✚ Chapter No:-01

1. INTRODUCTION

1.1 GENERAL(SPIOT College Management System)

We identify several problems including unauthorized privilege escalation, incorrect use of cryptography, vulnerabilities to network threats, and poor software development processes. We show that only college administrator can start the system.

Administrator can search the particular student by his/her enrollment number or student id And we are adding notification module where administrator should add the notification with start and end date.

The first phase of software project is to gather requirements .Gathering software requirements begins as a creative brainstorming process in which the goal is to develop an idea for a new and modules that no other software vendor has thought. New software modules ideas normally developed as a result of analyzing the project

The main function of requirements gathering phase is to take an abstract idea that fills a particular needs or that solves a particular problems and create a real world project with a particular sets of objectives, timeline and team.

Some of the highlights of the requirements gathering phase include:

- Collecting project ideas.
- Gathering customer requirements and proposed solution.
- Justifying the project.
- Submitting the request for proposal
- Getting the team in phase.
- Preparing the requirements documents.

The College management system is an automated version of manual Student Management System. It can handle all details about a student. The details include college details, subject details, student personnel details, academic details, exam details etc... In case of manual system they need a lot of time, manpower etc. Here almost all work is computerized. So the accuracy is maintained. Maintaining backup is very easy. It can do within a few minutes.
Our system has two type of accessing modes, administrator and user. Student management system is managed by an administrator. It is the job of the administrator to insert update and monitor the whole process. When a user log in to the system. He would only view details of the student. He can't perform any changes.
In our project, the college management system is particularly designed to provide marks and attendance updates from the college to the parents of the respective students.

1.2 Project Objectives

- A college management system allows colleges and higher education institutes to manage their enquiries and leads, carry out online admissions, teach virtually, sell courses, track student progress, take exams and quizzes, manage attendance, take assignments online, manage learning material, generate report cards, create ID cards and documents, send notices and announcements, manage communications, manage timetables, manage results online.

- It gives the educators, students and parents a platform such as web app, Android app, iOS app to carry out their day to day activities, communicate and collaborate.
- College jackpot is an unique cloud based system that can be used by teachers, students and parents to perform all of their academic activities online through web or app.
- By this application student can easily access the modules like to see the all subjects questions paper , academic calendar , syllabus ,attendance etc.
- The teacher module is used to fill the student attendance related data and submit the leave application.
- And last Principle module is used to give the permission for teacher leave applications.

Chapter No:-2

LITERATURE SURVEY

TITLE: SPIOT College Management System.

College Management System (OCMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up- to - date information regarding a students' academic career is critically important in the university as well as colleges. Student information systemdeals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It will also have faculty details, batch execution details, students' details in all aspects, the various academic notificationsto the staff and students updated by the college administration.

2.1.PURPOSE OF LITERATURE SURVAY

This survey helps our research work in many ways:

1. Allows us to understand the research journey from the *fundamentals* till date. Understanding the path the research has taken in the field of our interest, we get higher insight about our field of research.

2. Can understand the research methodology to take up. While reading the stories associated with earlier research works, we realise the various steps that are involved in the research work.

3. Each paper we go through, will reinforce the ideas that we intend to continue as our research work. All the unsolved problems, they present as the drawbacks or limitations of their research work, can be a very good sources of *goals* for our research work.

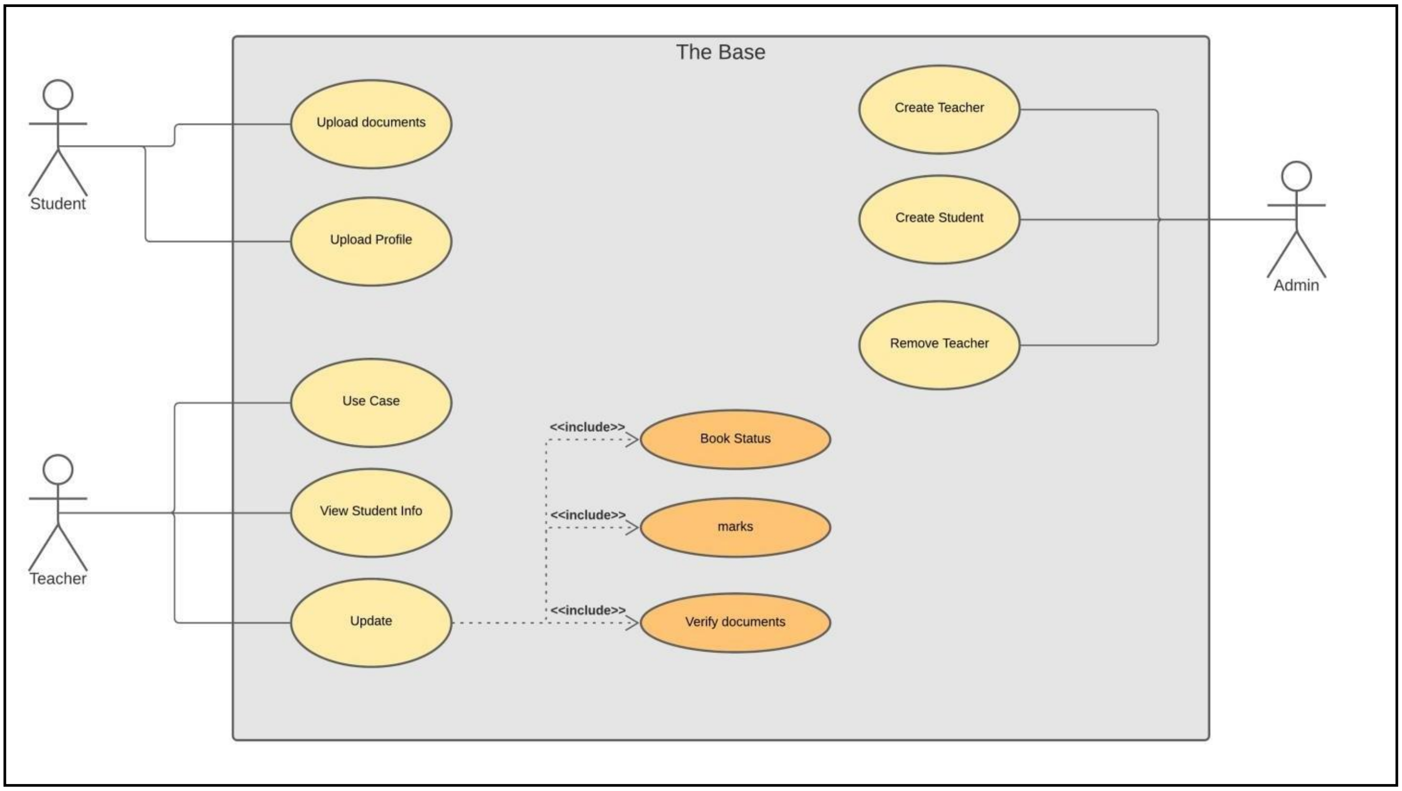
2.2.COURSE OUTCOMES (COs)

