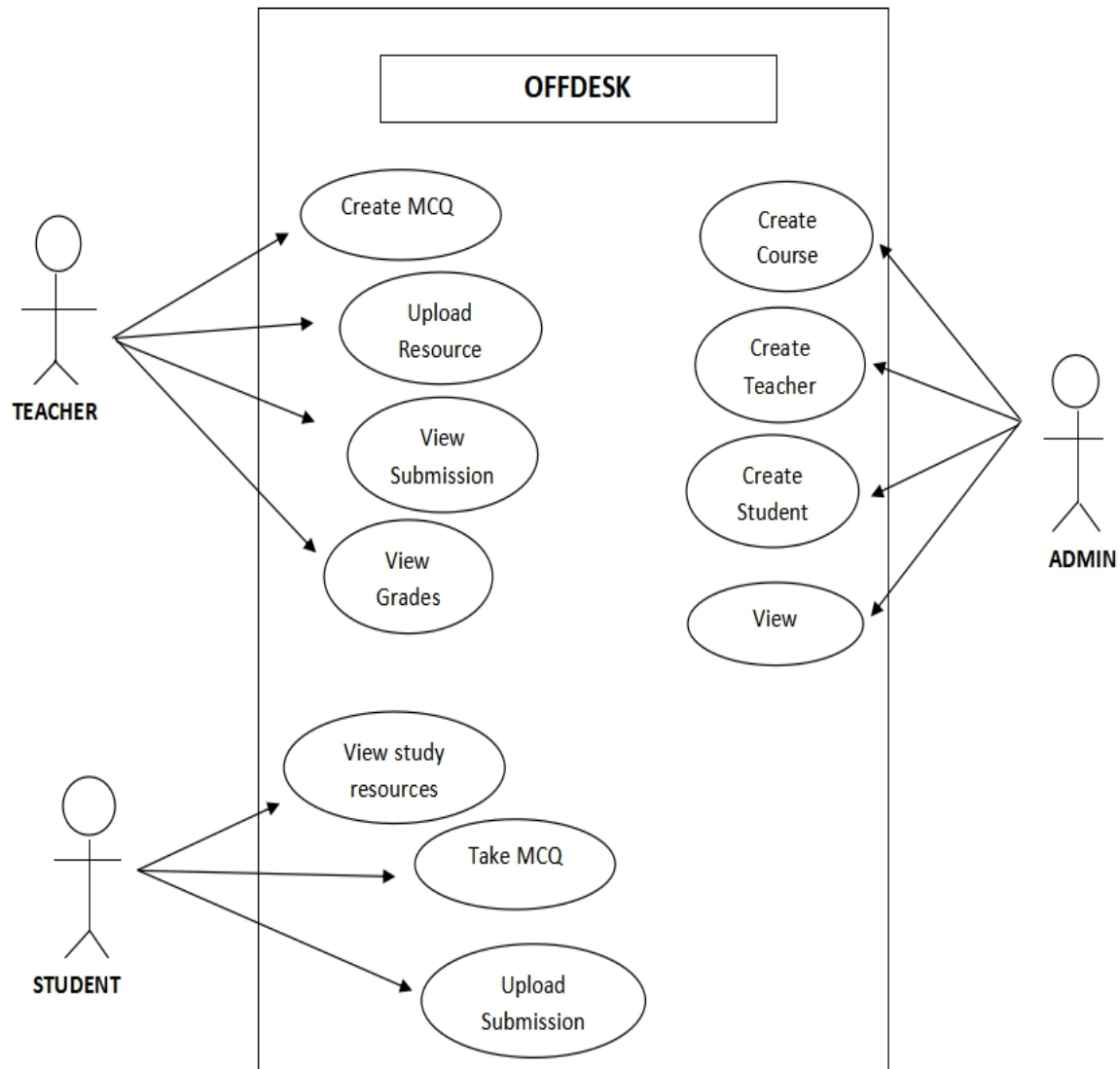
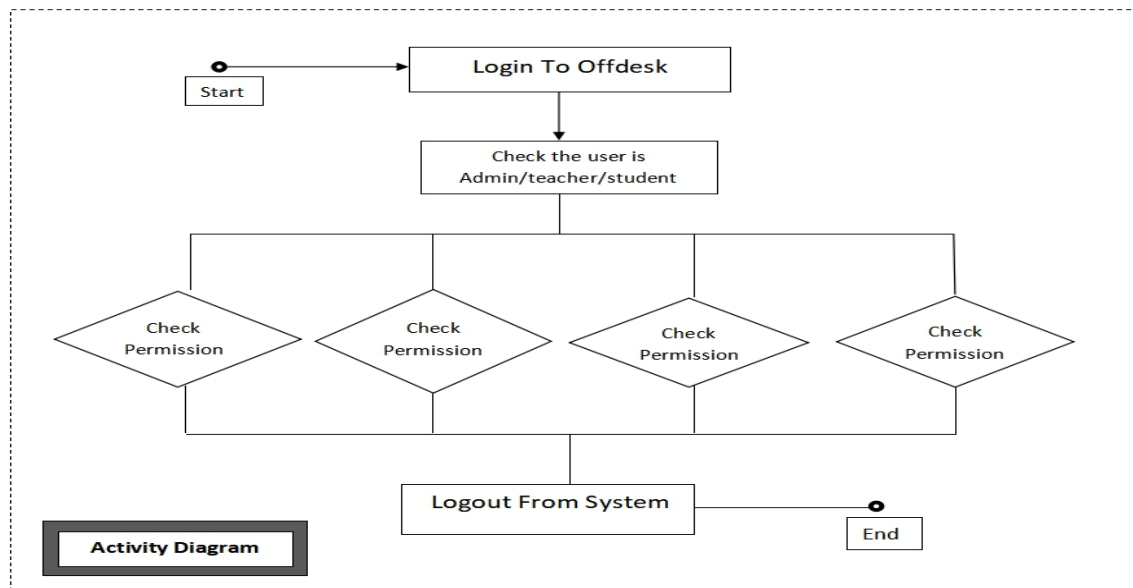


Figure 1: Use Case Diagram

- ActivityDiagram



**Figure 2 : Activity Diagram**

### 3.2.2 Detailed Design

Detailed Design- Detailed design deals with the implementation part of what is seen as a system and its sub-systems in the previous two designs. It is more detailed towards modules and their implementations. It defines logical structure of each module and their interfaces to communicate with other modules. After high-level design, a designer's focus shifts to low-level design. Each module's responsibilities should be specified as precisely as possible. Constraints on the use of its interface should be specific. Pre and post conditions can be identified. Module-wide invariants can be specified. Internal data structures and algorithms can be suggested. The detail design phase involves completing the product's design. The design team works toward completion of the specifications for the product and its subassemblies, product elements, and manufacturing processes. Like the other phases of product development, detail design is an iterative process. Design trade-offs are made as the design team learns more about the impact of design decisions on the performance, reliability, and cost of the product.

