"E-NOTES"

A

Project Report

submitted

in partial fulfillment

for the award of the Degree of

Bachelor of Technology

in Department of Computer Science and Engineering

Project Mentor:
Name: Dr Mukesh Kumar Gupta
Designation : HOD CSE Department

Submitted By :
Jahnavi Sachdeva
Kaushal Saraswat

Department of Computer Science and Engineering
Swami Keshvanand Institute of Technology, M & G, Jaipur
Rajasthan Technical University, Kota
Session 2019-2020

Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

Department of Computer Science and Engineering

CERTIFICATE

This is to certify that Mr Kaushal Saraswat , Ms Jahnavi Sachdeva, a student of B.Tech(Computer Science & Engineering) 7 semester has submitted his/her Project Report entitled ”E-Notes Application” under my guidance.

Mentor

Name:Dr Mukesh Kumar Gupta

Designation:- HOD CSE Department

Signature.....

Coordinator

Name: Anjana Sangwan

Designation:- Associate Professor

Signature.....

DECLARATION

We hereby declare that the report of the project entitled ”E-Notes” is a record of an original work done by us at Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur under the mentorship of ”Dr. Mukesh Kumar Gupta” (Dept. of Computer Science and Technology) and coordination of ”Dr. Mukesh Kumar Gupta” (Dept.of Computer Science and Technology). This project report has been submitted as the proof of original work for the partial fulfillment of the requirement for the award of the degree of Bachelor of Technology (B.Tech) in the Department of Computer Science and Technology.It has not been submitted anywhere else, under any other program to the best of our knowledge and belief.

Team Members **Signature**

(Jahnavi Sachdeva , 17ESKCS070)

(Kaushal Saraswat, 17ESKCS076)

Acknowledgement

A project of such a vast coverage cannot be realized without help from numerous sources and people in the organization.We take this opportunity to express our gratitude to all those who have been helping us in making this project successful.

We are highly indebted to our faculty mentor Dr. Mukesh Kumar Gupta .He/She has been a guide, motivator source of inspiration for us to carry out the necessary proceedings for the project to be completed successfully. We also thank our project coordinator Dr. Mukesh Kumar Gupta for his co-operation, encouragement, valuable suggestions and critical remarks that galvanized our efforts in the right direction.

We would also like to convey our sincere thanks to Prof. Dr. Mukesh Gupta, HOD, Department of Computer Science and Engineering, for facilitating, motivating and supporting us during each phase of development of the project.Also, we pay our sincere gratitude to all the Faculty Members of Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur and all our Colleagues for their co-operation and support.

Last but not least we would like to thank all those who have directly or indirectly helped and cooperated in accomplishing this project.

Team Members:

(Jahnavi Sachdeva,17ESKCS070)

(Kaushal Saraswat, 17ESKCS070)

Contents

1 Project Chapter **2**

1.1 Problem Statement and Objective 2

1.2 Literature Survey /Market Survey/Investigation and Analysis 2

1.3 Introduction to Project 2

1.4 Proposed Logic / Algorithm / Business Plan / Solution / Device 3

1.5 Scope of the Project 3

2 Software Requirement Specification **4**

2.1 Overall Description 4

2.1.1 Product Perspective 4

2.1.1.1 System Interfaces 4

2.1.1.2 User Interfaces 4

2.1.1.3 Hardware Interfaces 5

2.1.1.4 Software Interfaces 6

2.1.1.5 Communications Interfaces 6

2.1.1.6 Memory Constraints 7

2.1.1.7 Operations 7

2.1.1.8 Project Functions 7

2.1.1.9 User Characteristics 7
2.1.1.10 Constraints 8
2.1.1.11 Assumption and Dependencies . . . 8

3 SYSTEM DESIGN SPECIFICATION 9

3.1 Module Decomposition Description 9
3.1.1 Module 1: ADMIN 9
3.1.2 Module 2: TEACHER 9
3.1.3 Module 3: STUDENT 9
3.2 High Level Design Diagrams 10
3.2.1 Use Case Diagram 10
3.2.2 Activity Diagram 11
3.2.3 Data-Flow Diagram 14
3.2.4 Class Diagram 15

4 METHODOLOGY AND TEAM 16

4.1 Introduction to Waterfall Framework 16
4.2 Team Members, Roles & Responsibilities 19

5 System Testing 20

5.1 Functionality Testing 20
5.2 Performance Testing 21

6 PROJECT SCREENSHOTS 22

7 PROJECT SUMMARY AND CONCLUSIONS 26

7.1 Conclusion 26

8 FUTURE SCOPE **27**

References **27**

List of Figures

3.1 **Use Case Diagram** 10
3.2 **User Registration** 11
3.3 **Upload Notes and Assignment** 12
3.4 **Submit Assignment** 13
3.5 **Data Flow Diagram** 14
3.6 **Class Diagram** 15

4.1 **WaterFall model** 17

6.1 **Login Page** 22
6.2 **Admin Dashboard** 23
6.3 **Student Registration** 23
6.4 **Teacher Dashboard** 24
6.5 **Upload Assignment** 24
6.6 **Student Dashboard** 25
6.7 **Submit Assignment** 25

List of Tables

2.1 Multirow table 7

Chapter 1

Project Chapter

1.1 Problem Statement and Objective

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placeratac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget,consectetuer id, vulputate a, magna. Donec vehicula augue eu nequeykashyap.

1.2 Literature Survey /Market Survey/Investigation and Analysis

In this pandemic times, the major issue faced by teachers was the management of assignments. This application will help the students to get the study material and help the teachers to keep a check on assignments in the most efficient way.

1.3 Introduction to Project

E-notes application is a web app, developed for schools/colleges to provide the notes and assignments to the students. It contains three modules:-

1.Admin

2.Teacher

3.Student

The teacher can upload nodes and assignments (branch wise). Students can download the notes to check the assignment and upload the solution of the assignment. The teacher can able to see the student who submitted the assignment and who is not.

1.4 Proposed Logic / Algorithm / Business Plan / Solution / Device

Our Proposed Solution to the problem is to define the system that can helps in :

• Providing online notes

• Providing online assignments.

• Submission of assignments.

• Easy track on assignments branch wise.

1.5 Scope of the Project

• There are three basic users –Admin, Students and Teachers.

• All users have their own dashboards.

• Admin has the authority to add/delete users, grant permission to teacher and students according to their branches.

• Teachers can upload the assignments and notes for the students and can keep an easy track on assignments.

• Students can upload the assignments and can access the notes uploaded.

Chapter 2

Software Requirement Specification

2.1 Overall Description

The product is for any college. It is a PWA (Progressive Web App) based system implementing client-server model. This portal system provides a simple mechanism for uploading notes and assignment and to keep a track on assignment. Main features of E-Notes App are already covered in the overview of the application.

2.1.1 Product Perspective

2.1.1.1 System Interfaces

The application is implemented in Python , Django Framework. Visual Studio Code will be the IDE while implementing. MySQL workbench is also used as DBMS workbench.Database of the system will be temporarily held in local servers.

2.1.1.2 User Interfaces

The User interface in the project is Graphical User Interface (GUI).It is a form of user interface that allows users to interact with electronic

devices through graphical icons and audio indicator such as primary notation, instead of text-based user interfaces, typed command labels or text navigation.