Depending upon the nature of the projects undertaken, the following could be some of the major course outcomes that could be attained, although, in case of some projects few of the following course outcomes may not be applicable.

1. Implement the planned activity individually and/or as team.
2. Select, collect and use required information/knowledge to solve the identified problem.
3. Take appropriate decisions based on collected and analysed information.
4. Ensure quality in product.
5. Incorporate energy and environment conservation principles.
6. Consider the ethical issues related to the project (if there are any).
7. Assess the impact of the project on society (if there is any).
8. Communicate effectively and confidently as a member and leader of team.
9. Prepare project report after performing due plagiarism check using appropriate tools.

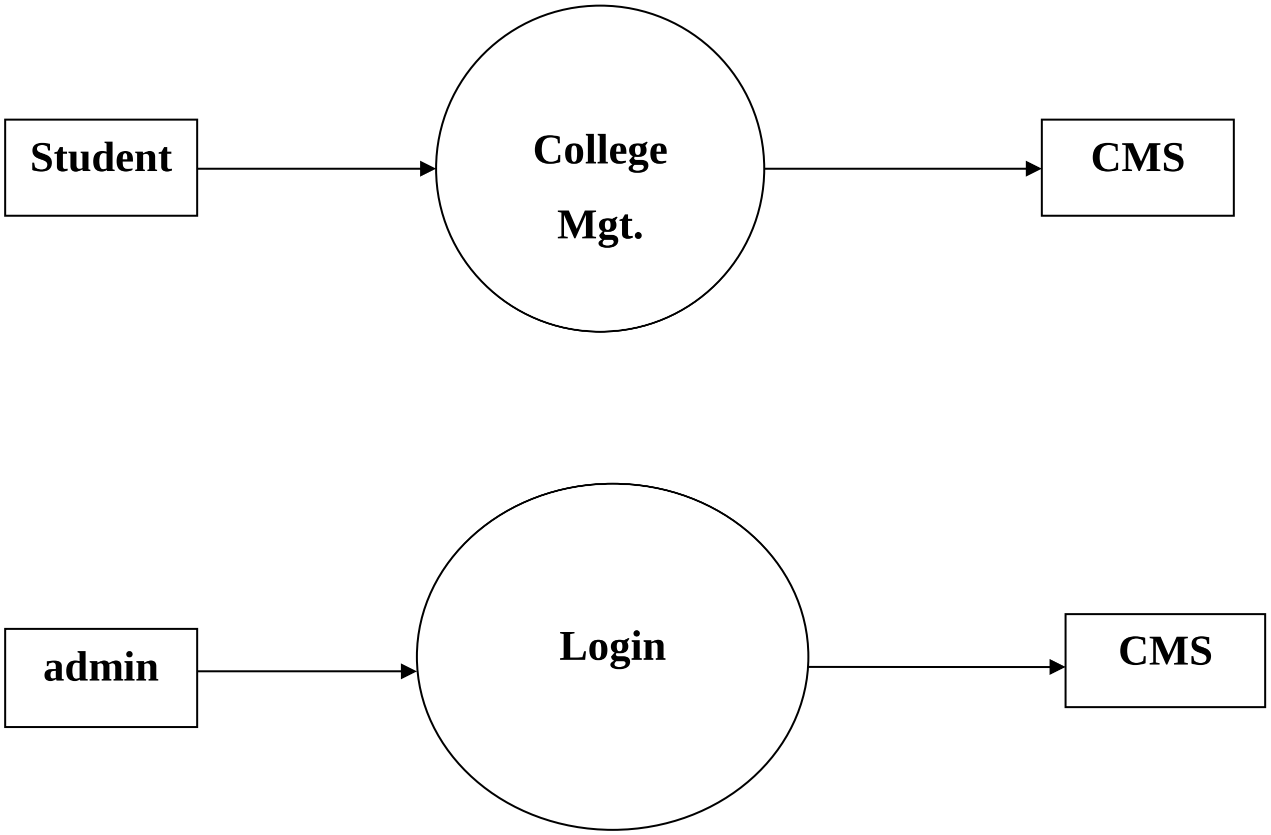
Chapter No:-3

3.1 USE CASE DIAGRAM



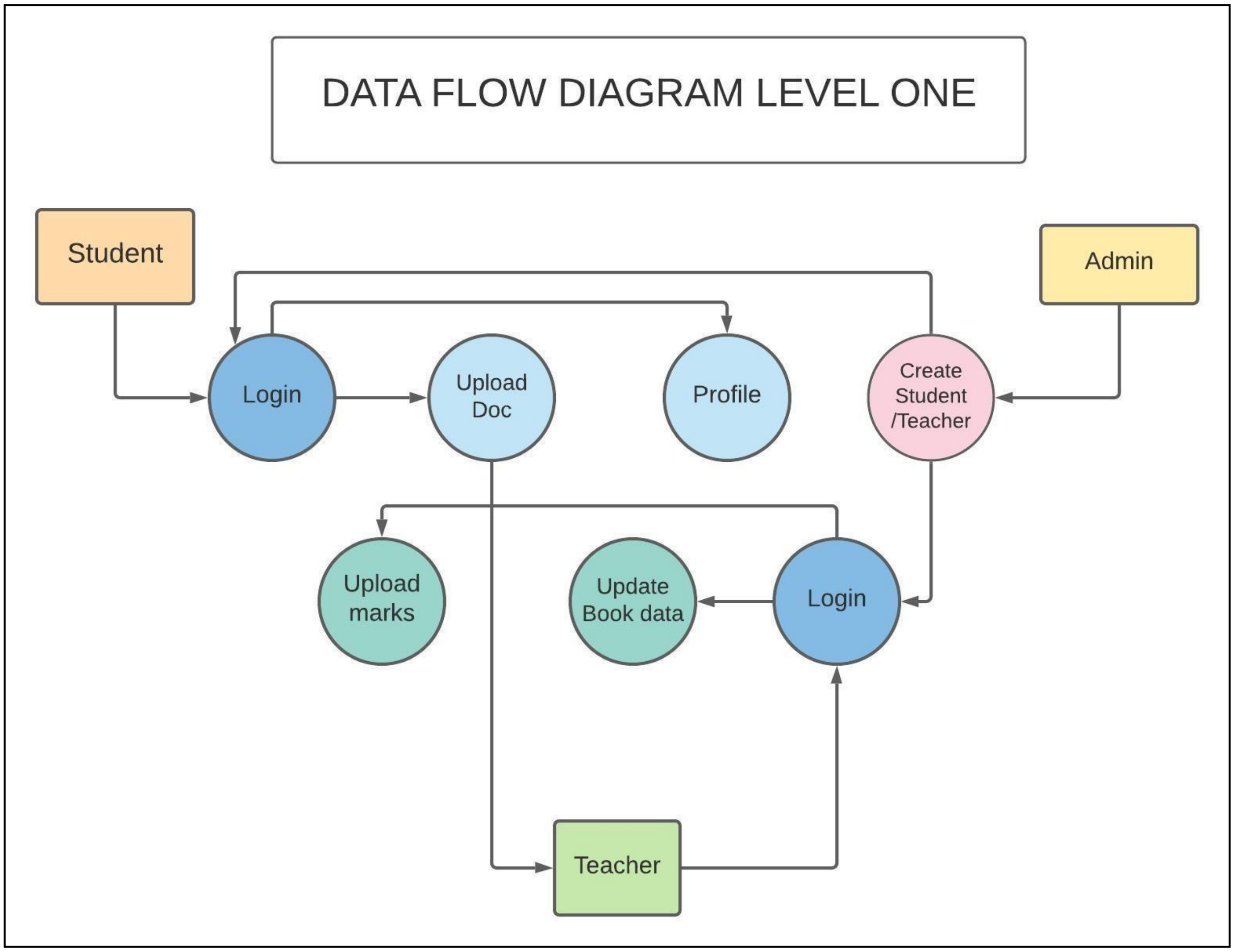
3.2 DATA FLOW DIAGRAM

Level-0



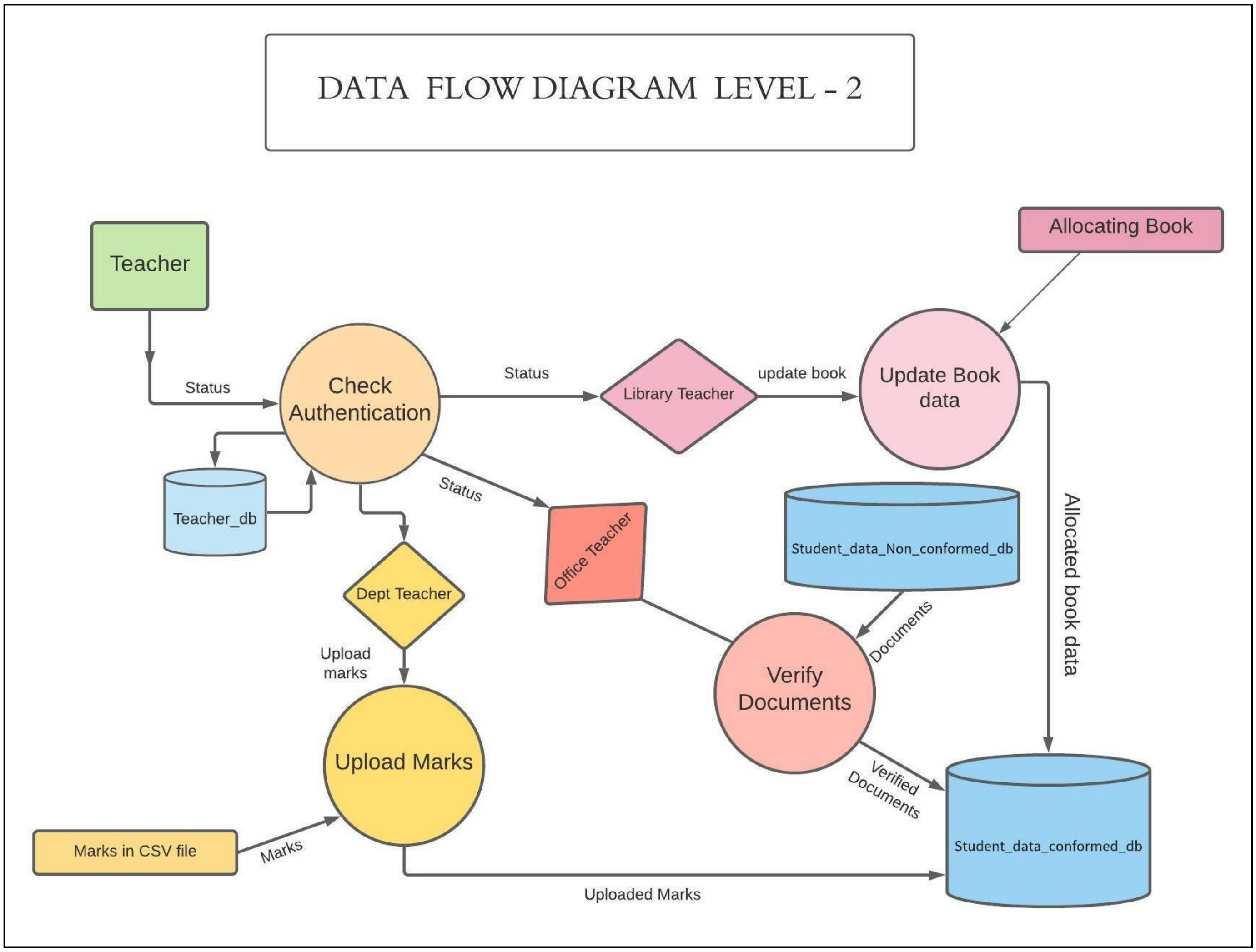
LEVEL- 1 DFD

Level-1

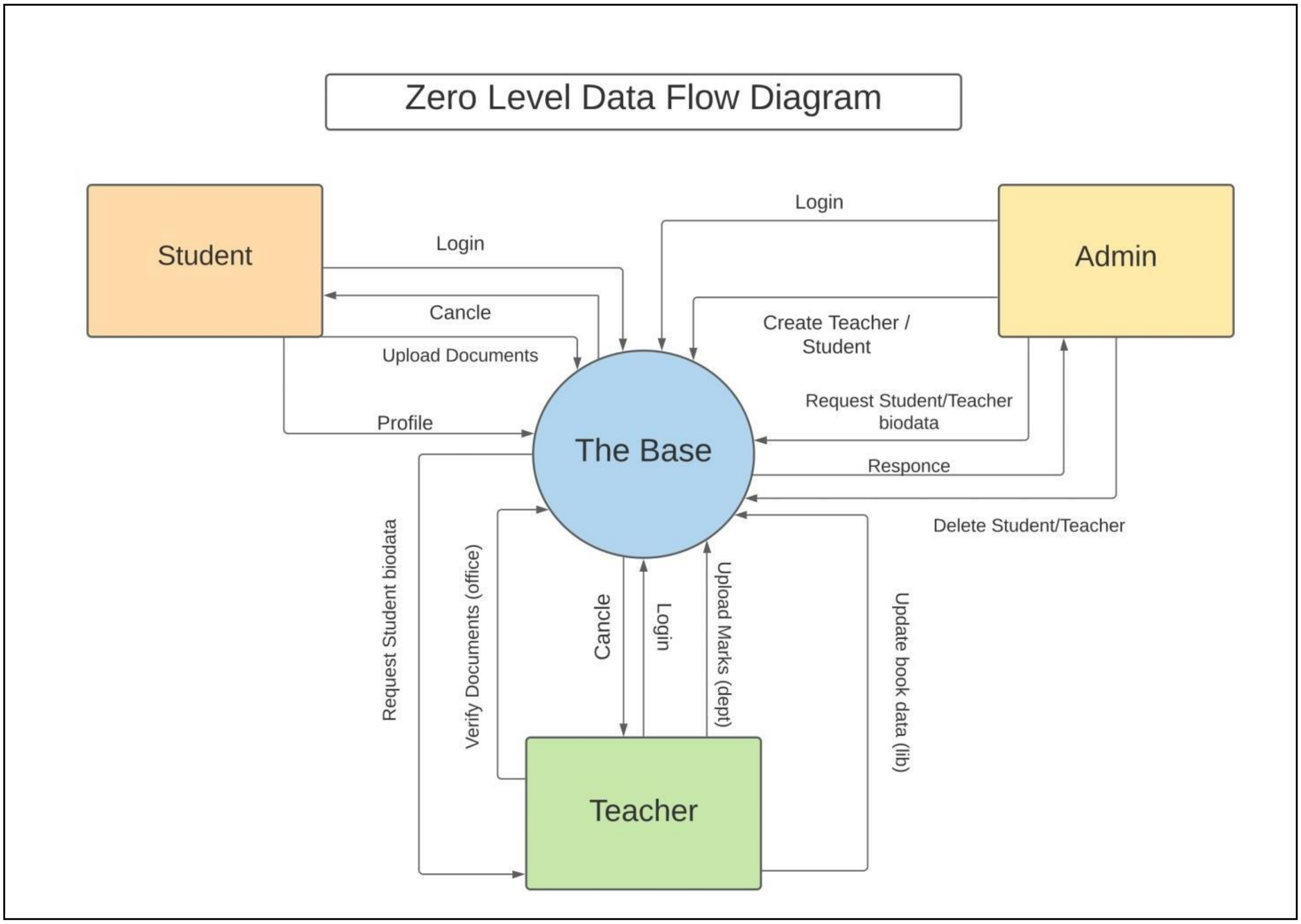


LEVEL- 2 DFD

Level-2

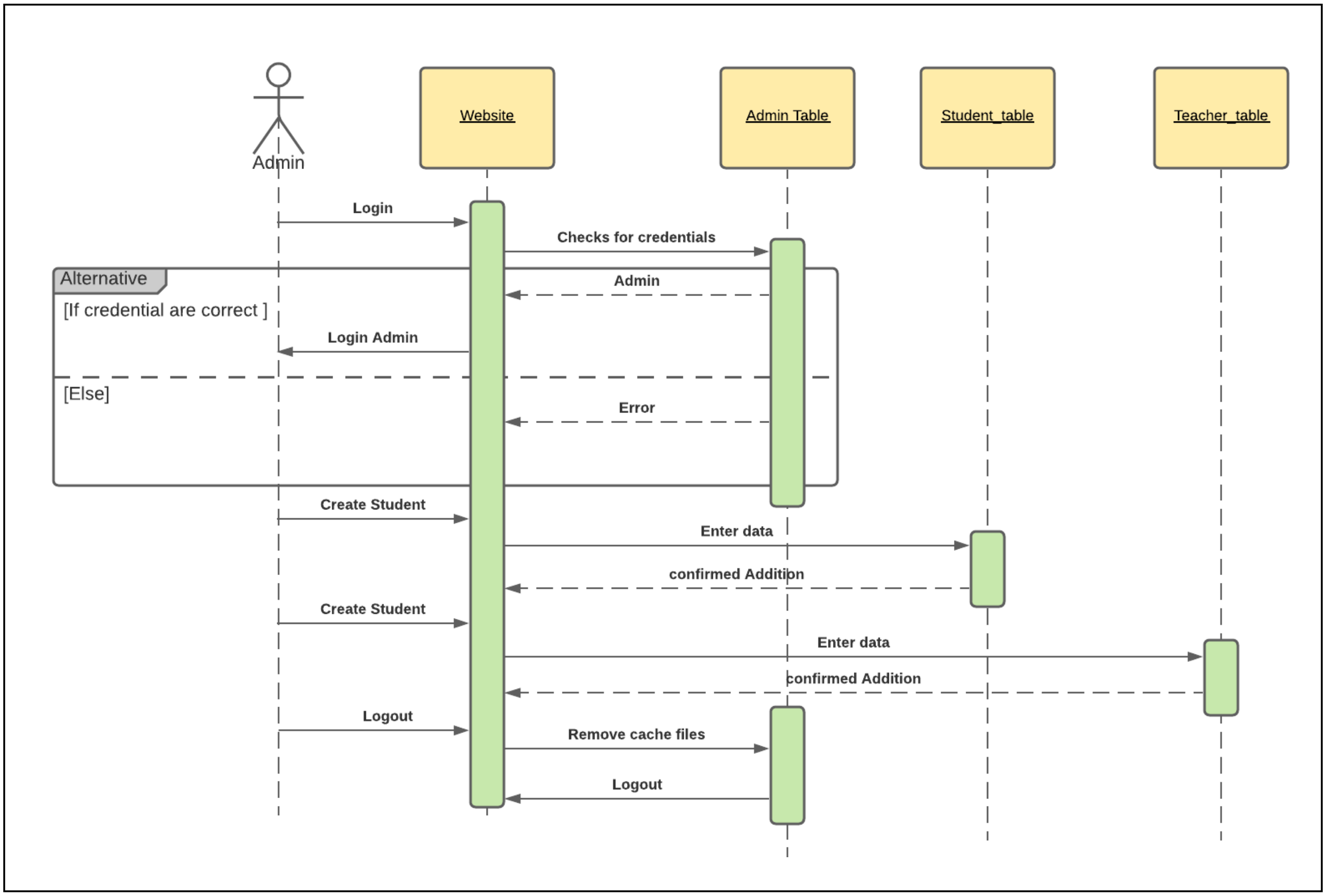


3.3 Class Diagram

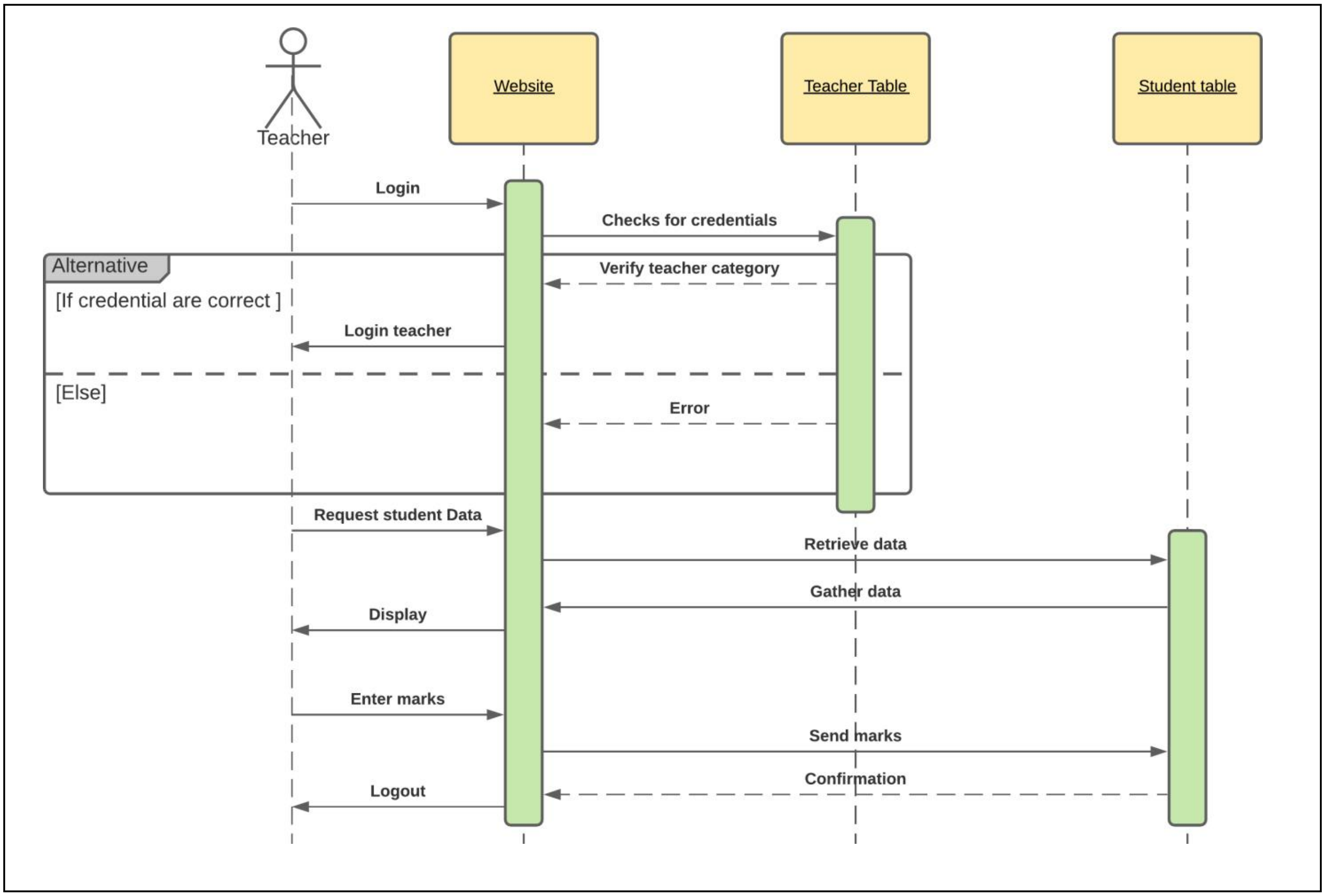


3.4 Sequence Diagram

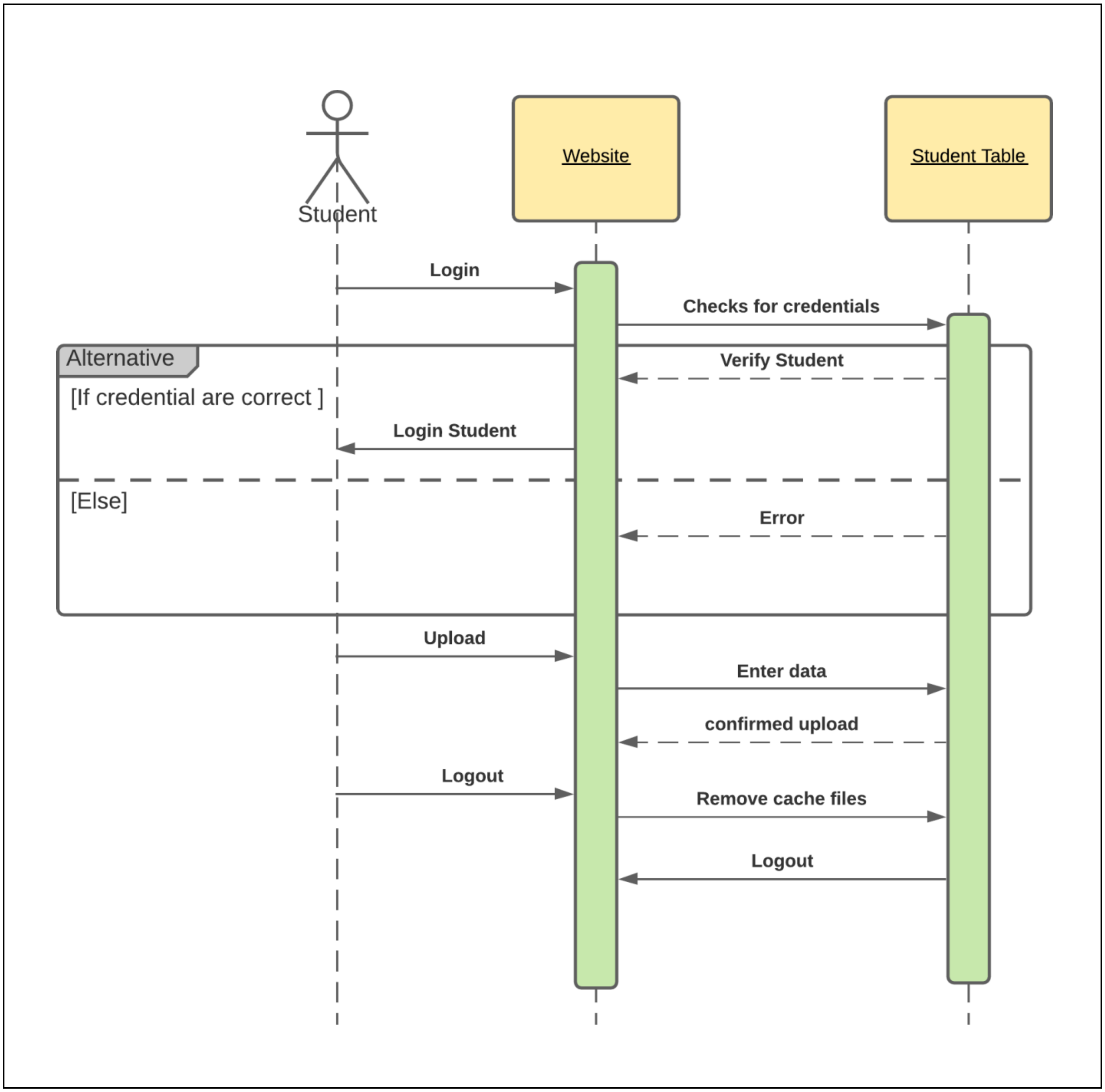
A) Admin



