

**ATMIYA UNIVERSITY**

**RAJKOT**



A

Report On

**On Board**

Under subject of

**PROJECT**

B. TECH, Semester – VII

(Computer Engineering)

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Academic Year

(2022-2023)

## **CANDIDATE'S DECLARATION**

We hereby declare that the work presented in this project entitled “**Online QUIZ**” submitted towards completion of project in **7<sup>th</sup> Semester** of B. Tech. (Computer Engineering) is an authentic record of our original work carried out under the guidance of “**Prof. Janak Maru**”.

We have not submitted the matter embodied in this project for the award of any other degree.

Semester: 7<sup>th</sup>

Place: Rajkot

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**ATMIYA UNIVERSITY**  
**RAJKOT**



**CERTIFICATE**

Date:

This is to certify that the “**Online quiz**” has been carried out by **Banugariya jeel** under my guidance in fulfillment of the subject Project in COMPUTER ENGINEERING (7<sup>th</sup> Semester) of Atmiya University, Rajkot during the academic year 2022-23.

Prof. **Janak Maru**

**(Project Guide)**

Prof. Tosal M. Bhalodiya

**(Head of the Department)**

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Prof. **Janak Maru**

**(Project Guide)**

Prof. Tosal M. Bhalodiya

**(Head of the Department)**

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BANUGARIYA JEEL (190002005)

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## **ABSTRACT**

in this system there are mcq type question are provided to the candidate and there are four option are given. candidate can select one option and the result will be displayed to the candidate at the end of the exam. in this system there are two panels,user profile and andmin profil.admin can insert update and delete questions and candidates.

The purpose is to provide a system that saves the effort and time of institution.

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# **CHAPTER – 1**

## **INTRODUCTION**

### **1.1 PURPOSE**

Online examination system is a multiple choice question (MCQ) based examination system. It provides an easy to use environment for both test conductors and student appearing for examination. The main objective of online quiz examination system is to provide all the features that an examination system must have with the interfaces that don't scare its users.

### **1.2 SCOPE**

The main purpose of the system is to efficiently evaluate the candidate thoroughly through a fully automated system that not only saves a lot of time but also gives fast result and saves paper.

It is a cost effective and popular means of mass evaluation system.

### **1.3 TECHNOLOGY AND TOOLS**

**Frontend:** Technologies used for designing the structure and layout of the web application.

#### **1.Hypertext Markup Language (HTML):**

HTML is the standard markup language for creating web pages and web applications, Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. With Cascading Style

#### **2.Cascading Style Sheets (CSS):**

CSS is a style sheet language used for describing the presentation of a document written in a mark-up language like HTML.CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

#### **3.HYPertext PREPROCESSOR (PHP):**

PHP is know as a general purpose scripting language that can be used to develop dynamic and interactive website.

#### **4.MYSQL:**

MYSQL is an open source relational database management system.its name is a combination of my the name of co founder MICHAEL WIDENIUS daughter my and SQL the abbreviation for structured query language.

**Backend:** Technologies used to create the back end of the application.

### **1..PHP :**

Our main programming technology is PHP. We constantly improve on our architecture to keep up with latest technology and advancements. Our experienced team is capable of providing customized solutions as well as integrating with any third-party resources

### **2.SQL:**

This is a relational open-source relational database management system(RDBMS). It has easy query structure so user can manipulate data easily. Used to store database for web applications. MySQL is a central component of the widely used LAMP open source web application software stack. LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python. Free-software-open source projects that require a full-featured database management system often use MySQL.

# **CHAPTER - 2**

## **PROJECT MANAGEMENT**

### **2.1.1 PROJECT PLANNING**

- Scheduling manpower and other resources needed to develop the system.
- Staff organization and staffing plans.
- Risk identification, analysis, and accurate planning.
- Estimating some of the basic attributes of the project like cost, duration and efforts. the effectiveness of the subsequent planning activities is based on the accuracy of these estimations. Miscellaneous plans like quality assurance plan, configuration management plan, etc.

Project management involves planning, monitoring and control of the people, process, and the events that occurs as the software evolves from a preliminary concept to an operational implementation. Cost estimation is a relative activity that is concerned with the resources required to accomplish the project plan.

