DataRitz Technologies
Enhancing Technology Experience

Abhigyan Project

Project-Based Internship 2020 Report

Submitted

To

DataRitz Technologies

2019-20
By

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Under the guidance of
HARIVANS PRATAP SINGH

CERTIFICATE

This is to certify that Project Report entitled “Abhigyan” which is submitted by Mohit Chauhan,Mourya Pradeep Ramashare,Riya Rastogi in partial fulfillment of the requirement for the summer internship of A Hands-On Approach To Software Testing in Department of Computer Science And Engineering of ABES Engineering College,Ghaziabad, is a record of the candidate own work carried out by him under my/our supervision.

Supervisor

Date

ACKNOWLEDGEMENT

It gives us a great sense of pleasure to present the report of the Project Based Internship 2020 undertaken during BTech (2nd year). We owe special debt of gratitude to Harivansh Pratap Singh, Lead Technical Architect, DataRitz Technologies for his constant support and guidance throughout the course of our work. His constant motivation has been a constant source of inspiration for us. It is only his cognizant efforts that our endeavors have seen light of the day.

We also take the opportunity to acknowledge the contribution of team members of DataRitz Technologies for their full support and assistance during the development of the project.

We also do not like to miss the opportunity to acknowledge the motivation of the Computer Science and Engineering department of ABES Engineering colleges to provide us the opportunity to undergo training at DataRitz Technologies.

Signature:

Name :

Roll No.:

Date :

Project Summary

Region/Unit	DataRitz Technologies
Location	Ghaziabad
Program	DataRitz Technologies.Abhigyan.(V.1)
Project Number	DataRitz Technologies.
Project Description	This project is made for ABES Engineering college.From this site teacher can schedule the students online lecture time and date.Student can submit their assignment.Teachers can mark online attendance.Abhigyan focuses on effective online learning delivery among students, acting as a platform for online content, including courses, & classroom management for instructor-led training.

Document Control

Prepared by:	Mohit Chauhan, Mourya Pradeep Ramashare,Riya Rastogi
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College:	ABES Engineering colleges, Ghaziabad
Department:	Computer Science and Engineering
Location:	Ghaziabad
Version date:	7 June 2020 Documentation complete
Status:	Approved Document

Version history

Version no.	Date	Changed by	Nature of amendment
1.0			
1.1			

Endorsement and Approval

Project Customer

I approve the business requirements specifications in this document.

Name	ABES Engineering colleges		
Position	Director		
Signature		Date	

The following officers have **endorsed** this document

Project Sponsor

Name	ABES Engineering college		
Position	Director		
Signature		Date	

Project Manager (= Component Project Customer)

Name	Harivansh Pratap Singh		
Position	Lead Technical Architect		
Signature		Date	

Component Project Sponsor

I accept the business requirements specifications in this document.

Name	Harivansh Pratap Singh		
Position	Lead Technical Architect		
Signature		Date	
Comments			

The following officers have **endorsed** this document

Component Program Manager

Name	Mr. Gaurav Kansal		
Position	Chief Operating Officer		
Signature		Date	

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CHAPTER 1

INTRODUCTION

1.1 Aim of the Project:

The first and the foremost aim of this project is to ensure that it fulfills all the requirements of the customer, which means firstly understanding the customer requirements and then ensuring it behaves in the similar manner.

1.2 Objective of the Project:

The main objective of this project is to check whether software which is being built, is as per the requirement of the customer or not . Secondly to find defects from the software before customers find them out.Defects get a fix from the developer.Preventing defects.Gaining confidence.

1.3 Scope of the Project:

The scope of the project is that it gaps a bridge between users and development team.It troubleshoot all issues and bugs as well as control the quality of the resulting product.

CHAPTER 2

FEASIBILITY STUDY

2.1 Technical Feasibility:

- This project is teachinally feasibility as per assignment of the project.
- UI Path is used for testing purposes.
- UMLet to design the Diagrams.
- Pc with 1 GB hard-disk and 256MB RAM is required.
- It is easy to install in all the systems whenever needed. It is more efficient,easy to understand by all new users.