Furthermore, the design team obtains more information about how to manufacture components, subassemblies, and the product, allowing it to modify and refine the designs and, if necessary, the product's design requirements.

- Data Flow Diagram (DFD)

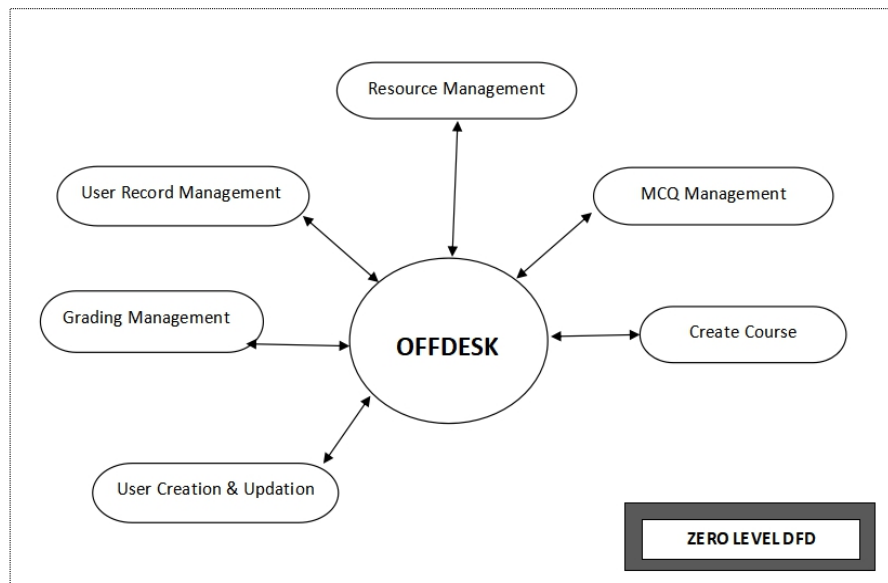


Figure 3: Zero level DFD

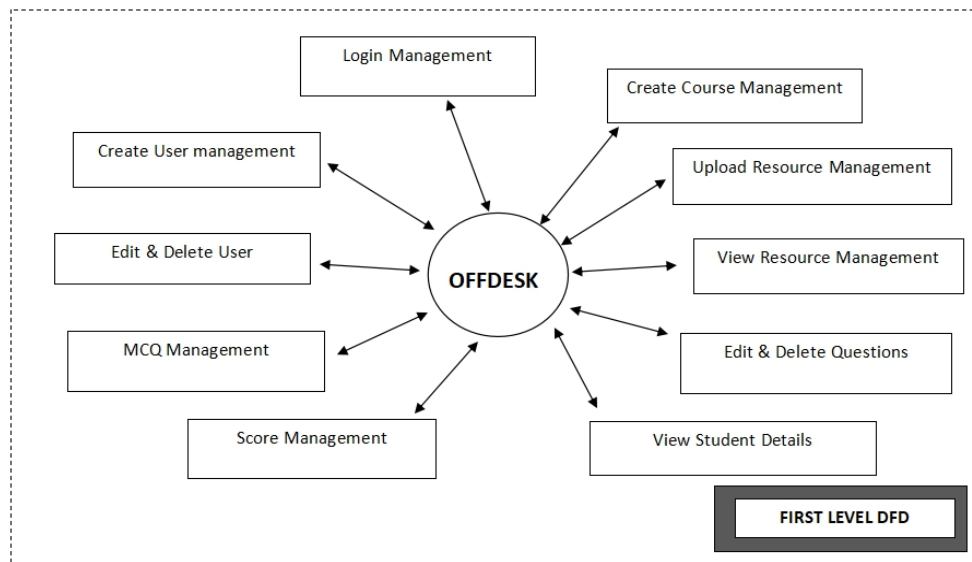


Figure 4 : First level DFD

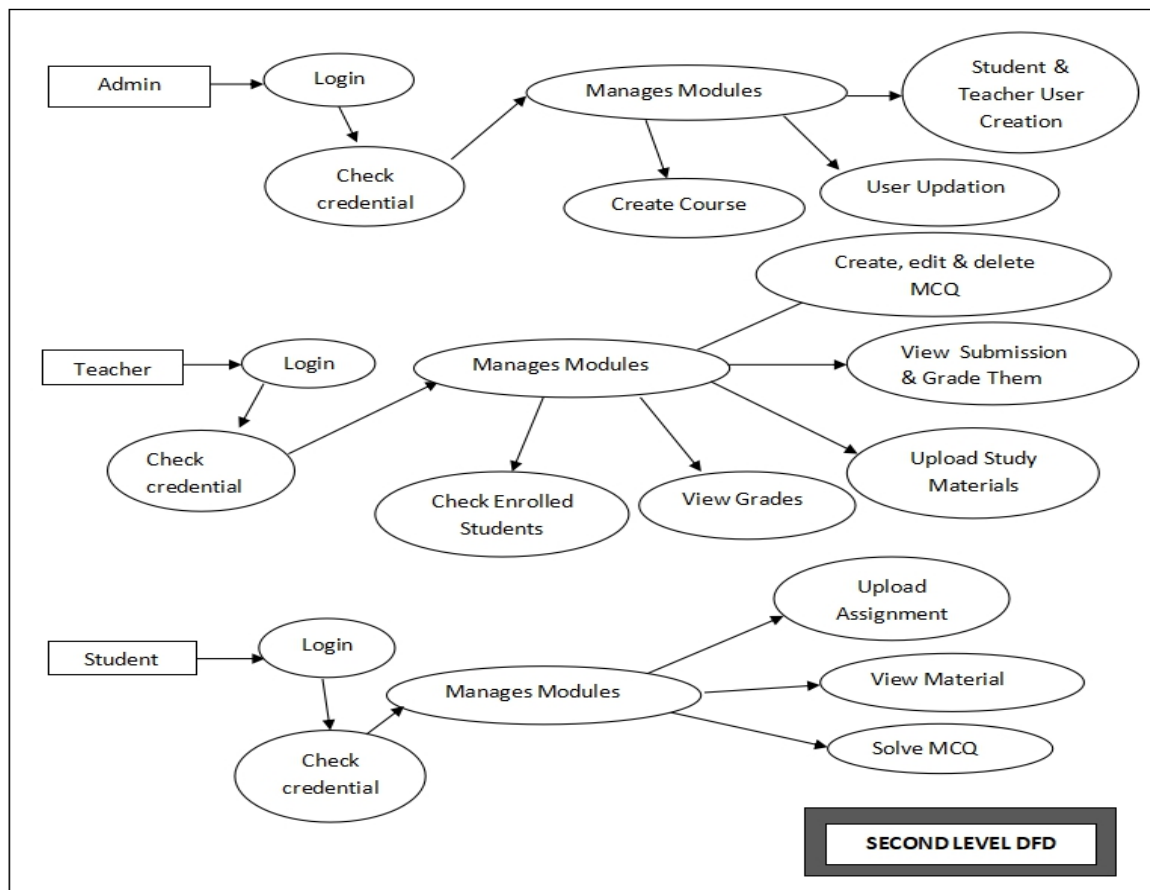


Figure 5 : Second Level DFD