#### **2.1.1 Project Development Approach and Justification**

A Software process model is a simplified abstract representation of a software process, which is presented from a particular perspective. A process model for software engineering is chosen based on the nature of the project and application, the methods and tools to be used, and the controls and deliverables that are required. All software development can be characterized as a problem-solving loop which in four distinct stages is encountered:

- Requirement analysis
- Design
- Coding
- Testing
- Deployment

### **2.1.2 Milestones and Deliverables**

Management needs information. As software is tangible, this information can only be provided as documents that describe the state of the software being developed without this information it is impossible to judge progress at different phases and therefore schedules cannot be determined or updated.

Milestone is an end point of the software process activity. At each milestone there should be formal output such as report that can be represented to the management. Milestones are the completion of the outputs for each activity. Deliverables are the requirements definition and the requirements specification.

Milestone represents the end of the distinct, logical stage in the project. Milestone may be internal project results that are used by the project manager to check progress. Deliverables are usually Milestones but reverse need not be true. We have divided the software process into activities for the following milestone that should be achieved.

### **2.1.3 Roles and Responsibilities**

This phase defines the role and responsibilities of each and every member involved in developing the system. To develop this system there was only one group with two members working on the whole application. Each member was responsible for each and every part of developing the system. Each of the group members has sufficient knowledge in several programming languages. Our team structure is of mixed control team organization as it consists of both democratic and chief programmer organization.

### **2.1.4 Group Dependencies:**

The structure chosen for the system is the chief programmer structure. In this system, Chief Programmer team for the structure is used because in the organization, a senior engineer provides the technical leadership and is designated as the chief programmer. The chief programmer partitions the task into small activities and assign them to the team members. He also verifies and integrates the products developed by different team members and they work under the constant supervision of the chief programmer. For this system reporting entity represents myself and the role of chief programmer is played by my internal guide.

## 2.2 PROJECT SCHEDULING

The scheduling is the peak of a planning activity, a primary component of software project management. When combined with estimation methods and risk analysis, scheduling establishes a roadmap for project management. The characteristics of the project are used to adapt an appropriate task set for doing work.

## 2.3 RISK MANAGEMENT

Risk management consists of a series of steps that help a software development team to understand and manage uncertain problems that may arise during the course of software development and can plague a software project. Risks are the dangerous conditions or potential problems for the system which may damage the system functionalities to very high level which would not be acceptable at any cost. So, in order to make our system stable and give its 100% performance we must have identify those risks, analyze their occurrences and effects on our system and must prevent them to occur.

### 2.3.1 Risk Identification

Risk identification is a first systematic attempt to specify risks to project plan, scheduling resources, project development. It may be carried out as a team process using brainstorming approach.

**Technology risk:** Technical risks concern implementation, potential design, interfacing, testing, and maintenance problems

- Database Corruptness
- Garbage Collection

**People Risks:** These risks are concerns with the team and its members who are taking part in developing the system.



- Leaking an important data
- Failure of the administration
- Lack of knowledge
- Lack of clear product vision.
- Technical staff conflict
- Poor communication between people.

**Tools Risks:** These are more concerned with tools used to develop the system

- Tools containing bugs.
- Lack of tools.

**General Risks:** General Risks are the risks, which are concerned with the mentality and resources.

- Rapidly changing requirements.
- Lack of resources can cause great harm to efficiency and timely productivity.
- Changes in requirements can cause a great harm to implementation, designing and schedule of developing the system.
- Insufficient planning and task identification.

### 2.3.2 Risk Analysis

**“Risk analysis = risk assessment + risk management + risk communication.”**

Risk analysis is employed in its broadest sense to include:

#### **Risk assessment**

Involves identifying sources of potential harm, assessing the likelihood that harm will occur and the consequences if harm does occur.

For this project It might be: -

- System Crash

#### **Risk management**

Evaluates which risks identified in the risk assessment process require management and selects and implements the plans or actions that are required to ensure that those risks are controlled.

Precautions taken to make risks minimal are as under: -

- Periodical backups are taken to avoid major loss in case of system crash.

## **Risk communication**

Involves an interactive dialogue between stakeholders and risk assessors and risk managers which actively informs the other processes.