2.2 Financial Feasibility:

- Software engineers are required to develop this project.
- Internet broadband connectivity is required to work on the module.
- Office rooms are required for the meeting between client and developer.
- Developer paid version software is required to develop the project.
- Testing software is required for the testing of the project.
- 3-5 laptops are required for working on the project.
- Electricity facilities are required for charging or for essential needs in the office.
- Hosting is required to deploy the software on the internet.
- Paid security is required to protect software from the hacker.
- All the technical requirements are more commonly available and even the cost involved in the installation process is not high.

- **2.3 Market Feasibility:** As per the market requirement ,this software is feasible
- .As it will provide the user(teachers) to manage the record of students
- .It help them to schedule the training session.
- It allows to maintain client(student)records.
- It helps to maintain grades and course of every student
- .It decreases the work of the teacher as the record is maintained.
- It is also easy to access.

2.4 Social Feasibility:

- The impact of the project on the society is good.Because we can provide the information which is generally provided by college.
- We will show the information of college and students according to the rules and policies of the college.
- The project is socially feasible as each and every information can be given very easily to everyone.
- It gaps the communication gap between the student and teacher.

CHAPTER 3

REQUIREMENT ANALYSIS REPORT

4.1 Requirement Gathering:

The requirement of the project from the client are below:

- The login page is required by the client for entering in the website.
- The dashboard is required for both students and instructors.In the dashboard student and teacher can view all their related details.
- The calendar is required for pinning the event on the calendar and sending the information related to the event via email.
- Students can pin the event on the calendar for their reminder.
- Course modules are made for the students to choose their course according to their needs.
- Instructors can add their course in their module which they can teach during the course duration.
- User profiles are required for the both student and instructor to add their personal details .
- Assignment summation modules are required for the both students and instructors.
- Instructors can upload the assignment and students can view and submit their work .
- Grades modules are required for when the instructor grades the assignment of the student to show that in it.
- Message modules are required for the chat between students and the instructor.
- Logout modules are required for the end of the current session for the both students and instructors.
- Online chat modules are required for the instructor to take a lecture on this module.

- Announcements module are required for instructor announcements related in the course to the students.
- In the calendar module instructors can add the weekly planning in it.

3.2 Requirement Analysis:

Requirement analysis of the module are below:

- Login page is the starting page of the software for the entry point.
- Dashboard for all updates related to the student and instructor.
- At the dashboard student can see her name and dropdown menu for going to the next module.
- Profile Module contains all personal details related to an individual user as a student or instructor.
- Calendar modules are used for updating the upcoming event .
- Calendar can view both the student or instructor side.
- In this module individuals can maintain their upcoming events.
- Notification modules are used for the remainder or as a message box in the project.
- Notification preferences are used for setting the priority of messages received from the instructor.
- Profile modules are used showing data related to the students and instructors as an individual basis.
- Preference modules are used to set the preference of a particular course and instructor or work on the site.
- Message modules are required for both students and instructors to send the message and receive messages by this message module.
- Course modules are used for the adding the course in their individual course list or select course as per choice.
- Attendance modules are required for the instructor for taking the attendance .

- Assignment module are required for the assignment upload for the instructor and assignment summation for the students.
- Grade module are required for showing the report of the students.
- Video chat bot are required for taking the lecture online.
- Instructors can update the daily video and notes on the section of the classroom.
- Participant sections are used for showing the list of participants in the online class taken by the instructor.
- The organization social site link is below with their symbol.

3.3 Requirement Specification:

The specific requirement of the project ara as follows:

- At this website all required functions of the client are available on this site.
- Sites are secure to use,there is no third party that access the client data.
- User interface of the site is easy to access.
- The website is accessible to all search engines.
- The performance of the site is robust.
- Quality of the site is best as compared to other sites available on the internet.
- Virtual classrooms are created by the instructor and students can participate in the lecture.
- Login password are required to access the organization portal.
- Those passwords are provided by the administrator of the organisation.
- The website is secure to use and there is no third party access to this website without permission.

3.4 Functional Requirements:

Provide Calendar:

- Students can add their event on the calendar with date and time .
- Students can view the event that the teacher had posted on the website according to date and time.

Dashboard:

- Students and teachers can view their work profile and all details related to them at the dashboard.

Profile:

- Students can update their profile by filling up their details like gmail address, native address,blood group.
- Students can view the course status completion,no of course taken .
- The teacher can allot the course to the student by the student's request.
- Teacher can view all the personal information on his profile page.