2.1.1.3 Hardware Interfaces

Minimum Requirements:

Client side			
	Processor	RAM	Disk Space
Google Chrome 6	Intel Pentium III or AMD-800 MHz	1 GB	100 MB

Server side			
	Processor	RAM	Disk Space
MySQL – 8.0	Intel Pentium III or AMD-800 MHz	1 GB	500 MB (Excluding Data Size)

Recommended Requirements:

Client side			
	Processor	RAM	Disk Space
Google Chrome 6	All Intel or AMD-1 GHz	1 GB	100 MB

Server side			
	Processor	RAM	Disk Space
MySQL – 8.0	All Intel or AMD-2 GHz	1 GB	500 MB (Excluding Data Size)

2.1.1.4 Software Interfaces

- Client on Internet
  Web Browser, Operating System (any)
- Client on Intranet
  Web Browser, Operating System (any)
- Data Base Server
  MySQL, Operating System (any)
- Development End
  Django (Backend) , HTML ,CSS, Bootstrap ,JavaScript (Frontend)

2.1.1.5 Communications Interfaces

- Client (customer) on Internet will be using HTTP/HTTPS protocol.
- Client (system user) on Internet will be using HTTP/HTTPS protocol.

2.1.1.6 Memory Constraints

System shall use no more than 1 GB of storage and 1 GB of RAM.

2.1.1.7 Operations

The data is to backed up at midnight so that no operations are to be disturbed during the backup.

2.1.1.8 Project Functions

Table 2.1: Multirow table

Use Case Name	Use Case	Description
Admin	Login Add Teacher Add Student	Admin must login in order to register student and teachers Admin is able to add teachers. Admin is able to add students
Student	Login Submit Assignments	Student must login in order to download notes and submit assignments Student is able to submit assignments assigned to him.
Multiple row	Login Upload Notes cell8	Teacher must login in order to upload notes and assignments Teacher has the authority to upload the notes for his/her subjects only cell9

2.1.1.9 User Characteristics

There are three functioning modules in the project:-

- Admin: Admin has the authority to add/delete teacher and student.
- Teacher: Teacher has the authority to upload the notes and assign assignments to the students (branch wise). Teacher can upload notes and assignment for his/her subjects only
- Student: Student will be able to download the notes and submit the solution of assigned assignments.

2.1.1.10 Constraints

- GUI is only in English.
- Login and password are used for the identification of users.
- Specifically, for the particular college student and teachers only.
- This system is working for single server.

2.1.1.11 Assumption and Dependencies

- GUI is only in English.
- Login and password are used for the identification of users.
- Specifically, for the particular college student and teachers only.
- This system is working for single server.

Chapter 3

SYSTEM DESIGN SPECIFICATION

3.1 Module Decomposition Description

3.1.1 Module 1: ADMIN

Admin has the authority to add/delete teacher and student.

3.1.2 Module 2: TEACHER

Teacher has the authority to upload the notes and assign assignments to the students (branch wise). Teacher can upload notes and assignment for his/her subjects only

3.1.3 Module 3: STUDENT

Student will be able to download the notes and submit the solution of assigned assignments.