Steps taken for risk communication is as under: -

- All the possible risks are listed out during communication and project is developed taking care of that risks.
- Probability of certain risks is negotiated with client.

# CHAPTER – 3

## SYSTEM REQUIREMENT STUDY

### 3.1 USER CHARACTERISTICS

#### 1. User

- Registration
- Manage Profile
- Login
- View courses
- Can give the Exam
- View result

### 3.2 HARDWARE AND SOFTWARE REQUIREMENT SPECIFICATION

This shows minimum requirements to carry on to run this system efficiently.

#### 3.2.1 Hardware Requirements

**Table 3.2.1.1 Backend Hardware Requirements**

Devices	Description
Processor	Intel Core Duo 2.0 or higher
RAM	512 MB or more
ROM	10 GB or more

#### 3.2.2 Software Requirements

**Table 3.2.2.1 Software Requirements**

For What	Software
Operating System	Windows 7/8/10, Linux
Server	NGINX or Apache Server
Backend	NodeJS 14 or higher

Database	MongoDB 4 or higher
----------	---------------------

**3.2.3 Client-Side Requirements**

**Table 3.2.3.1 Client-Side Requirements for Web App**

For What	Requirement
Browser	Any compatible browser

# **CHAPTER – 4**

## **SYSTEM ANALYSIS**

### **4.1 STUDY OF CURRENT SYSTEM**

Currently, Online examination is highly used in day to day life because it saves time and also it is the most accurate system as maximum participants are increasing in today's life. Online Examination System is a computerized system that gives instant results and also saves time. Online examination system uses fewer resources and reduce the need for question papers and answer scripts, exam room scheduling, arranging invigilators, coordinating with examiners, and more.

### **4.2 PROBLEMS AND WEAKNESS OF CURRENT SYSTEM**

- Challenges in Technology Adoption.
- Infrastructural Barriers.
- Difficulty in Grading Long-answer Type.
- Susceptible to Cheating.
- Transitioning to Open-Book Exams.

### **4.3 REQUIREMENTS SPECIFICATION**

Requirements specification adds further information to the requirements definition.

#### **4.3.1 User Requirements**

- User Registration
- Manage Profile
- Login
- View courses
- Can give the Exam
- View result



## Chapter – 5

### System Design

#### 5.1.1 Admin Login:

## Online Examination System

Login to start your session

   
   
 Remember Me   
[Forgot your password?](#)

#### Admin Login

### 5.1.2 Dashboard:

The screenshot displays the 'Online Exam System' Admin Dashboard. The top navigation bar is orange and contains the system name, a menu icon, and the user 'Hi, Admin'. A dark sidebar on the left lists navigation options: Dashboard, Master Data, Relation, Question Bank, Exam Results, User Management, and Settings. The main content area, titled 'Dashboard Application Data', features six data cards with 'More info' links:

Category	Count
Department	4
Class	8
Lecturer	5
Student	3
Course	6
Questions	19

Admin Dashboard

## 5.2 INTERFACE DESIGN

### 5.2.1. ER Diagram

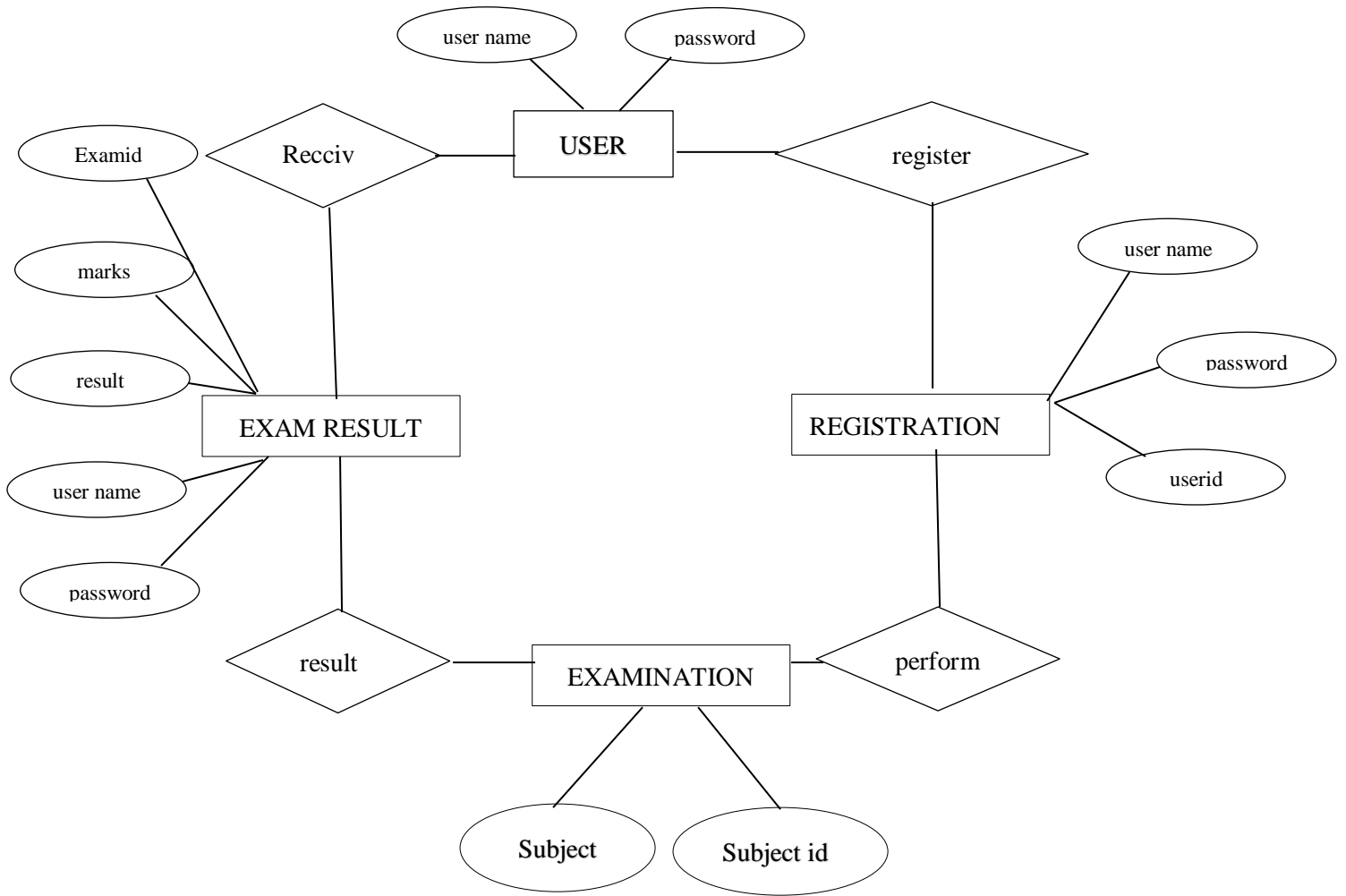