- Entity Relationship(ER) Diagram

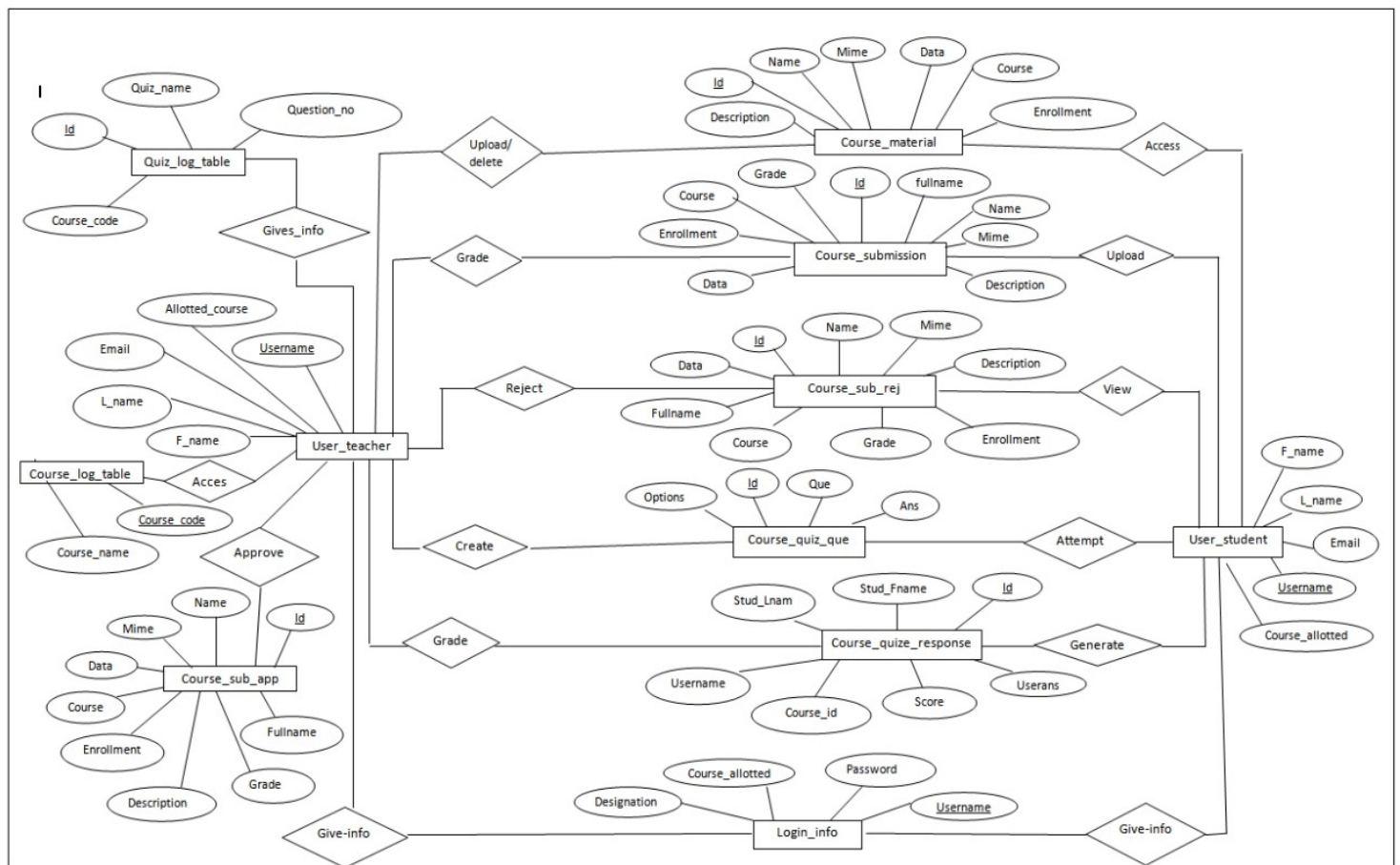


Figure 6 : ER Diagram for Offdesk

# **Chapter 4**

## **SYSTEM IMPLEMENTATION & TESTING**

System implementation is the important stage of project when the theoretical design is tuned into practical system. The main stages in the implementation are as follows:

- Planning
- Training
- System testing and
- Changeover Planning Planning is the first task in the system implementation.