3.2 High Level Design Diagrams

3.2.1 Use Case Diagram

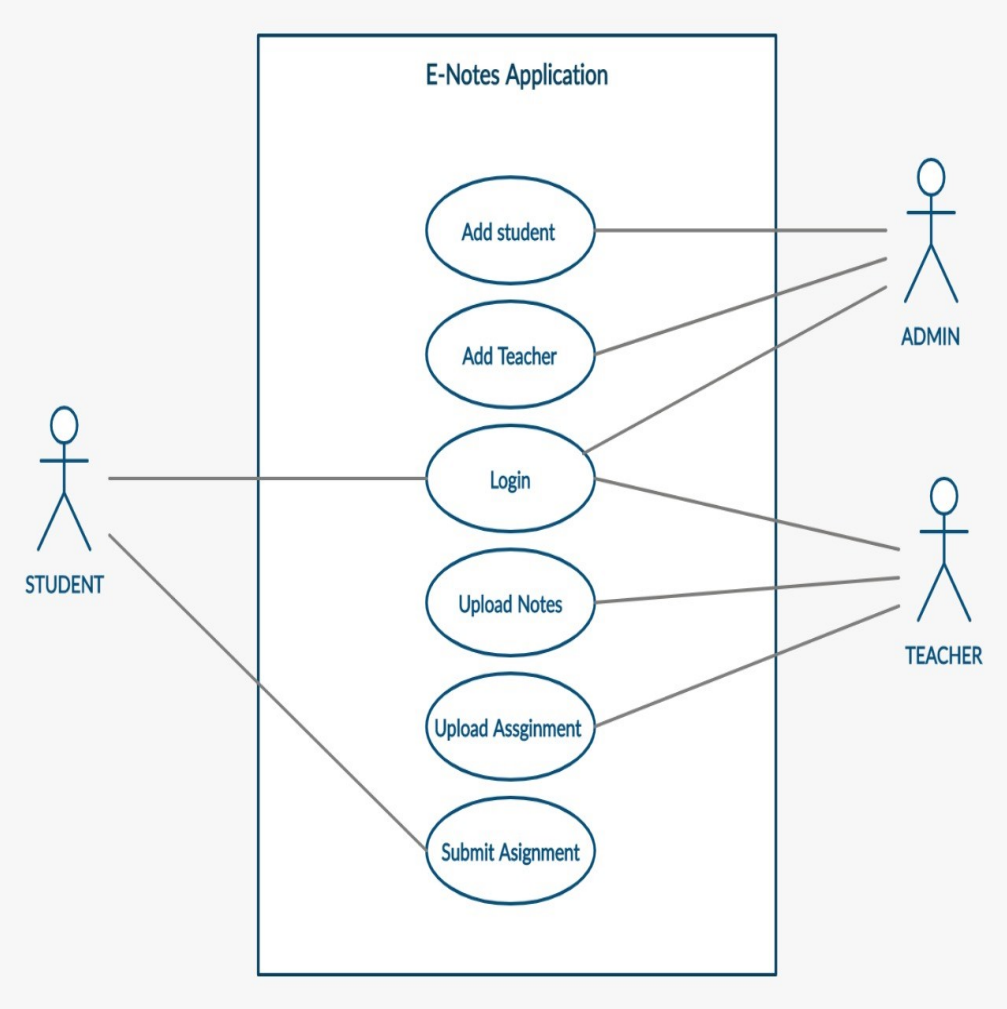

Figure 3.1: Use Case Diagram

3.2.2 Activity Diagram

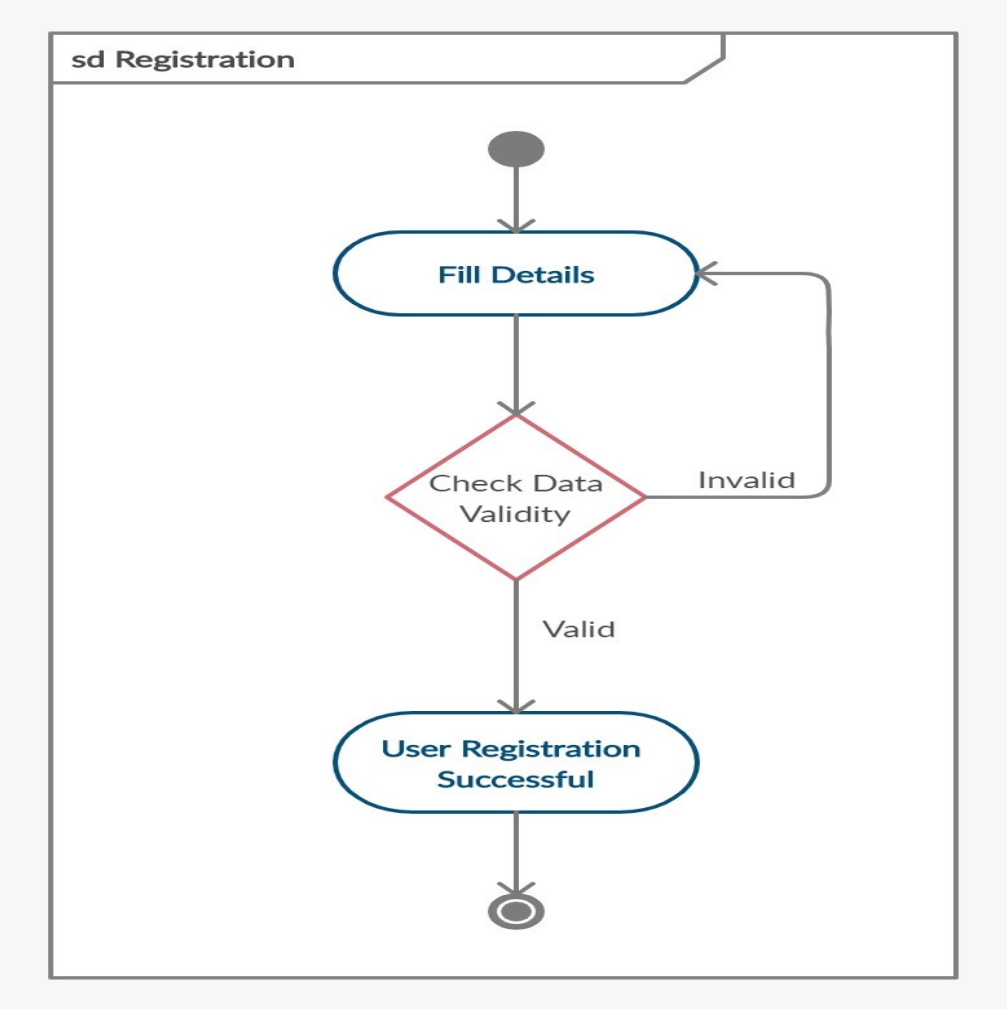

Figure 3.2: User Registration

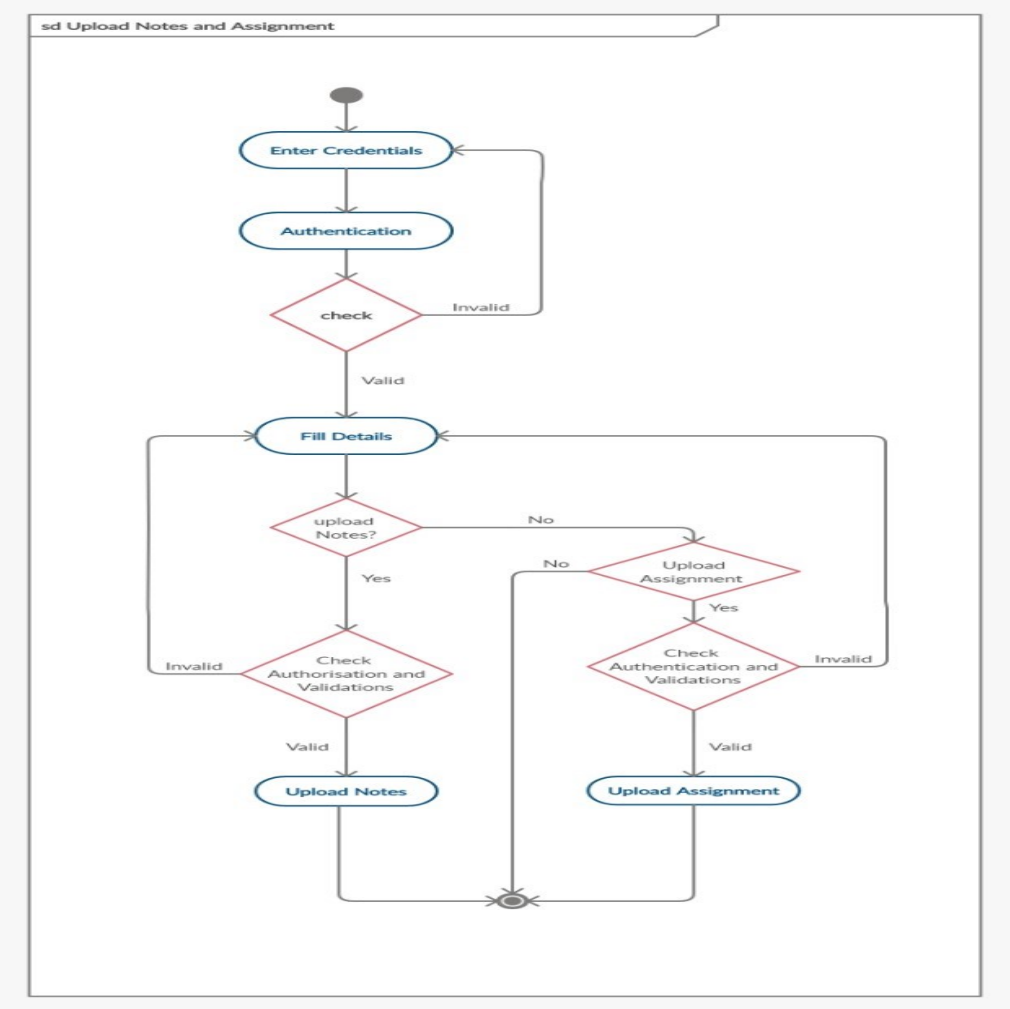

Figure 3.3: Upload Notes and Assignment

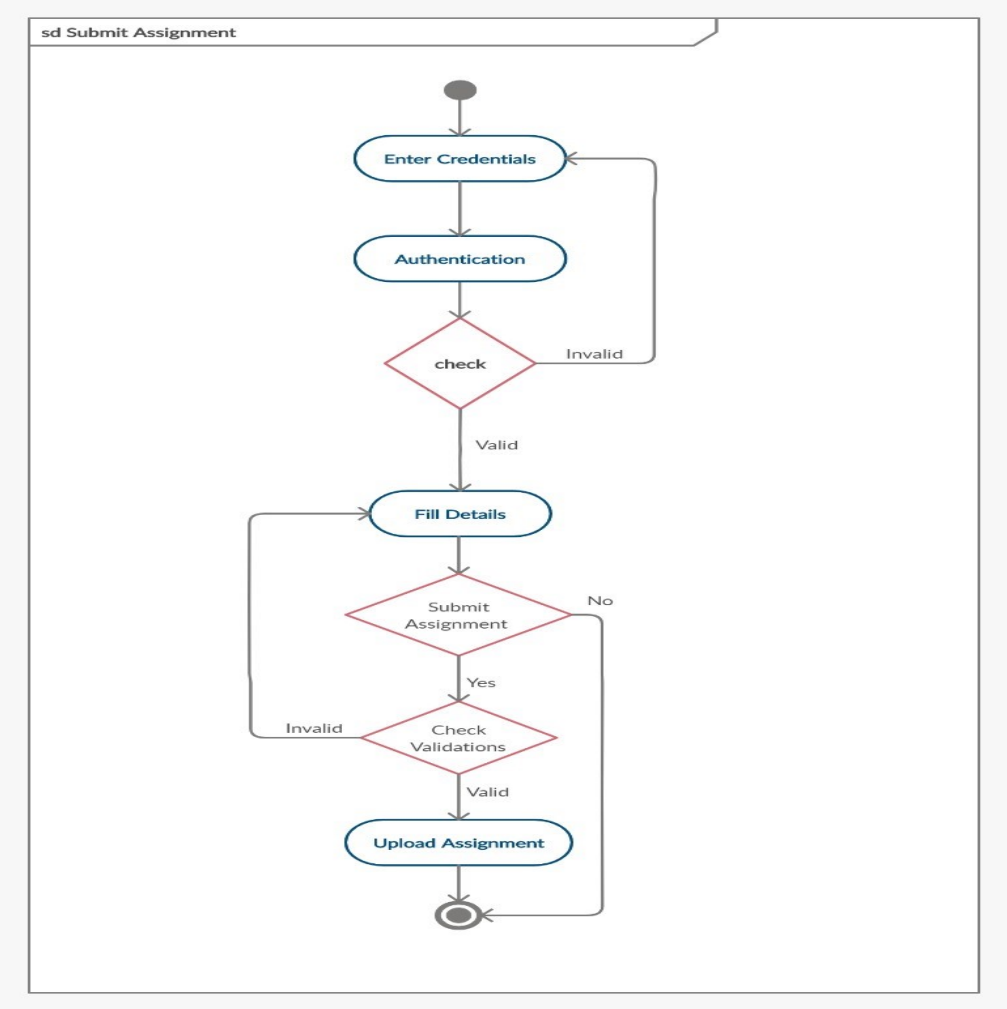

Figure 3.4: Submit Assignment

3.2.3 Data-Flow Diagram

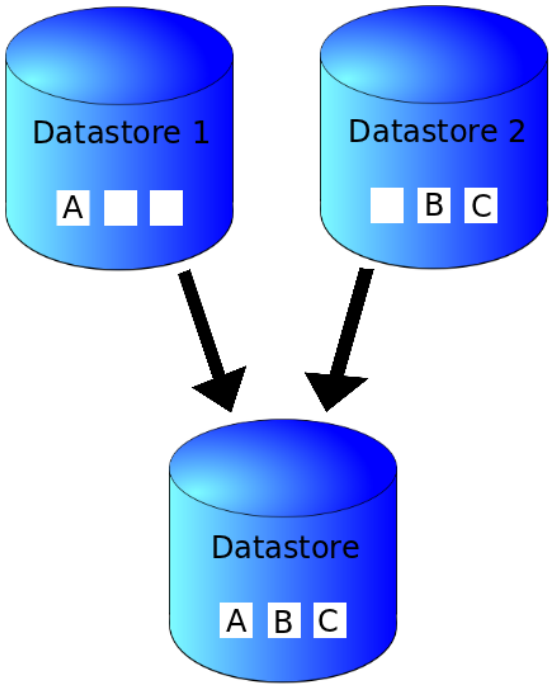

Figure 3.5: Data Flow Diagram

3.2.4 Class Diagram

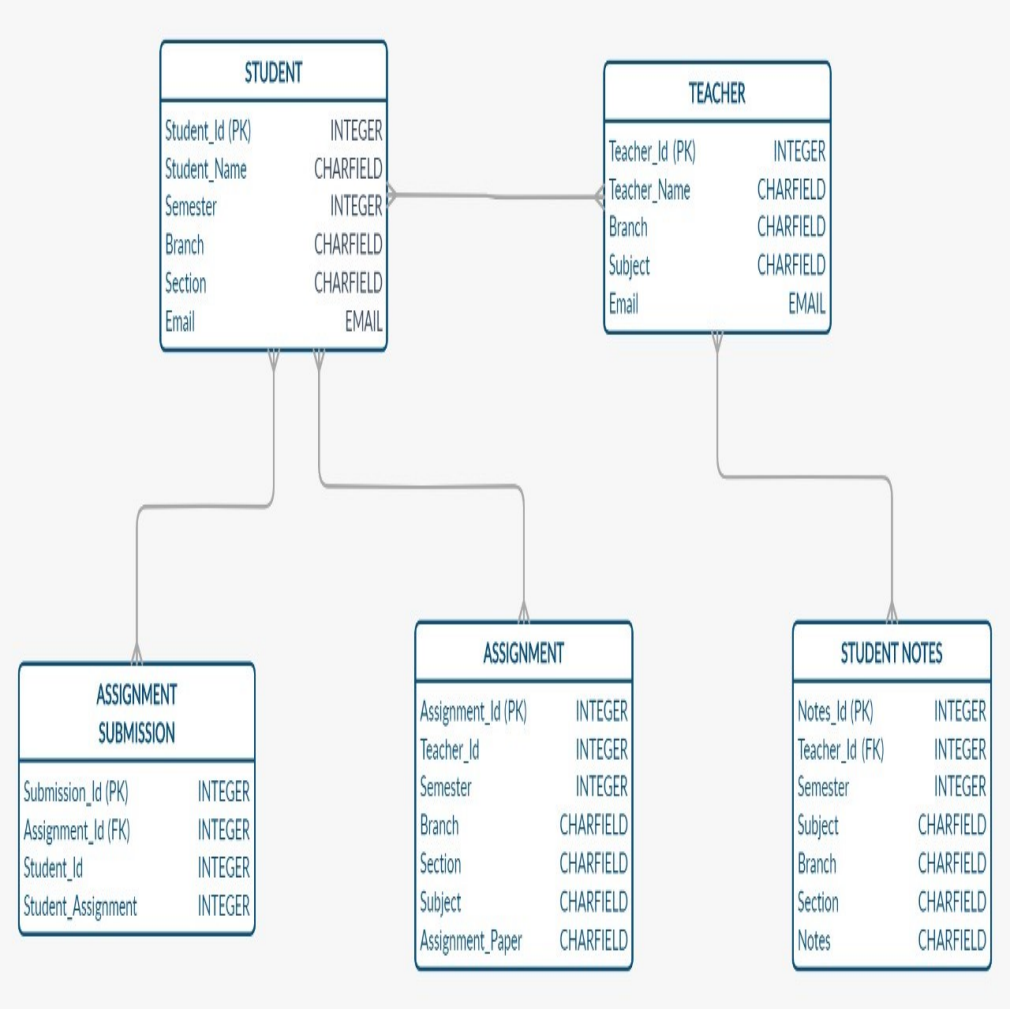

Figure 3.6: Class Diagram

Chapter 4

METHODOLOGY AND TEAM

4.1 Introduction to Waterfall Framework

The Waterfall Model was first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases. The waterfall Model illustrates the software development process in a linear sequential flow; hence it is also referred to as a linear-sequential life cycle model. This means that any phase in the development process begins only if the previous phase is complete. In waterfall model phases do not overlap. In ”The Waterfall” approach, the whole process of software development is divided into separate phases. In Waterfall model, typically, the outcome of one phase acts as an input for the next phase sequentially. Following is a diagrammatic representation of different phases of waterfall model.