Figure 5.2.1. ER Diagram



## 5.2.1 activity diagram

### 5.2.1.1 Use Case Diagram

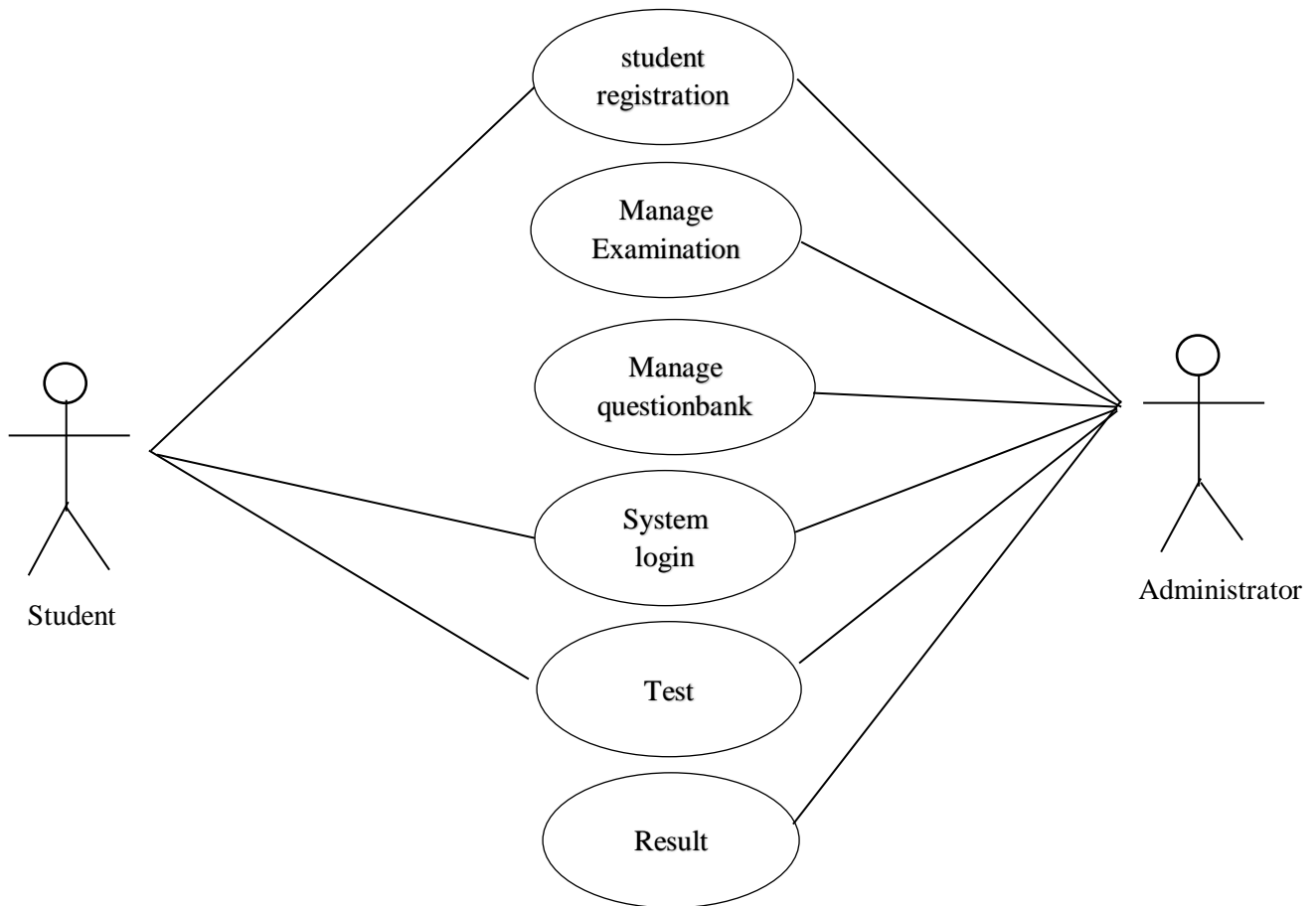
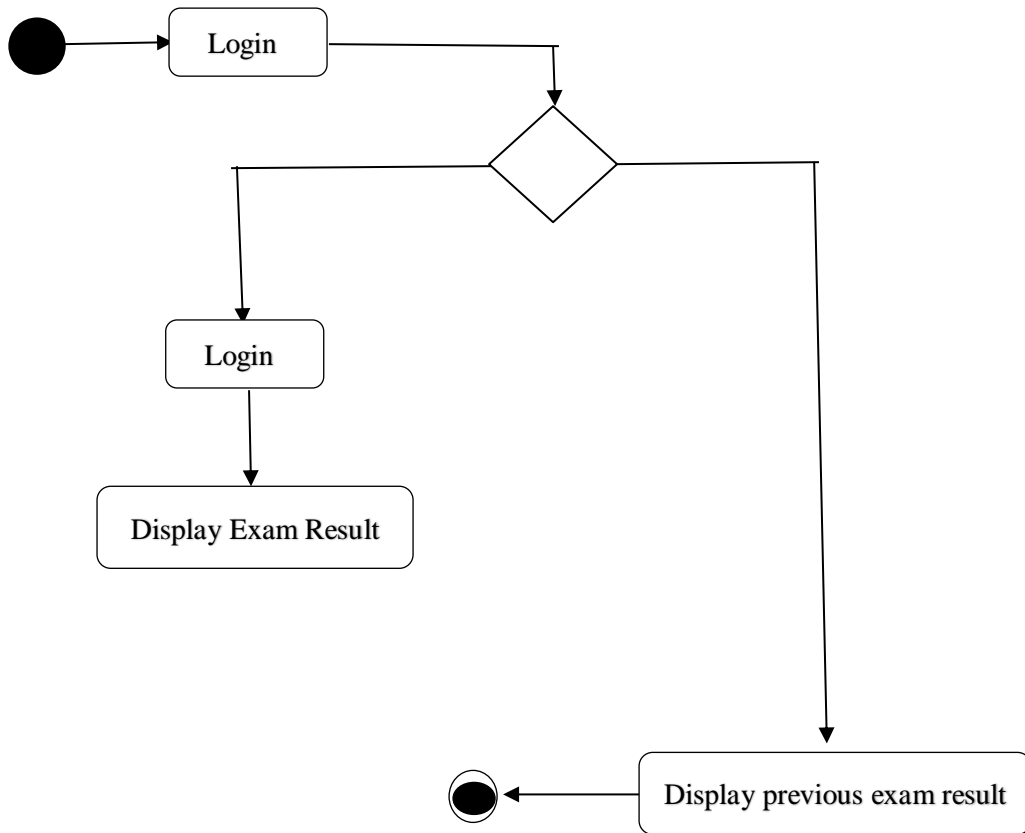