Grade:

- Students can view their grade on this page that is given by the instructor.

Message:

- Students can chat with the instructor with the message dialogue box.
- Students can ask their doubts by message forum and instructors can resolve student doubts.

Preference:

- In the preference page both student and instructor can choose the menu of where they should want to go.

Private Files:

- The instructor can upload the assignment and students can submit their assignment in this module.

Badges :

- The badges of the students are shown on this function.

Participant:

- In this module the instructor can views name of the participant on it.
- In this module instructors can add the participants and remove from courses.

Message:

- Students can send the message to the instructor.
- Students can ask their queries by this forum.

Notification:

- Messages from the instructor related to the course are sent via this function.
- Students can receive the message related to their pending assignment or reminders for their work are received via this function.
- Messages related to upcoming courses are also sent via notification.

Provide Customer Support :

- The system shall provide online help, FAQ's customer support, and sitemap options for customer support.
- The system shall allow the user to select the support type he wants.
- The system shall allow users to enter the customer and product information for the support.
- The system shall display user contact of the store and Project support desk
- The system shall display the online help upon request.
- The system shall display the FAQ's upon request.

3.5 Non- Functional Requirements:

Performance (NFR-1):

- The product shall be based on the web and has to be run from a web

server.

- The product shall take initial load time depending on internet connection strength which also depends on the media from which the product isrun.
- The performance shall depend upon hardware components of the client/customer.

Security (NFR-2):

Data Transfer (NFR-2A):

- The system shall use secure sockets in all transactions that include any confidential data of student and teacher.
- The system shall automatically log out all students after a period of inactivity.
- The system shall confirm all transactions with the customer's web browser.

Data Storage (NFR-2B):

- The customer's web browser shall never display a customer's password. It shall always be echoed with special characters representing typed characters.
- The system's back-end servers shall never display a customer's password. The customer's password may be reset but never shown.
- The system's back-end servers shall only be accessible to authenticated administrators.
- The system's back-end databases shall be encrypted and within the company's perimeter.

Reliability (NFR-3):

- The system provides storage of all databases on redundant computers with automatic switchover.
- The reliability of the overall program depends on the reliability of the separate components.
- The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recentchanges.

Maintainability (NFR-3)

- In case of a failure, a re-initialization of the program will be done.
- Also the software design is being done with modularity in mind so that maintainability can be done efficiently

Constraints (NFR-4):

- It cannot ensure the reliability of the review.

3.6 Stakeholder detail and its Requirements:

STAKEHOLDER IMPACTS

A. Internal

Stakeholder	Impact/Interest in the project
Student	This website is designed for maintaining students' online class room, Summit assignment,etc.
Teacher	Teachers will upload the marks of students, attendance,etc.

Working staff Of College	The Department of registrar ,Library can access the portal for the student information.

B. EXTERNAL

STAKEHOLDER	IMPACT/INTEREST IN THE PROJECT
Parents	Parents are visiting this website for checking the record of their children.
Visitors	The visitors are visit the website for checking the facilities of college, placement record, students performance,etc

3.7 OPERATIONAL OR TECHNICAL REQUIREMENT NAME

Reference	OR001
Description	Domain Name

Reference	OR002
Description	Hosting Server with Java Application Servers

Reference	OR003
Description	MySQL Database on Hosting Server

Reference	OR004
Description	SSL Certificate

3.7.1 acceptance testing requirements:

3.7.2 Software requirements : Adobe XD, Oracle Database, Notepads, Visual studio code

3.7.3 Hardware requirements: Laptop with proper internet connectivity to every member of the team.

3.7.4 Resource requirements

3.7.4.1 Internal Resource: Software Engineer(Designer,Coder,Project manager,Tester)

3.7.4.2 External Resource: Funding,Internet resources,Office**.**

3.7.5 Security requirements:The security requirements are as follows:

- Authentication and password management
- Authorization and role management
- Audit logging and analysis
- Network and data security
- Code integrity and validation testing
- Cryptography and key management
- Data validation and sanitization
- Third party component analysis.