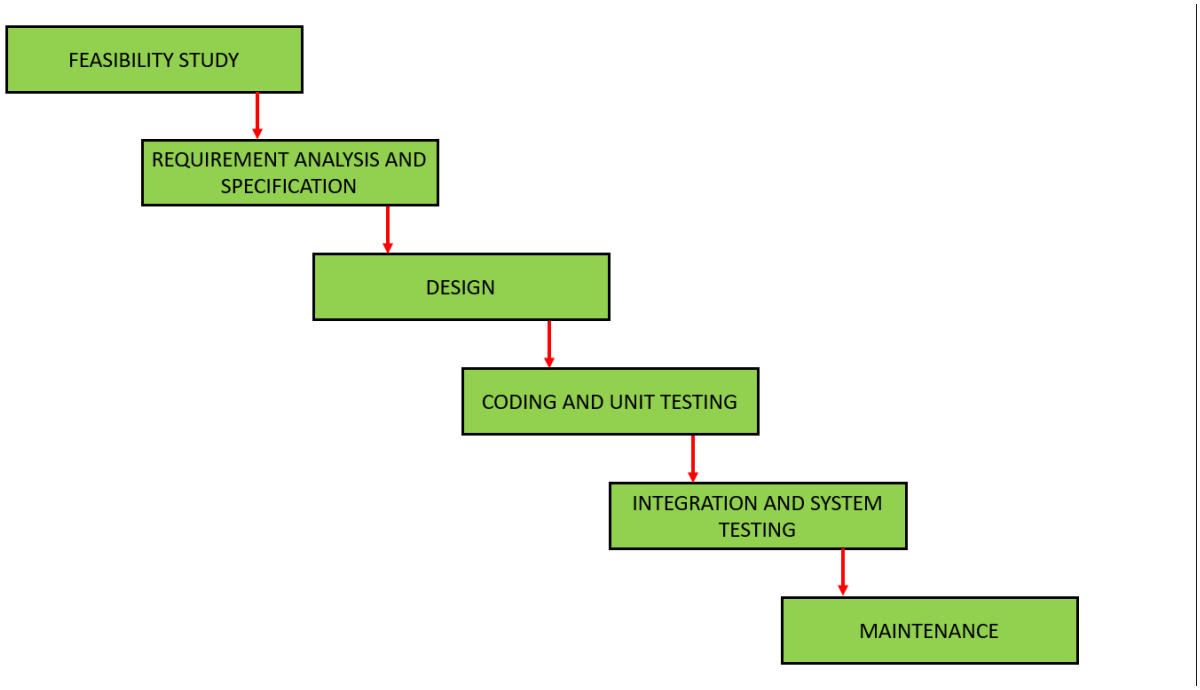

Figure 4.1: WaterFall model

The sequential phases in Waterfall model are-

1. **Requirement Gathering and analysis:** All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.

2. **System Design:** The requirement specifications from first phase are studied in this phase and system design is prepared. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture.

3. **Implementation:** With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.

4. **Integration and Testing:** All the units developed in the imple-

mentation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

5. **Deployment of system:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

6. **Maintenance:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

All these phases are cascaded to each other in which progress is seen as flowing steadily downwards (like a waterfall) through the phases. The next phase is started only after the defined set of goals are achieved for previous phase and it is signed off, so the name ”Waterfall Model”. In this model phases do not overlap.

Waterfall Model Pros Cons

Advantage The advantage of waterfall development is that it allows for departmentalization and control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process model phases one by one. Development moves from concept, through design, implementation, testing, installation, troubleshooting, and ends up at operation and maintenance. Each phase of development proceeds in strict order.

Disadvantage The disadvantage of waterfall development is that it does not allow for much reflection or revision. Once an application is in the testing stage, it is very difficult to go back and change something that was not well-documented or thought upon in the concept stage.

4.2 Team Members, Roles & Responsibilities

Kaushal Saraswat - Teacher Module , Backend of Admin Module

Jahnavi Sachdeva - Student Module , Front of Admin Module

Chapter 5

System Testing

The designed system has been testing through following test parameters.

5.1 Functionality Testing

In testing the functionality of the web sites the following features were tested:

1. Links

   (a) Internal Links: All internal links of the website were checked by clicking each link individually and providing the appropriate input to reach the other links within.

   (b) External Links: Till now no external links are provided on our website but for future enhancement we will provide the links to the candidate's actual profile available online and link up with the elections updates online etc.

   (c) Broken Links : Broken links are those links which so not divert the page to specific page or any page at all. By testing

the links on our website, there was no link found on clicking which we did not find any page.

2. Forms

   (a) Error message for wrong input : Error messages have been displayed as and when we enter the wrong details (eg. Dates), and when we do not enter any details in the mandatory fields. For example: when we enter wrong password we get error message for acknowledging us that we have entered it wrong and when we do not enter the username and/or password we get the messages displaying the respective errors.

   (b) Optional and Mandatory fields : All the mandatory fields have been marked with a red asterisk (*) and apart from that there is a display of error messages when we do not enter the mandatory fields. For example: As the first name is a compulsory field in all our forms so when we do not enter that in our form and submit the form we get an error message asking for us to enter details in that particular field.

3. Database Testing is done on the database connectivity.

5.2 Performance Testing

Tested on various browsers like google chrome,mozilla firefox and microsoft edge. it was working fine with the backend having execution time upto 3 seconds required to fetch the data