Figure 5.2.1.1 Use Case Diagram

**5.2.1.2 Admin user Activity Diagram:**



### 5.2.3 Data Flow Diagram

#### 5.2.3.1 DFD level 0

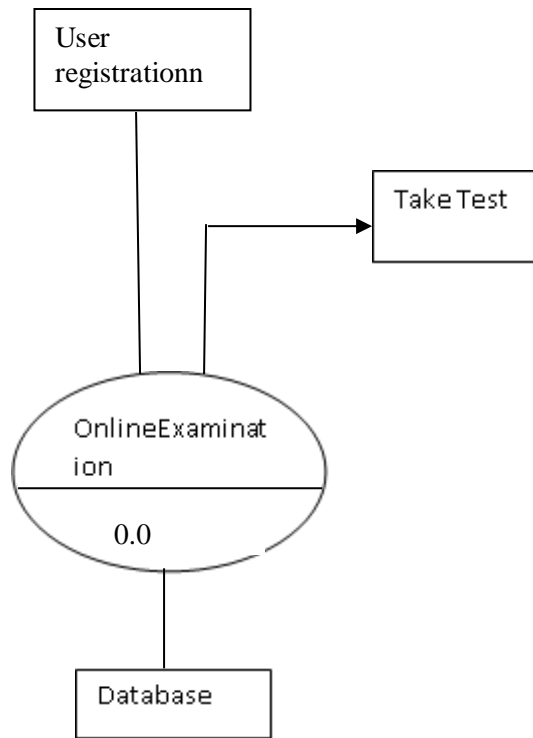


Figure 5.2.3.1 DFD Level 0

#### 5.2.3.2 DFD level1

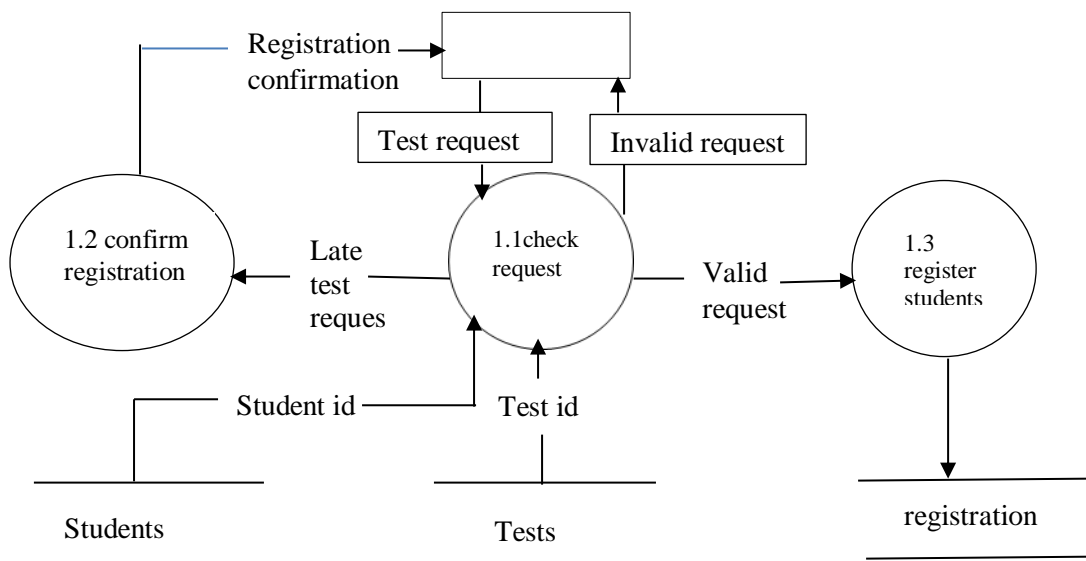
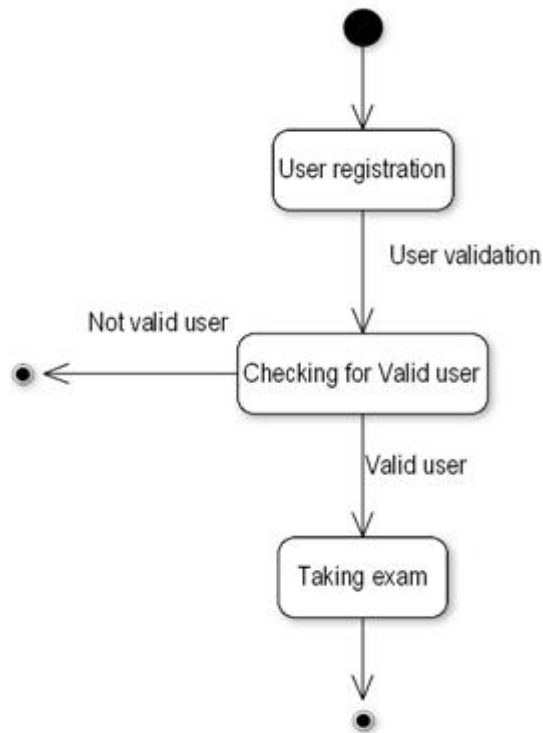


Figure 5.2.3.2 DFD Level 1

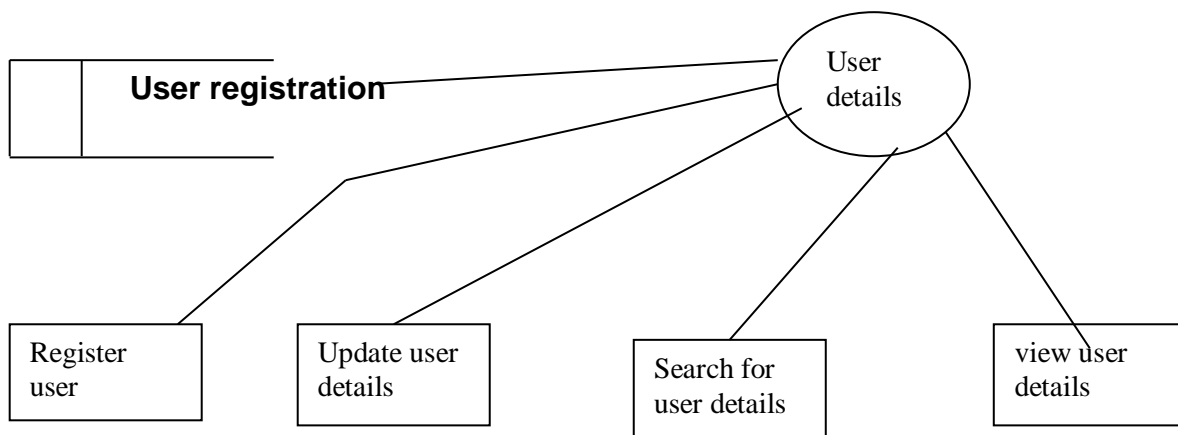
## 5.2.4 statechart diagram

### Statechart Diagram



5.2.4.1 statechart diagram

### 5.2.4.2 user registration diagram



5.2.4.2 user registration diagram

# **CHAPTER -6**

## **TESTING**

Various parameters like implementation environment, program modules and coding standards are explained in previous chapter while this chapter is aimed to provide brief account of testing the software.