3.7.6 Portability requirements: This software can run on the chrome, explorer,mozilla firefox,or any web browser.

3.7.7 Legal requirements:

CHAPTER 4

4.1 PROJECT INITIATION CHECKLIST

- Is the scope of the project clear? Yes
- Is the project funding approved? Yes
- Have all the stakeholders been identified? Yes
- Has a sponsor been identified? Yes
- Does the project contain 3rd Party or external resources? Yes
- Have you confirmed in writing the project delivery expectations (time and scope) with all the stakeholders? Yes
- Have all the project benefits been captured and are reasonable? Yes
- Are you aware of the process of getting the project approved? Yes
- Does the business case cover assumptions, dependencies, and constraints? Yes
- Do you need a risk assessment to be conducted? Yes
- Will the project costs be capitalized? Yes
- Do you have a high-level effort estimate for the project? Yes
- Are you supposed to use a standard template for the initiation document? No
- Has the project team been established or resources available to start the project? Yes
- Does the project need an approved business case to start work? Yes

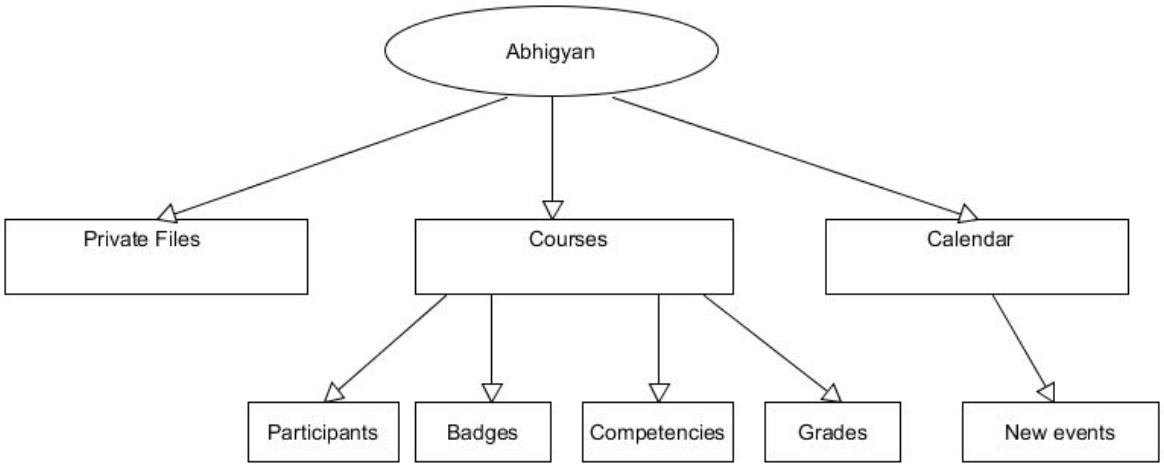
4.2 PROJECT PLANNING CHECKLIST

- Have you organized a project kick-off meeting? Yes
- Does the project team need any training? No
- Are you comfortable with the skill level of the project team? Yes
- Do you need a project management plan? Yes
- Do you have enough contingency or buffer in budget and schedule? Yes

- Is there a vendor contract involved in the project? Yes
- Have all the project components been estimated? Yes
- Do you have a detailed project schedule drafted? Yes
- Do you need a work breakdown structure? Yes
- Have you created a baseline for the project plan? Yes
- Is the project team comfortable with the project schedule? Yes
- Do you have clearly defined the milestones for the project? Yes
- How do you plan to track project progress? By GitHub
- Have the team leave plans and public holidays been factored into the project plan? No
- Do you have a resource plan for the duration of the project? Yes
- Do you need to hire additional resources for the project? If yes, has the hiring process been kicked off? No
- Have you factored in the resourcing costs in the plan? Yes
- Are you aware of the SMEs required for the project? Yes
- Is your project schedule detailed enough for the project team to understand the tasks? Yes
- Is there a quality assurance plan for the project? Yes