B)Teacher


Teacher
Website
Teacher Table
Student table
Login
Checks for credentials
Alternative
[If credential are correct]
Verify teacher category
Login teacher
[Else]
Error
Request student Data
Retrieve data
Gather data
Display
Enter marks
Send marks
Confirmation
Logout

C)Student


Student
Website
Student Table
Login
Checks for credentials
Alternative
[If credential are correct]
Verify Student
Login Student
[Else]
Error
Upload
Enter data
confirmed upload
Logout
Remove cache files
Logout

Chapter No:-4

FEASIBILITY STUDY

4.1.Feasibility Study

- **Financial feasibility:**

  Financial feasibility refers to financial support required. It refers to finance incurred during the development of the project. The financial feasibility study to decide whether to go ahead with a project or not. Only the financial feasibility study can tell you if a project is profitable and how the investment costs can be translated into profits to create value.

- **Technical feasibility:**

  Technical feasibility is essential for any project because it helps identify potential problems, assess resource requirements, evaluate technical requirements, and ensure project viability. By conducting this study, project managers can improve the chances of project success and avoid costly mistakes. Since our project in JAVA so we need to have a strong base in programming. A computer with JDK installed is needed.

- **Operational feasibility:**

  Operational feasibility means is it possible to practically implement the project. While installing this software, the hardware and software requirements should be specified. The operational feasibility study assesses whether your project can be implemented effectively within your organization's operational framework. It involves evaluating processes, resource planning, scalability, and analyzing potential operational risks.

4.2.Software Requirements:

- Android studio
- Firebase Database

4.3.Hardware Requirements(minimum): -

Processor	- AMD Ryzen 5 3500U