At the time of implementation of any system people from different departments and system analysis involve. They are confirmed to practical problem of controlling various activities of people outside their own data processing departments. The line managers controlled through an implementation coordinating committee. The committee considers ideas, problems and complaints of user department. Offdesk will implement creating MCQ tests , taking MCQ tests ,uploading resources, etc. It will be used to grade students for internal assessment for respective courses .

## **4.1 Setting Environment**

### **4.1.1 XAMPP**

**XAMPP** is the most popular software package which is used to set up a PHP development environment for web services by providing all the required software components. During the process of software deployment, most of the web servers use almost similar components, so use of **XAMPP** provides easy transition from local server to live server. **XAMPP** is a **AMP** stack which stands for Cross platform, **A**pache, **M**ySQL, **P**HP, **p**erl with some additional administrative software tools such as **PHPMyAdmin** (for database access), **FileZilla** FTP server, **Mercury** mail server and **JSP Tomcat** server. Other commonly known software packages like **XAMPP** are **WAMP**, **LAMP**, and others. The **XAMPP** server is used to test PHP pages. It works as local server. It contains a **MySQL** database to manage or save data on a local server.

### **Software components of XAMPP:**

- **Apache** plays the role of processing the HTTP request. It is the actual default web server application. It is the most popular web servers maintained by Apache Software Foundation.
- **MySQL** The role of database management system in XAMPP is played by MySQL. It helps to store and manage collected data very efficiently. It is an open-source and most popular.
- **PHP** is the server-side scripting language which stands for Hypertext Pre-processor. It is Embedded with HTML code which interacts with the web server. It is an open-source and work well with MySQL and has become a common choice for web developers.
- **Perl** is the high-level programming language designed for text editing which serves purpose like web development and network programming.

### **Steps to download XAMPP**

#### **Step 1: Download and install XAMPP**

To download and install XAMPP, go to apache friends downloads page, the official link to download XAMPP from. You will see XAMPP ready to download for cross-platform like

Windows, Linux, Mac OS X. Since we are discussing How to install XAMPP on Windows 10, therefore, we will choose the Windows option.

#### **Step 2: Run the installer to install XAMPP**

##### **1. XAMPP Setup Wizard**

During the installation process, you may come across warning pop-ups. But you would probably click 'Yes' to start the installation process. Soon after you click on the downloaded

file, the XAMPP setup wizard will open. Now click on the 'Next' Button to proceed.



## 2. Select Components

Next, you need to check the components which you want to install and can uncheck or leave as it is which you don't want to install. You can see there are a few options which are light grey in color. These are the options which are necessary to run the software and will automatically be installed. Now click on the 'Next' button to continue.

## 3. Select Installation Folder

Now you need to choose the folder where you want to install the XAMPP. You can choose the default location or you can choose any location of your choice and choose the 'Next' button to move ahead.

## 4. Bitnami for XAMPP

Now will see a window showing you information about Bitnami. Simply click on the 'Next' button to move further. However, if you wish to learn more about the Bitnami, then you may check the box saying 'Learn more about Bitnami for XAMPP.' Basically Bitnami is for installing open source applications i.e. WordPress, Joomla etc on your newly installed XAMPP.

## 5. Ready to Install

Now you'll see another window with a message "Setup is now ready to begin installing XAMPP on your computer" like shown below. You just have to hit the 'Next' button to Proceed.

## 6. Welcome to XAMPP Wizard

Now just be patient and wait for the installation to complete.

## 7. Installation Complete

Once the installation is completed, you will be asked whether you would like to start the control panel now or not, displaying the message “Do you want to start the control panel now?” Check the box and click on the ‘Finish’ button and see if the XAMPP is working fine.

### **Step 3: Select your XAMPP install language**

As soon as you will click on the Finish button in the final step of install XAMPP process, you will be asked to select the preferred language between English and German. It is up to you which language you choose. After that click on the ‘Save’ button to confirm your selected language. As of now, I am choosing the English language.

### **Step 4: XAMPP is now installed, run it**

If the entire process of XAMPP installation went correctly, then the control panel would open smoothly. Now click on the ‘Start’ button corresponding to Apache and MySQL. That’s it. You have successfully installed XAMPP on Windows 10. Or say you have successfully installed XAMPP locally. Once you start the modules, you should see their status turn to green. Whereas, on the right side, you can see the process ID number and port numbers every module is using. You’re good to go now.

## **4.1.2 Sublime Text**

Sublime Text Editor is a sophisticated text editor for code, markup and prose. You’ll love the slick user interface, extraordinary features and amazing performance.

### **Steps to download**

**Step 1:** Download the .exe package from the official website as shown below –

<https://www.sublimetext.com/3>

**Step 2:** Now, run the executable file. This defines the environment variables. When you run the executable file, you can observe the following window on your screen. Click Next.

**Step 3:** Now, choose a destination location to install Sublime Text3 and click Next.

**Step 4:** Verify the destination folder and click Install

**Step 5:** Now, click Finish to complete the installation

### **Steps to set up OFFDESK in server PC**

**Step 1:** Firstly copy project folder(the Offdesk directory) to the xampp htdoc folder of the server PC.

**Step2:** open the xampp control panel. And start apache and Mysql.

**Step3:** go to any browser and type 127.0.0.1/offdesk.

This is how you install OFFDESK project to the server pc.

## **4.2 Implementation Details**

While implementation of project we need to make sure certain requirements:

- Make sure that LAN connection is made so that clients and server remain on same network.
- Both server and client should be active.
- Xampp server should be installed on the server computer.
- Make sure that all the teachers and students are provided with a username and password by admin.
- Assure that all the database files are imported in server side computer's phpMyAdmin database server.

### **4.3 System Execution Details**

For execution following points are needed:

- Server and client should be active and on same network.
- Start the the xampp control panels on the server side.
- Start the apache and mysql server from xampp control panel on the server side.
- If any update is needed to be seen from server end we need to restart the application.