Chapter 6

PROJECT SCREENSHOTS

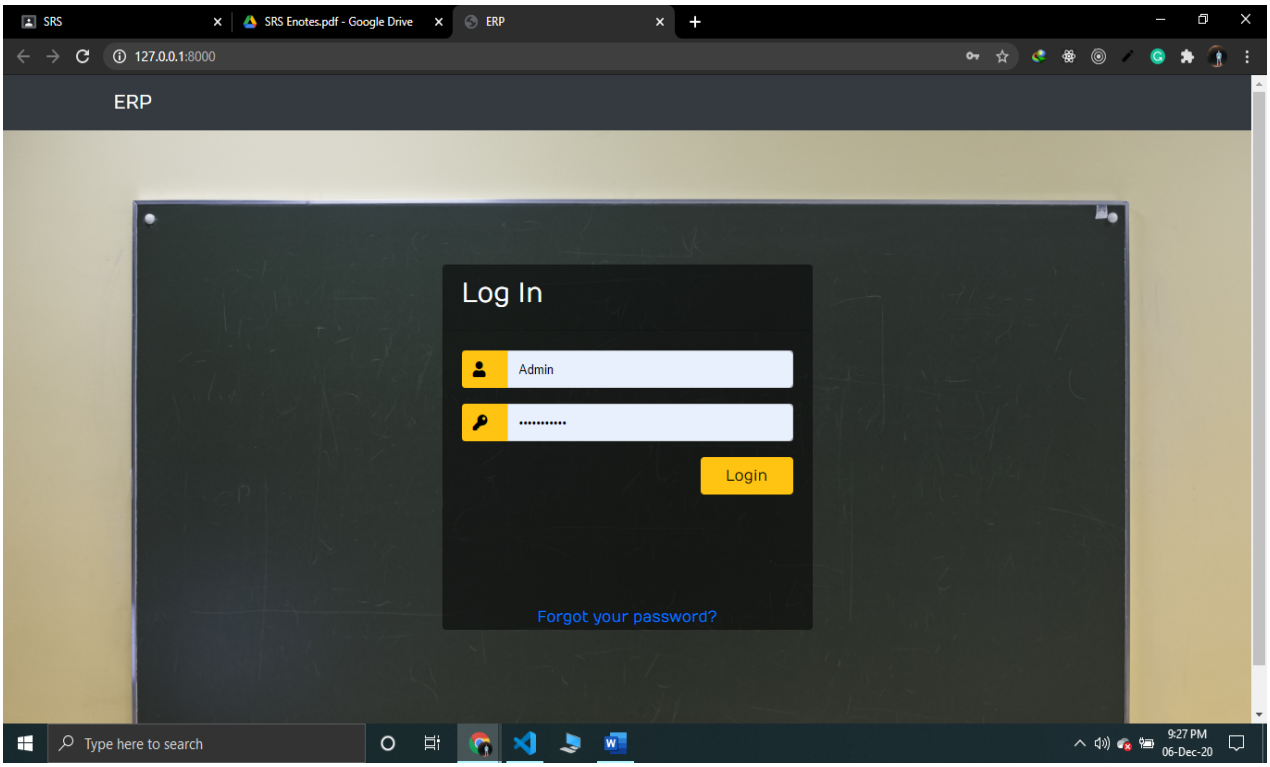

Figure 6.1: Login Page

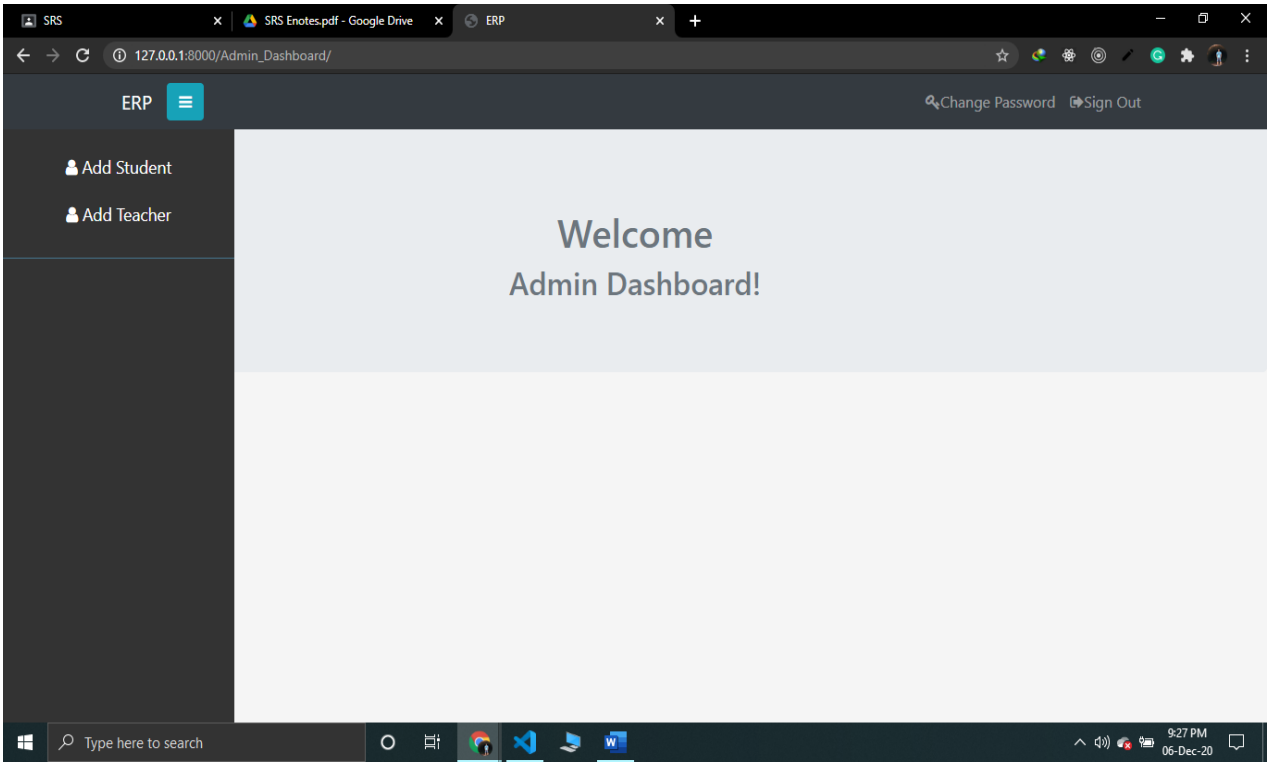

Figure 6.2: Admin Dashboard

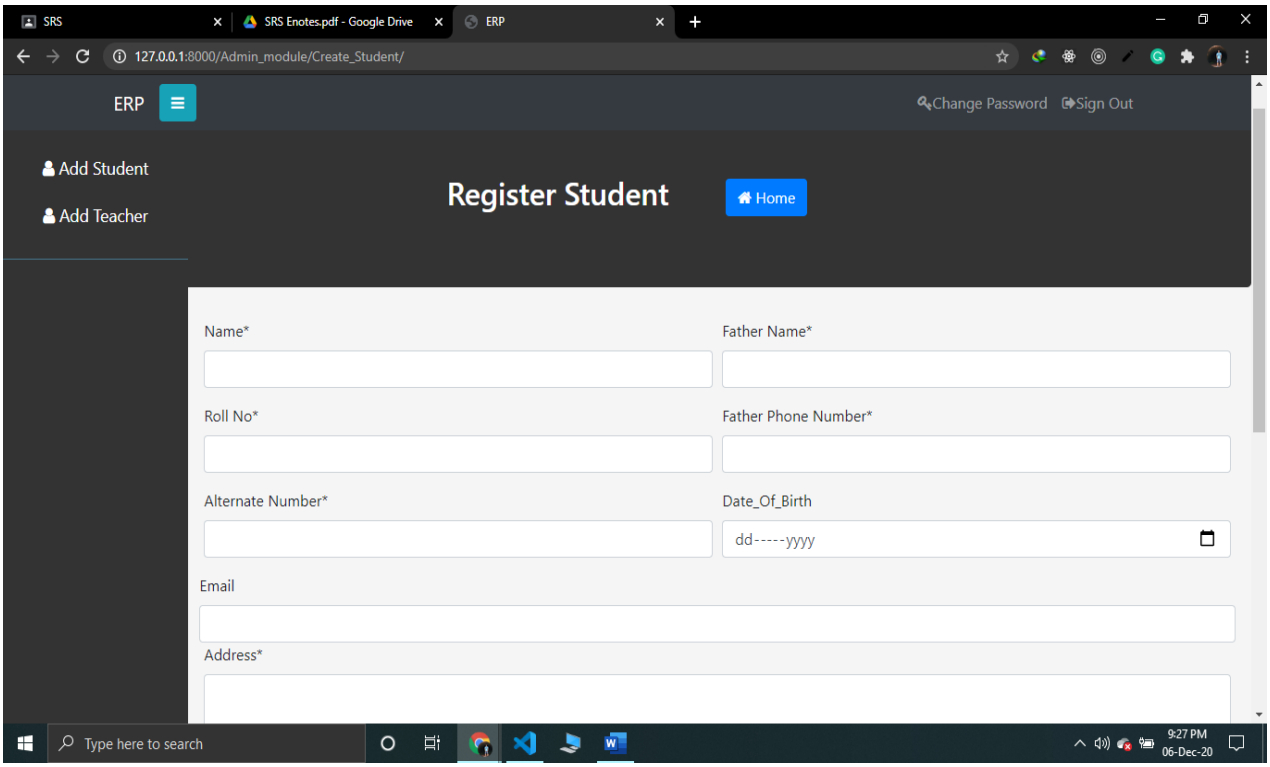

Figure 6.3: Student Registration

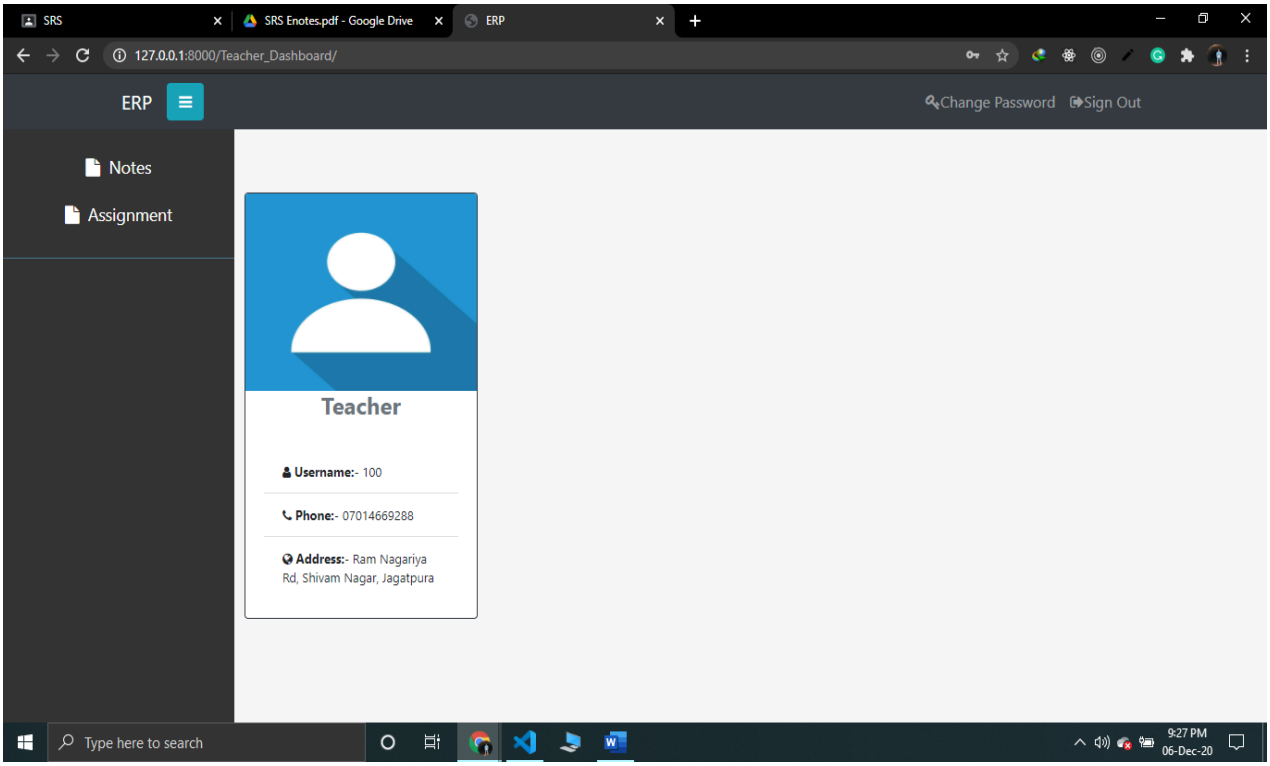

Figure 6.4: Teacher Dashboard

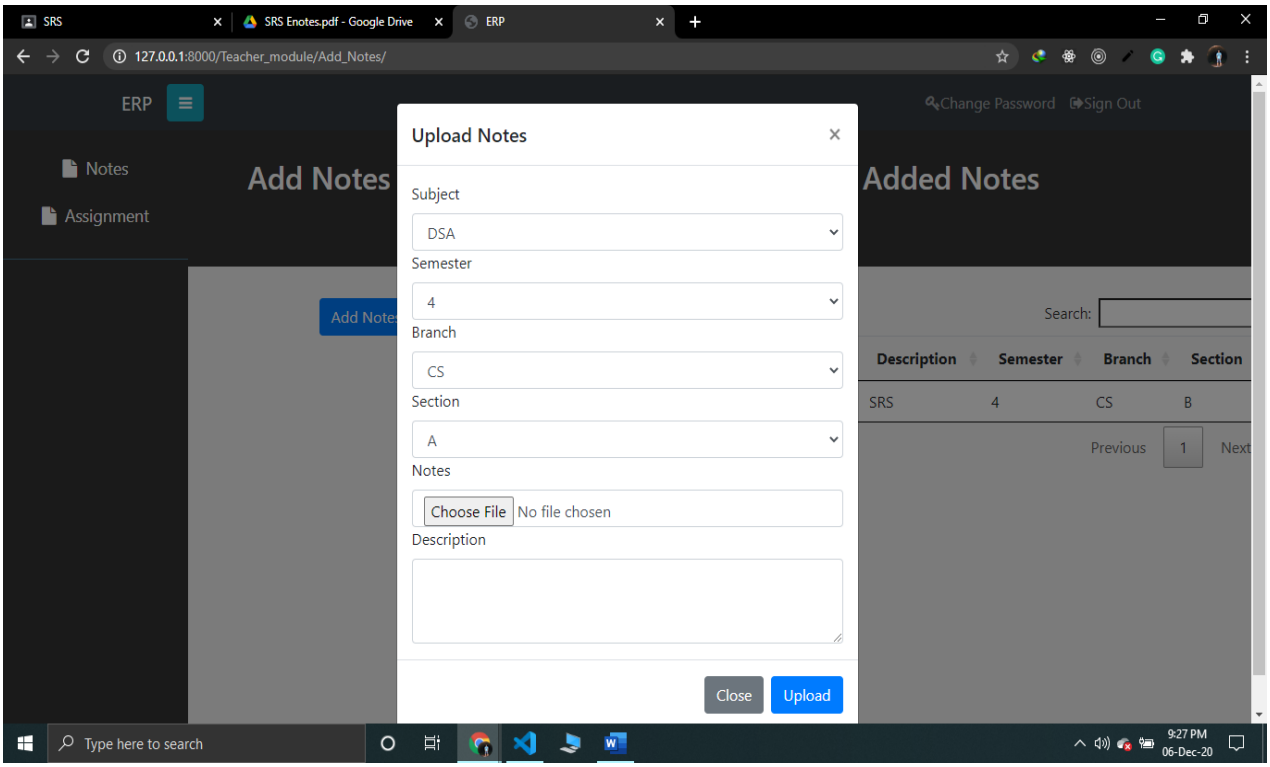

Figure 6.5: Upload Assignment

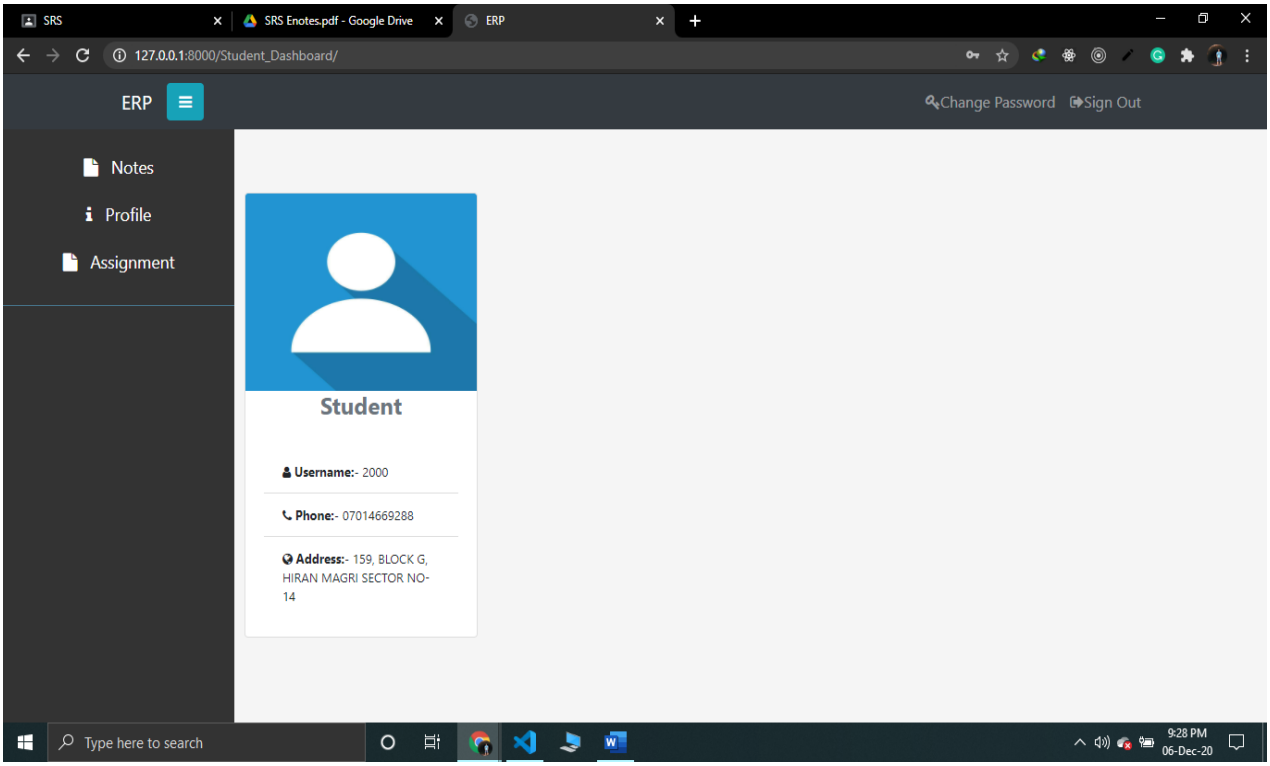

Figure 6.6: Student Dashboard

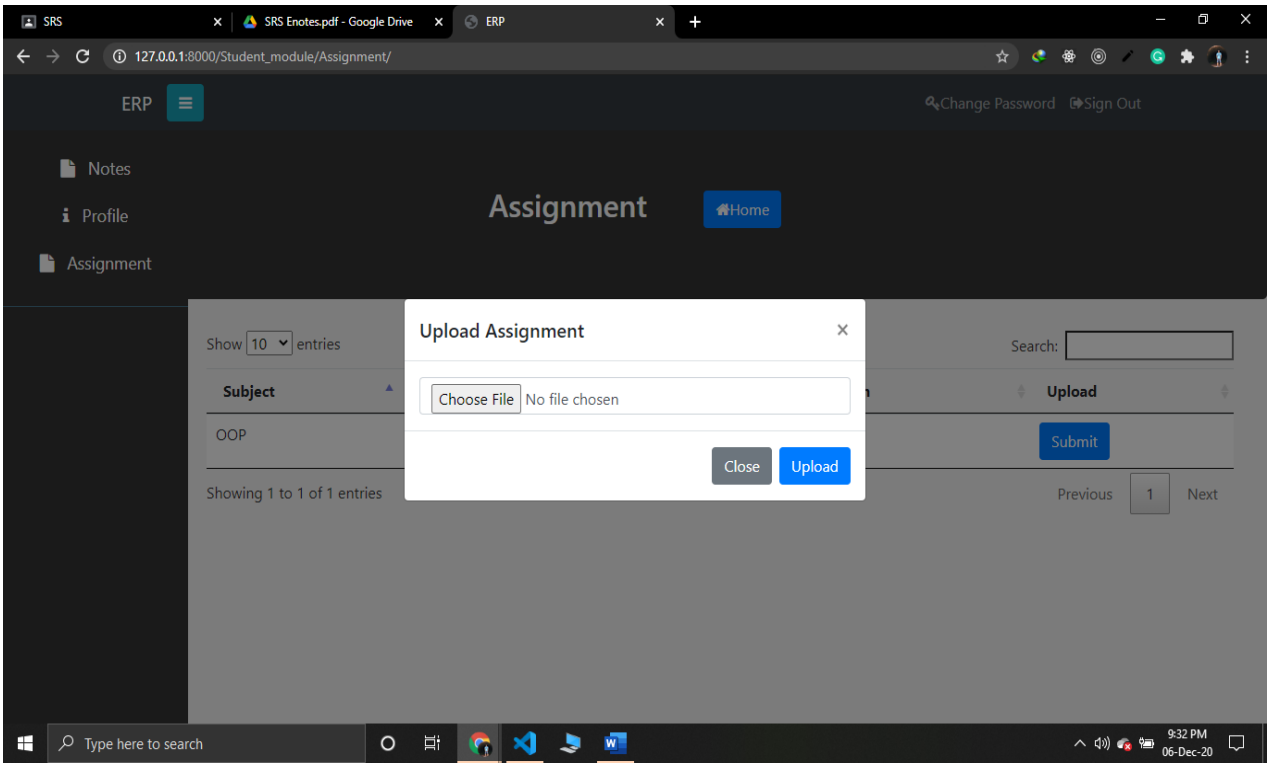

Figure 6.7: Submit Assignment

Chapter 7

PROJECT SUMMARY AND CONCLUSIONS

7.1 Conclusion

It is a tool which is based on the technology Django Frame Work helps us to bring assignments and notes online. Our tool is a web-based tool which is easy to use and is user friendly. There is no CLI so no command line knowledge is required. It offers many features like Uploading Assignments and Notes for teacher and student can use the notes for learning purpose and Submit the Assignments to the teachers. Nowadays this tool is very helpful for the Students for distance learning and teacher can easy make a track on Assignments

Chapter 8

FUTURE SCOPE

In coming Future we can add the following functionalities:-

- Uploading Attendance on daily basis
- Adding Lecture Videos for Students
- Creating Live Class Feature
- Adding Online Payment method for Fee Payments

References

[1] *https://www.python.org/doc/*

[2] *https://docs.djangoproject.com/en/3.1/*

[3] *https://getbootstrap.com/*

[4] *www.wikipedia.com*