Speed	- 1.1 - 3.1 GHz 1.8 GHz
RAM	- 8 GB
HDD	- 1TB

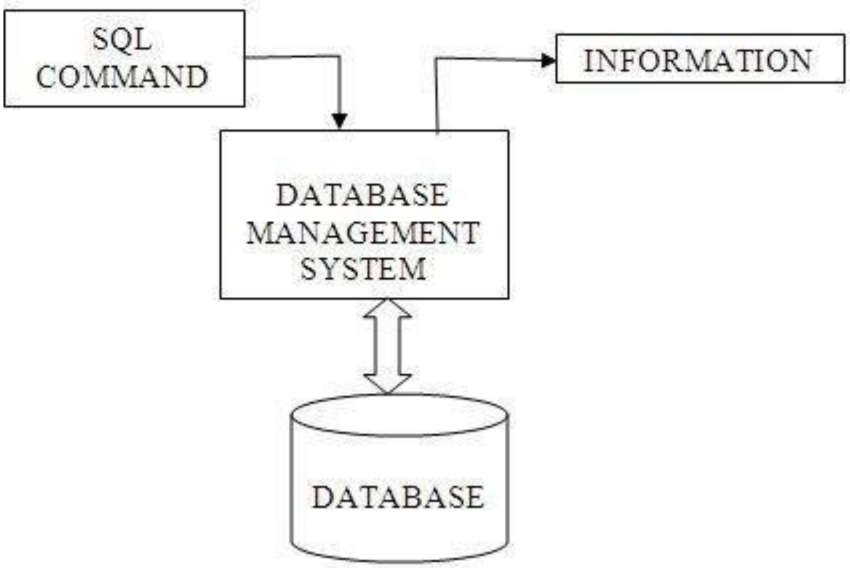
4.4.System Requirements(minimum):

Operating System	- Windows95/98/2000/XP/2007/2008/2010 Mac OS, Chrome OS, LinuxOS
Browser	- Chrome, Firefox, Safari

Chapter No:-5

FIREBASE DATABASE MANAGEMENT SYSTEM

5.1. Database Management System



Database Management System or DBMS in short refers to the technology of storing and retrieving users' data with utmost efficiency along with appropriate security measures. DBMS allows its users to create their own databases as per their requirement. These databases are highly configurable and offer a bunch of options.