### **4.4 Testing**

System testing is a level of software testing where a complete and integrated software is tested. It is the third level of software testing performed after Integration Testing and before Acceptance Testing. The purpose of this test is to evaluate the system's compliance with the specified requirements.

#### **4.4.1 System Testing**

System testing is a level of software testing where a complete and integrated software is tested. It is the third level of software testing performed after Integration Testing and before Acceptance Testing. The purpose of this test is to evaluate the system's compliance with the specified requirements. Normally, independent Testers perform System testing. It is performed by using the Black Box Testing method.

#### **4.2.2 Unit testing**

Unit testing is a type of software testing where individual units or components of a software are tested. The purpose is to validate that each unit of the software code performs as expected. Unit Testing is done during the development (coding phase) of an application by the developers. Unit Tests isolate a section of code and verify its

correctness. A unit may be an individual function, method, procedure, module, or object. Unit testing is a WhiteBox testing technique that is usually performed by the developer.

### **4.4.3 Functional Testing**

Functional testing is a type of software testing whereby the system is tested against the functional requirements/specifications. Functions (or features) are tested by feeding them input and examining the output. Functional testing ensures that the requirements are properly satisfied by the application. This type of testing is not concerned with how processing occurs, but rather, with the results of processing.

### **4.4.4 White Box Testing**

White box testing is testing of a software solution's internal structure, design, and coding. In this type of testing, the code is visible to the tester. It focuses primarily on verifying the flow of inputs and outputs through the application, improving design and usability, strengthening security. White box testing is also known as Clear Box testing, Open Box testing, Structural testing, Transparent Box testing, Code-Based testing, and Glass Box testing. It is usually performed by developers.

### **4.4.5 Black Box Testing**

Black box testing is defined as a testing technique in which functionality of the Application Under Test (AUT) is tested without looking at the internal code structure, implementation details and knowledge of internal paths of the software. This type of testing is based entirely on software requirements and specifications. In Black box Testing we just focus on inputs and output of the software system without bothering about internal knowledge of the software program.

## 4.5 Module Testing

### 4.5.1 Login/Logout

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Username and Password	If input data is correct then permit to next page and start respected user session.	If input data is correct then permit to next page and start respected user session.	Pass
2.	Incorrect Username and Password	If input data is incorrect then it should display a dialog box with error message “invalid username and/or password”.	If input data is incorrect then it should display a dialog box with error message “invalid username and/or password”	Pass
3.	Incorrect Password	If input data is incorrect then it should display a dialog box with error message “invalid username and/or password”.	If input data is incorrect then it should display a dialog box with error message “invalid username and/or password”.	Pass
4.	Press Logout	End the respective user session.	End the respective user session.	Pass

### 4.5.2 Change Password

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Old password and new password	Replace the old password with new password if entered password matches with the old password.	Replace the old password with new password if entered password matches with the old password.	Pass

### 4.5.3 Admin Menu

#### 4.5.3.1 Add Course

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Record fields such as Course Code and Course Name	If both the fields are relevant then create a course with respective Course Code and Course Name.	If both the fields are relevant then create a course with respective Course Code and Course Name.	Pass

#### 4.5.3.2 Delete Course

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Select a Course Code	Delete all the records of the selected Course Code.	Delete all the records of the selected Course Code.	Pass

#### 4.5.3.3 Add/Edit Teacher

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	User details like Username, First name, Last name, other details and Course Allotted.	Add user into the system and permit all operations for Allotted Courses.	Add user into the system and permit all operations for Allotted Courses.	Pass
2.	Require changes to be updated.	Update the changes of a user into the system.	Update the changes of a user into the system.	Pass
3.	Select a user	Delete the user from the system	Delete the user from the system	Pass



#### 4.5.3.4 Add/Edit Student

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	User details like Username, First name, Last name , other details and Course Allotted.	Add user into the system and permit all operations for Allotted Courses.	Add user into the system and permit all operations for Allotted Courses.	Pass
2.	Require changes to be updated.	Update the changes of a user into the system.	Update the changes of a user into the system.	Pass
3.	Select a user	Delete the user from the system.	Delete the user from the system.	Pass

#### 4.5.3.5 Admin View

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Select a Course Code.	View the list of submissions for the selected course.	View the list of submissions for the selected course.	Pass
2	Select a Course Code.	View the list of uploaded resources of the selected course.	View the list of uploaded resources of the selected course.	Pass

#### 4.5.4 Teacher Menu

##### 4.5.4.1 MCQ

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	All the required fields such as Course Code, Quiz name and Number of questions.	If all the fields are relevant then create a Mcq quiz with entered quiz name for the respective course code.	If all the fields are relevant then create a Mcq quiz with entered quiz name for the respective course code.	Pass
2.	Select a Quiz name	Delete the quiz from the system.	Delete the quiz from the system.	Pass
3	Select a Course Code and Quiz name	Display the grade of students who attempted the quiz.	Display the grade of students who attempted the quiz.	Pass

##### 4.5.4.2 Edit MCQ

Test ID	Input	Expected O/P	Actual O/P	Remarks
1.	Required changes in the question set of the quiz.	If all the fields are relevant then update the questions of the quiz in the system.	If all the fields are relevant then update the questions of the quiz in the system.	Pass
3.	Click on the delete button of a question in the question set .	If clicked then delete the question from the quiz.	If clicked then delete the question from the quiz.	Pass

#### 4.5.4.3 View Submission

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Select a Course Code	View the list of submissions for the selected course.	View the list of submissions for the selected course.	Pass

#### 4.5.4.4 Enrolled Students

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Selected Course Code	Display the list of enrolled students for the selected course.	Display the list of enrolled students for the selected course.	Pass

#### 4.5.4.5 Upload Resource

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	All the required fields such as Course Code , Description, Choose File.	If all the fields are relevant then upload the resource.	If all the fields are relevant then upload the resource.	Pass

#### 4.5.4.6 Delete Resource

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Select a Resource .	If selected then delete the resource.	If selected then delete the resource.	Pass