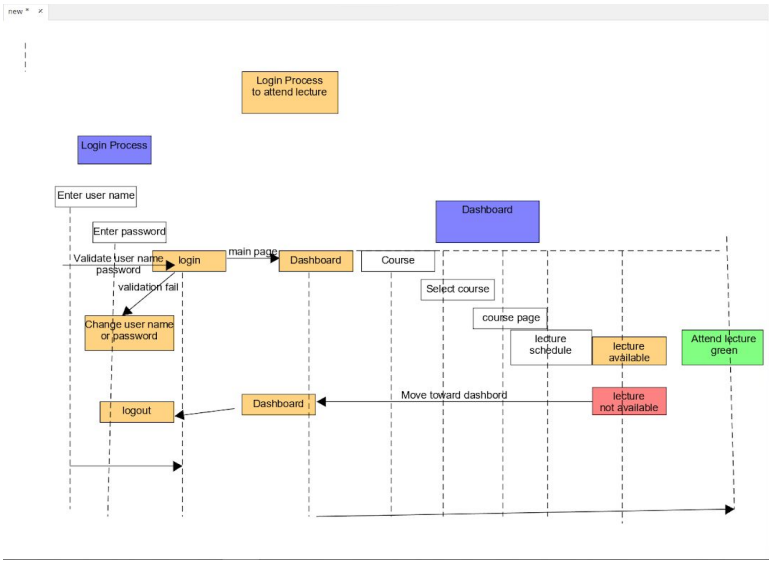
CHAPTER 5
SYSTEM DESIGN

5.1 High Level Design

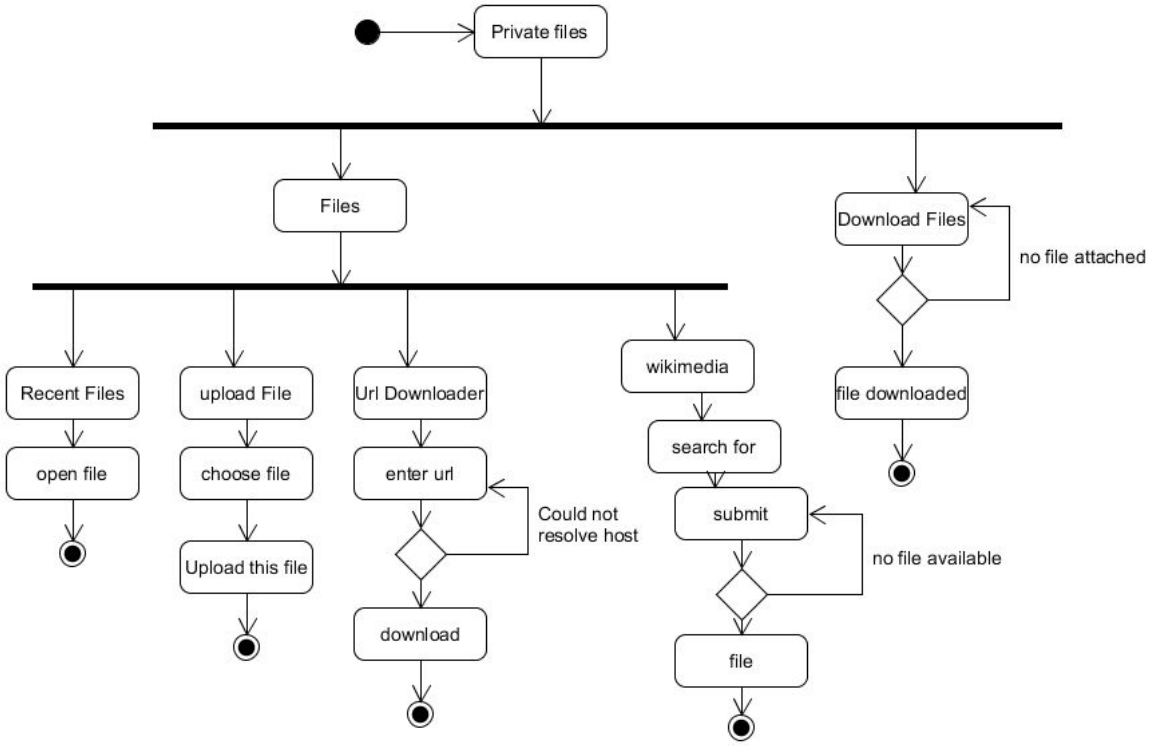


5.2 Domain Diagram riya

5.3 Sequence Diagram

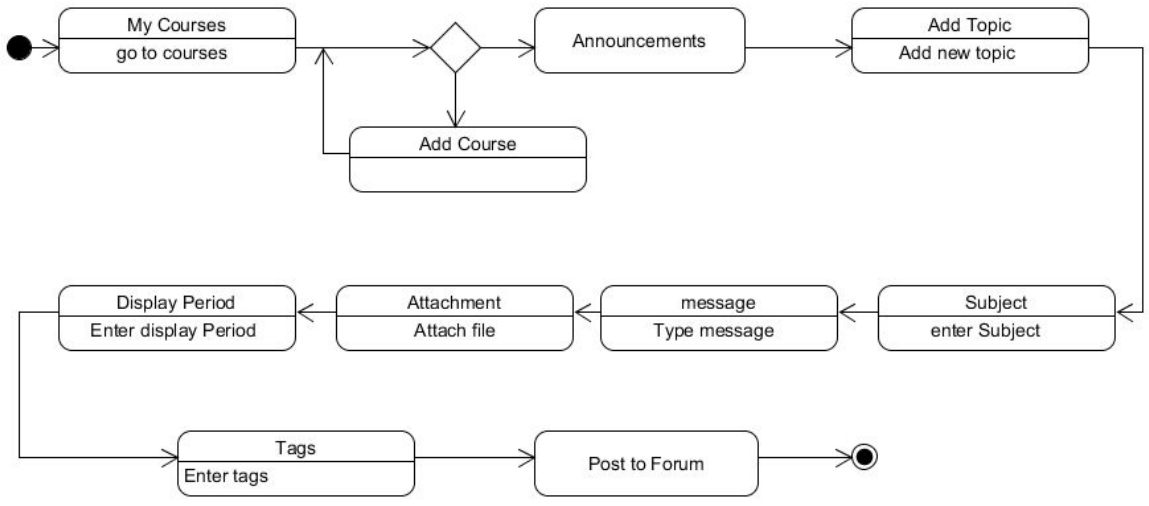


5.4 Activity Diagram

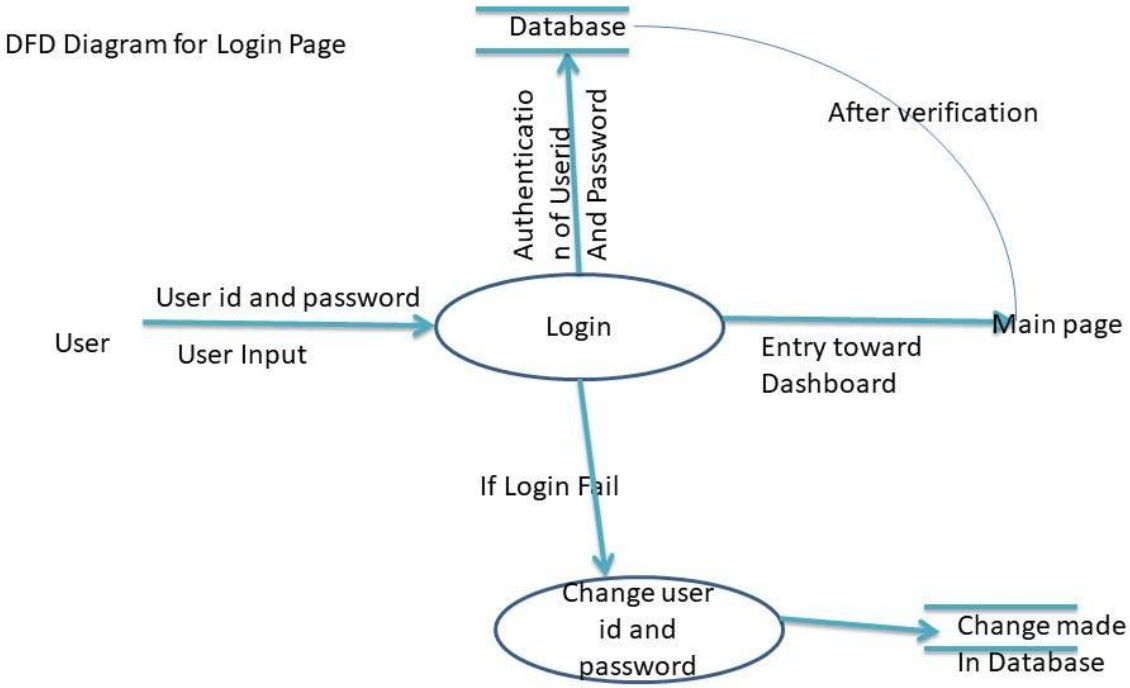


5.5 Collaboration Diagram Mohit

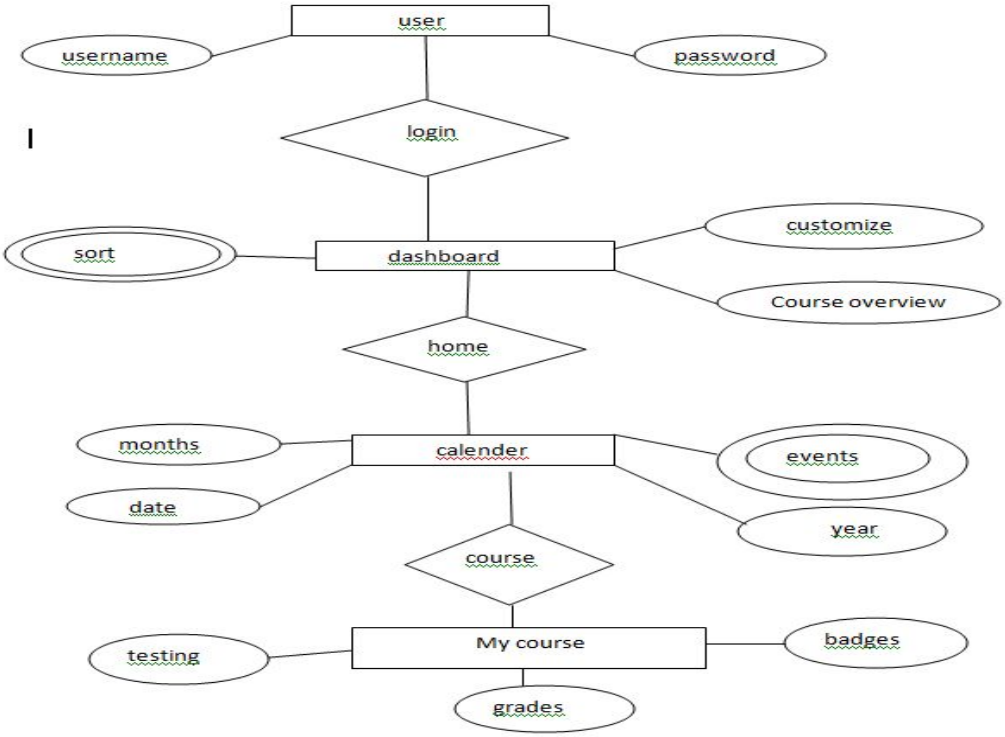
5.6 State Diagram



5.7 DFD Diagram

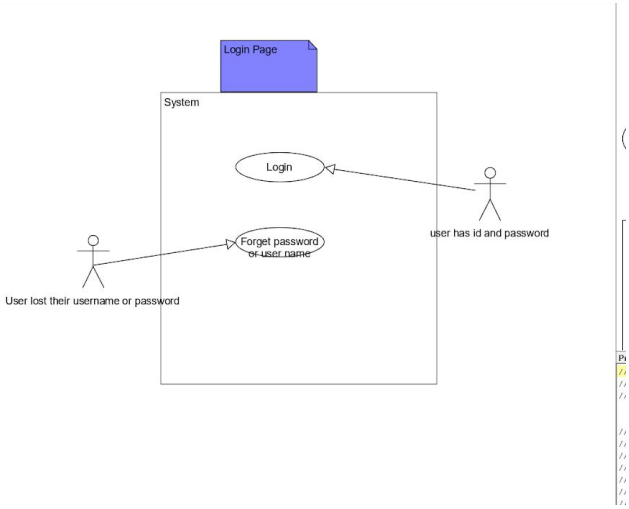


5.8 E-R Diagram



5.9 Class- Object Diagram

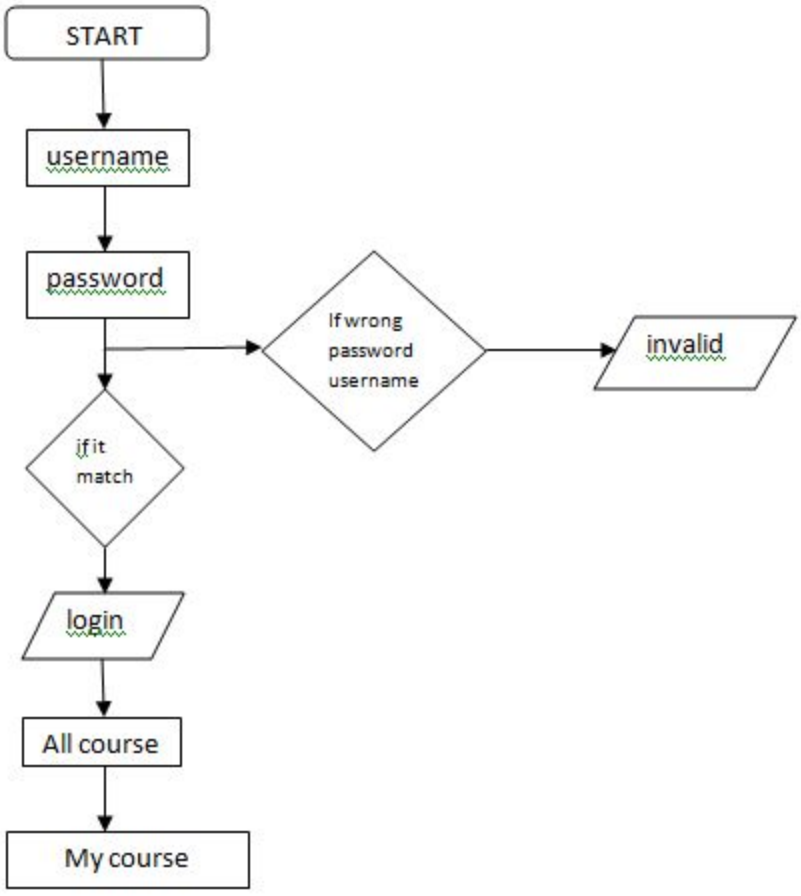
5.10 Use case Diagram



5.11 Low Level Design: Mohit

5.12 System Architecture /Diagrammatic View

5.13 DFD, Class Diagram, flow charts, ER Diagrams (which ever applicable depending on the project)