There are two principal motives of testing the software

1. To rectify the error in execution
2. To check the viability of software

The testing ensures that the software is according to the required specification standards and performs the task meant for it.

### **6.1 TESTING PLAN**

Testing is carried out at the following three stages:

#### **6.1.1 Design Testing:**

The design errors are to be rectified at the initial stage. Such errors are very difficult to repair after the execution of software.

#### **6.1.2 Implementation Testing:**

The errors occurred at this stage can't be overlooked because such errors do not allow the further process.

#### **6.1.3 Coding Testing:**

The coding procedure plays significant role in software designing. The improper coding of any software can generate inconsistent results. Such errors may occur due to incorrect syntax or false logic. If the errors at coding stage remain unnoticed may give rise to grave failure of the system.

### **6.2 TESTING STRATEGY**

A strategy for software testing integrates software test case design method into a well-planned series of steps that result in the successful construction of the software. The strategy provides the roadmap that describes the steps to be conducted as a part of testing, then these steps are planned and then undertaken, and how much effort, time and resource will be required.

- We have tested our whole system using bottom up testing strategy.
- Bottom up testing involves integrating and testing the modules to the lower levels in the hierarchy, and then working up hierarchy of modules until the final module is tested.
- Bottom up testing strategy shows how actual testing is to be done with whole system but it does not show any detail about each module testing.
- For each module testing we have decided to test each lower level module with white box testing strategy.
- When all modules are tested successfully then We will move to one step up and continue with white box testing strategy.

### **Why White Box Testing in my Project?**

During the project we were making the applications, we knew how it should proceed internally; we needed to Debugging also for testing our small functions and removing bugs.

### **Why interface Testing in our Project?**

We examined the code to be tested and explicitly list each call to an external component. In the system, standards test for GUIs have been performed, which are as follows.

- Name of the form in system is given appropriately.
- All navigation functions were verified for correctness.
- Validations for all inputs in forms were done.
- Whether the system prompts the user with appropriate message as and when invalid information is entered.
- All required fields aren't left blank.

## **6.3 TESTING METHOD**

### **6.3.1 Unit Testing**

The unit testing is meant for testing smallest unit of software. There are two approaches namely bottom-up and top-down.

In bottom up approach the last module is tested and then moving towards the first module while top down approach reverses the action. In present work we opt for the first one.

The bottom up approach for the current project is carried out as shown in.

### **6.3.2 Integration Testing**

The integration testing is meant to test all the modules simultaneously because it is possible that all the modules may function correctly when tested individually. But they may not work altogether and may lead to unexpected outcome.

### **6.3.3 Validation Testing**

After the integration testing software is completely assembled as a package, interfacing error have been uncovered and corrected, and then validation testing may begin. Validation can be defined in many ways but a simple definition is what a validation succeeds when software functions in a manner that can be reasonably accepted by the user.

## **CHAPTER – 7**

### **CONCLUSION**

- Automation of the entire system improves the efficiency
- It provides a friendly graphical user interface which proves to be better when compared to the existing system.
- It gives appropriate access to the authorized users depending on their permissions.
- It effectively overcomes the delay in communications.
- Updating of information becomes so easier.
- System security, data security and reliability are the striking features.
- The System has adequate scope for modification in future if it is necessary.



## **CHAPTER – 8**

### **LIMITATIONS AND FUTURE ENHANCEMENTS**

#### **8.1 LIMITATIONS**

Though we tried our best in developing this system but as limitations are mere parts of any system so are of our system. Some limitations of online quiz system are as under:

- Low Storage Capacity for free but we can upgrade with subscription
- Communication between admin and user

#### **8.2 FUTURE ENHANCEMENT**

There is always a scope for enhancements in any developed system, especially when our nature of the project is iterative waterfall which allows us to rethink on the method of development to adopt changes in the project. Below mentioned are some of the changes possible in the future to increase the adaptability, and efficiency of the system.

8.2.1 Increase Storage Capacity: To allow large file sizes on our platform.

8.2.2 More attractive GUI graphical user interface

8.2.3 Paragraph writing also

# **CHAPTER – 9**

## **REFERENCES**

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You tube video

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