### 4.5.5 Student Menu

#### 4.5.5.1 MCQ

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Select a Course Name and a quiz name.	Start the quiz for respective course.	Start the quiz for respective course.	Pass

#### 4.5.5.2 View Resource

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Select a Course Code.	View the uploaded resources of the selected course.	View the uploaded resources of the selected course.	Pass

#### 4.5.5.3 Upload Submission

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	All the required fields like Course Code, Description, Full name and a file to upload.	If all the fields are relevant then Upload the file.	If all the fields are relevant then Upload the file.	Pass

#### 4.5.5.4 View Rejected Submission

Test ID	Input	Expected O/P	Actual O/P	Remarks
1	Select a Course Code	View the rejected submissions of the selected course if any.	View the rejected submissions of the selected course if any.	Pass

## 4.6 System Snapshots

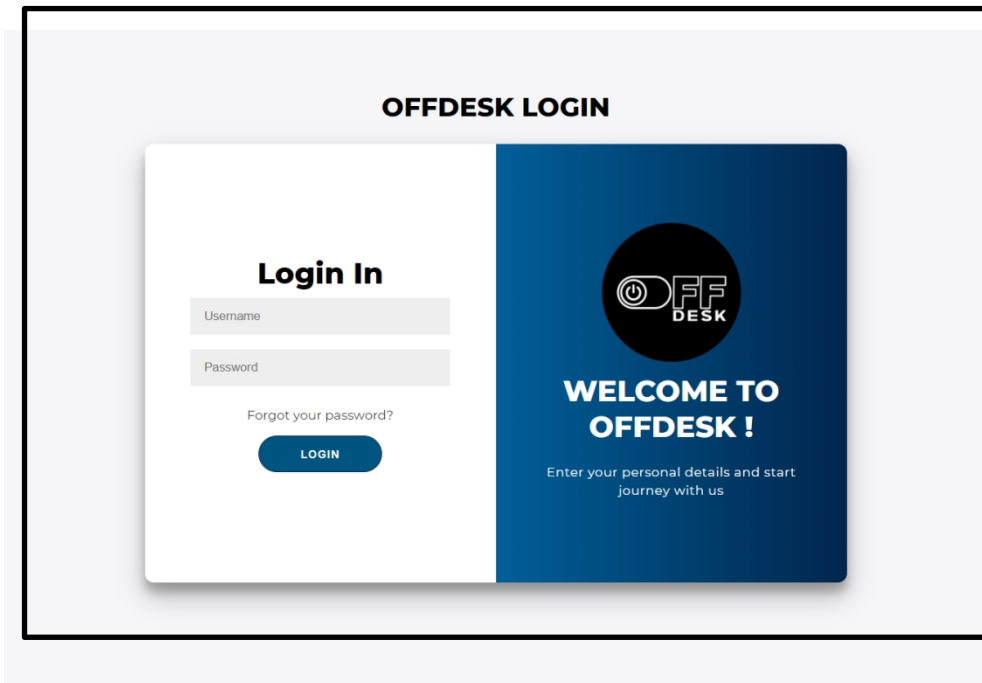


Figure 7 : Login

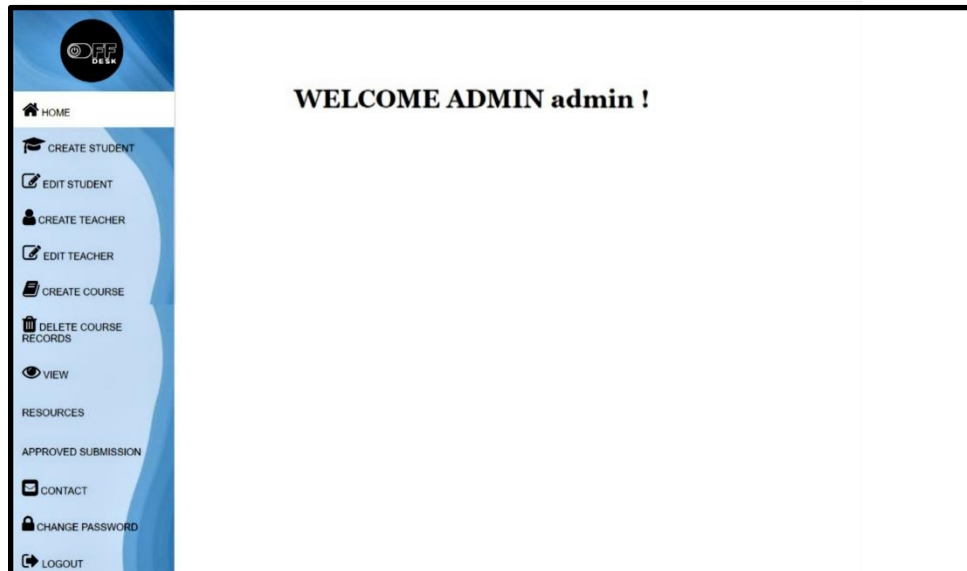


Figure 8 : Admin Menu



Figure 9 : Teacher Menu

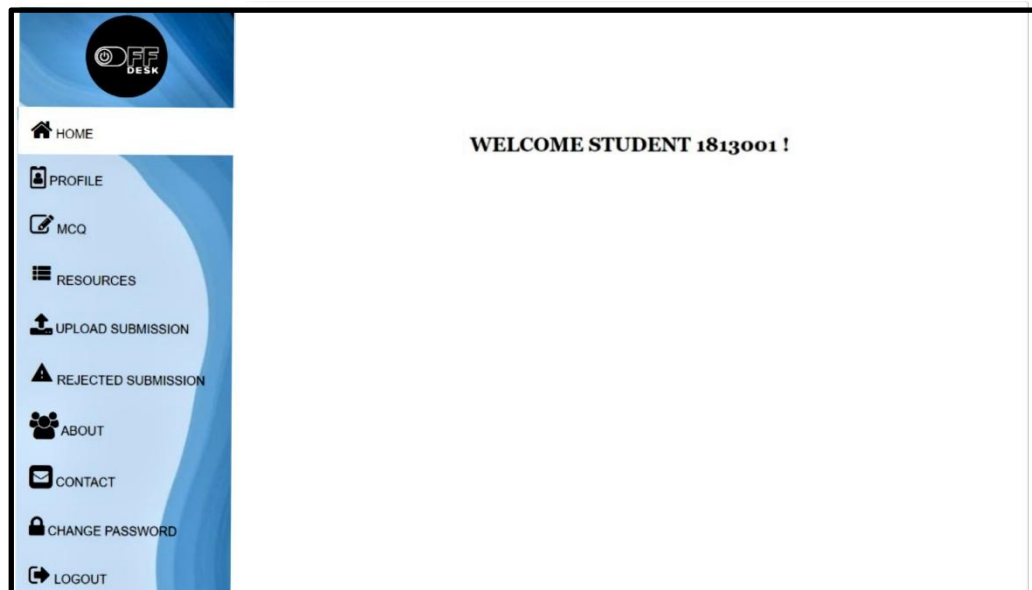
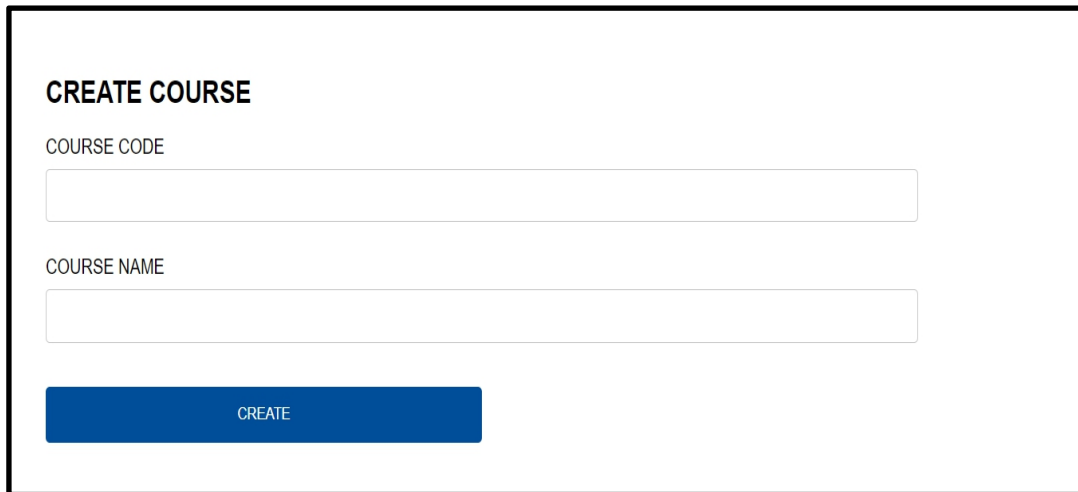


Figure 10 : Student Menu



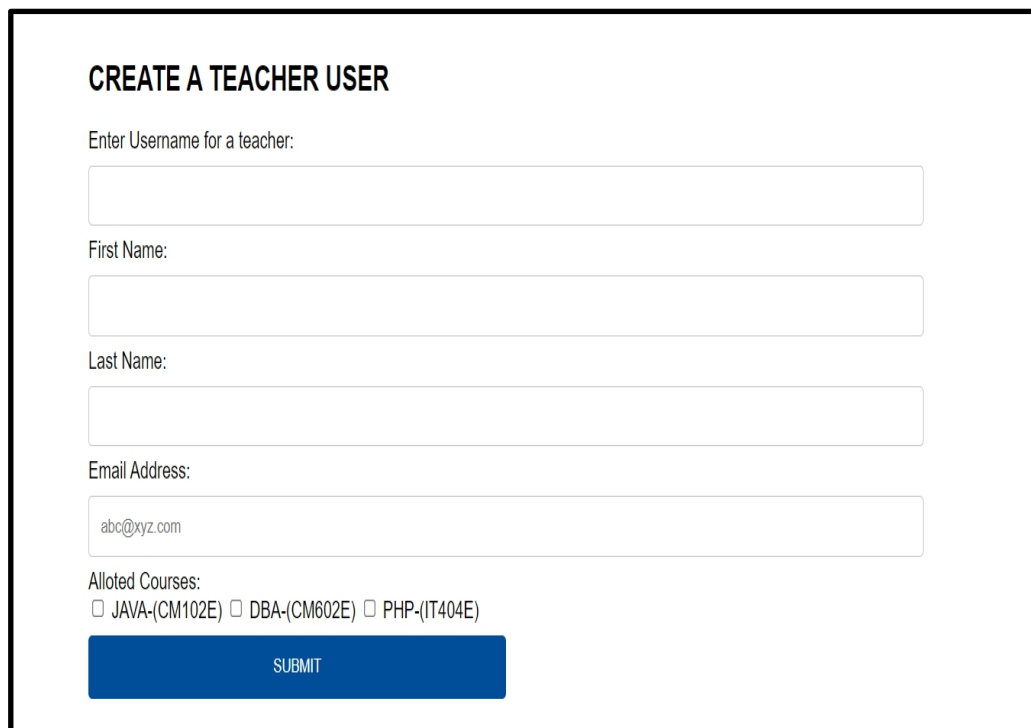
**CREATE COURSE**

COURSE CODE

COURSE NAME

CREATE

Figure 11 : Create Course



**CREATE A TEACHER USER**

Enter Username for a teacher:

First Name:

Last Name:

Email Address:

Alloted Courses:


☐ JAVA-(CM102E) ☐ DBA-(CM602E) ☐ PHP-(IT404E)

SUBMIT

Figure 12: Create Teacher User



## TEACHERS' INFORMATION

 Print as PDF

USERNAME	FIRST NAME	LAST NAME	EMAIL	ALLOTTED_COURSE		
Khatri	Sumit	Khatri	sum@yahoo.com	CM102e,it404e,	<a href="#">UPDATE</a>	<a href="#">DELETE</a>
Saleem	Saleem	Khan	saleem@gmail.com	CM102e,cm602e,it404e,	<a href="#">UPDATE</a>	<a href="#">DELETE</a>
shahid	Shahid	Ahmed	sh@gmail.com	cm602e,it404e,	<a href="#">UPDATE</a>	<a href="#">DELETE</a>