5.14 Algorithm(s) (if required, add any other section applicable for the methods and approaches you have followed)

5.15 Interface and design

5.16 User interfaces:

5.17 Operating Environment:

Recommended browsers are Chrome, Firefox, Safari and Internet Explorer 8 or higher.

System Perspective

Particulars	Client System	Server System
Operating System	Windows/Linux/Android/iOS	Linux
Processor	Intel or AMD	Intel or AMD
Hard Disk	1 GB	1 TB
RAM	256 MB	8 GB

Assumptions and Dependencies:

- The customer and the store must have basic knowledge of computers and English language.
- Each User must have a User ID and password.
- Each Store must have a Store ID and password.
- There must be anAdministrator.
- Internet connection is amust.
- Proper browsers should be installed in the user's system.

5.18 Logical Database:

Nginx	**Nginx** (pronounced as "engine X") is a lightweight open source web server developed by Igor sysoev.
MySQL	**MySQL** database for storage of Data and user as well as store information

RESTful API	A **RESTful API** is an application program interface (**API**) that uses HTTP requests to GET, PUT, POST and DELETE data.

5.19 Communications Interfaces:

NA

(To be prepared by IT, applicable for PM 003 only)

The e-store system shall use the HTTPS protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite. The user must have SSL certificate licensing registered as a web browser.

5.20Analytics Interfaces:

(To be prepared by IT, applicable for PM 003 only)

Structured Data Formats	The Open Graph protocol, originally developed by Facebook, is an RDF a-based format that enables any web page to become a rich object in a social graph.
Google Analytics	Google Analytics is a free service to get detailed statistics about the visitors of a website, provided by Google.

Chapter -6

IMPLEMENTATION AND RESULTS

7.1 Software and Hardware Requirements

In this section provide the details of any software or hardware requires for the implementation of the project.

7.2 Implementation Details

7.2.1 Snapshots Of Interfaces

7.2.2 Test Cases

List the test cases used to test your work. *//Test REPORTS*

7.3 Assumptions and dependencies

7.4 Constraints (If Applicable)

7.5 Results

Include the output of your work here. The result can be in tabular and/or graphical format depending on the project. Comparison with earlier or other work may also be presented.

References