Figure 13: Edit Teacher User

## CREATE STUDENT USERS

Username:

First Name:

Last Name:

Email Address:

Program:

☒ cm

Degree:

- ☐ B.E./B.Tech
- ☐ BCA
- ☐ B.Sc./BA/BBA
- ☐ Diploma
- ☐ M.Tech/M.E.
- ☐ Other

Courses Allotted

☐ JAVA-(CM102E) ☐ DBA-(CM602E) ☐ PHP-(IT404E)

Submit

Figure 14: Create Student User

## STUDENTS INFORMATION

Choose a Batch:

All

Submit

Print as PDF

USERNAME	FIRST NAME	LAST NAME	EMAIL	PROGRAM	DEGREE	ALLOTED_COURSE	UPDATE	DELETE
1813001	Amna	Patel	am@gmail.com	cm	Diploma	CM102e,cm602e,	<a href="#">UPDATE</a>	<a href="#">DELETE</a>
1813002	Sania	Ahmed	sam855180@gmail.com	cm	B.Sc./BA/BBA	cm602e,it404e,	<a href="#">UPDATE</a>	<a href="#">DELETE</a>
1813003	Isha	Mankar	ish@gmail.com	cm	B.E./B.Tech	CM102e,cm602e,	<a href="#">UPDATE</a>	<a href="#">DELETE</a>
1813004	Rutuja	Pethe	ruru855180@gmail.com	cm	M.Tech/M.E.	cm602e,it404e,	<a href="#">UPDATE</a>	<a href="#">DELETE</a>

Figure 15: Edit Student User

## ENROLLED STUDENTS

Choose a Course:


Course Code

Submit

Print as PDF

ENROLLMENT	FIRST NAME	LAST NAME	EMAIL	SEMESTER
1813001	Amna	Patel	am@gmail.com	Diploma
1813003	Isha	Mankar	ishhh@gmail.com	B.E./B.Tech
1813004	Rutuja	Pethe	ruru855180@gmail.com	M.Tech/M.E.

Figure 16: Enrolled Students



- HOME
- PROFILE
- MCQ
- VIEW QUIZZES
- CREATE MCQ
- EDIT MCQ
- MCQ GRADES
- DELETE MCQ
- VIEW

## CREATE QUIZ

Course Code:

Choose a Course Code


Quiz Name:

Number Of Question:

Time in Minutes:

Next

Figure 17: Create Quiz



- HOME
- PROFILE
- MCQ
- VIEW QUIZZES
- CREATE MCQ
- EDIT MCQ
- MCQ GRADES
- DELETE MCQ
- VIEW

## UPDATE EXISTING MCQ

Course Code:

Choose a Course Code

Quiz Name:

Next

Print as PDF

**QUIZ STATUS:**

☐ Not Active ☒ Active

**Time:**

1

Update

SI No	question	answerA	answerB	answerC	answerD	correct ans	Action
1	A hater of knowledge and learning	bibliophile	philologist	misogynist	misologist	misologist	<a href="#">Update</a>
2	person who does not believe in the existence of god	theist	heretic	atheist	fanatic	atheist	<a href="#">Update</a>

Figure 18: Update Quiz

## DELETE QUIZ

Course Code:

Choose a Course Code

Quiz Name:

Next

Figure 19: Delete Quiz

OffDesk

cm602e

-- QUIZ NAME --

START QUIZ

Figure 20: Start quiz

### MCQ GRADES

Course Code:

Choose a Course Code

Quiz Name:

Next

Figure 21: MCQ Grade

### UPLOAD RESOURCES HERE!

Course Code:

Choose a Course Code

Description:

shahid

Choose File No file chosen

Upload

Figure 22: Upload Resource

## VIEW RESOURCES

Course Code:

Choose a Course Code

▼

Submit

**Selected Course =**

DATA	DESCRIPTION	UPLOAD BY
------	-------------	-----------

Figure 23: View Resource

## DELETE RESOURCES

Course Code:

Choose a Course Code

▼

Submit

**Selected Course = it404e**

DATA	DESCRIPTION	DELETE
------	-------------	--------

Figure 24:Delete Resource

## VIEW STUDENTS' SUBMISSION

Course Code:

Submit

Selected Course =

ID	DATA	ENROLLMENT	USERNAME	DESCRIPTION	Grade	ACCEPT	REJECT
----	------	------------	----------	-------------	-------	--------	--------

Figure 25: View Submission

## VIEW EXISTING QUIZZES

Course Code:

Next

Print as PDF

Course Code	Quiz Name	Number of Questions	Time in Minutes	Active Status
CLT106	Quiz	2	2	Active

Figure 26: View Quiz

# **Chapter 5**

## **FUTURE SCOPE & CONCLUSION**



## **5.1 Future Scope**

1. Built-in compiler to execute code. As compiler takes the source code and converts source code to a machine language(object file) , then linker takes one or more object files generated by compiler and combines them into one to create an executable file..
2. A concept of offline bulletin board can be added in home page of student module. This will help in broadcasting any necessary information that the teacher wants to share to all the students . Those students who are registered in particular subject will be able to see the messages which teacher will broadcast.
3. Login into the application using fingerprint can be implemented. As this is highly accurate ,it will ensure more security and will prevent password stealing or any kind of theft.
4. Archive question bank will be included in teachers module so that they can archive the tests that are no longer in use .These archive test can be viewed by another teachers as a reference for a particular course .

## **5.2 Conclusion**

OffDesk is Web-based application designed for user-friendly MCQ test conduction , submission and grading efficiently . The system is centralized and is very profitable to teachers for test management ,grading and uploading study materials . Students can upload assignment and practicals and they can also download resources uploaded by teachers for respective courses . The developed system is secure and mobile compatible .It is easy to use as it has an attractive and simple GUI . No training is required to run the system. OffDesk can be Very serviceable in different organizations for efficient internal assessment . It is a system that provide a platform to carry out all the things related to internal assessment in colleges or institutes.

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## References

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