Database is a collection of related data and data is a collection of facts and figures that can be processed to produce information. Mostly data represents recordable facts. Data aids in producing information, which is based on facts. For example, if we have data about marks obtained by all students, we can then conclude about toppers and average marks. A database management system stores data in such a way that it becomes easier to retrieve, manipulate, and produce information.

5.2. CHARACTERISTICS

Traditionally, data was organized in file formats. DBMS was a new concept then, and all the research was done to make it overcome the deficiencies in traditional style of data management. A modern DBMS has the following characteristics:

- ❖ **Real-world entity:** A modern DBMS is more realistic and uses real-world entities to design its architecture. It uses the behavior and attributes too. For example, a school database may use students as an entity and their age as an attribute.
- ❖ **Relation-based tables:** DBMS allows entities and relations among them to form tables. A user can understand the architecture of a database just by looking at the table names.
- ❖ **Isolation of data and application:** A database system is entirely different than its data. A database is an active entity, whereas data is said to be passive, on which the database works and organizes. DBMS also stores metadata, which is data about data, to ease its own process.
- ❖ **Less redundancy**: DBMS follows the rules of normalization, which splits a relation when any of its attributes is having redundancy in values. Normalization is a mathematically rich and scientific process that reduces data redundancy.
- ❖ **Consistency:** Consistency is a state where every relation in a database remains consistent. There exist methods and techniques, which can detect attempt of leaving database in inconsistent state. A DBMS can provide greater consistency as compared to earlier forms of data storing applications like file-processing systems.
- ❖ **Query Language:** DBMS is equipped with query language, which makes it more efficient to retrieve and manipulate data. A user can apply as many and as different filtering options as required to retrieve a set of data. Traditionally it was not possible where file-processing system was used.

- **ACID Properties:** DBMS follows the concepts of Atomicity, Consistency, Isolation, and Durability (normally shortened as ACID). These concepts are applied on transactions, which manipulate data in a database. ACID properties help the database stay healthy in multi-transactional environments and in case of failure.
- **Multiuser and Concurrent Access:** DBMS supports multi-user environment and allows them to access and manipulate data in parallel. Though there are restrictions on transactions when users attempt to handle the same data item, but users are always unaware of them.
- **Multiple views:** DBMS offers multiple views for different users. A user who is in the Sales department will have a different view of database than a person working in the Production department. This feature enables the users to have a concentrate view of the database according to their requirements.
- **Security:** Features like multiple views offer security to some extent where users are unable to access data of other users and departments. DBMS offers methods to impose constraints while entering data into the database and retrieving the same at a later stage. DBMS offers many different levels of security features, which enables multiple users to have different views with different features. For example, a used in the Sales department cannot see the data that belongs to the Purchase department. Additionally, it can also be managed how much data of the Sales department should be displayed to the user. Since a DBMS is not saved on the disk as traditional file systems, it is very hard for miscreants to break the code. A typical DBMS has users with different

  rights and permissions who use it for different purposes. Some users retrieve data and some back it up.

The users of a DBMS can be broadly categorized as follows:

- A typical DBMS has users with different rights and permissions who use it for different purposes. Some users retrieve data and some back it up.

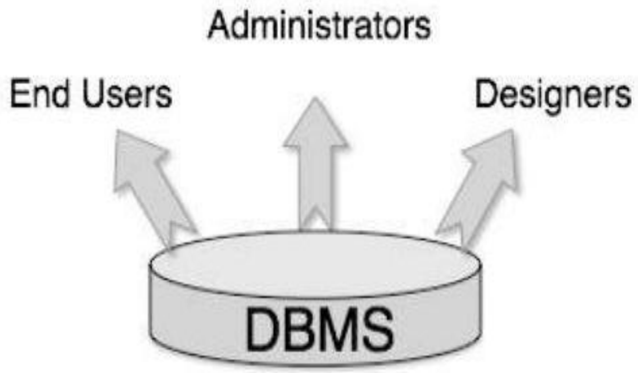


Figure : DBMS Users.

- **Administrators:** Administrators maintain the DBMS and are responsible for administrating the database. They are responsible to look after its usage and by whom it should be used. They create access profiles for users and apply limitations to maintain isolation and force security. Administrators also look after DBMS resources like system license, required tools, and other software and hardware related maintenance.
- **Designers:** Designers are the group of people who actually work on the designing part of the database. They keep a close watch on what data should be kept and in what format. They identify and design the whole set of entities, relations, constraints, and views.
- **End Users:** End users are those who actually reap the benefits of having a DBMS. End users can range from simple viewers who pay attention to the logs or market rates to sophisticated users such as business analysts.

BASIC TERMINOLOGIES

- **Entity:** An entity in an ER Model is a real-world entity having properties called attributes. Every attribute is defined by its set of values called domain. For example, in a school database, a student is considered as an entity. Student has various attributes like name, age, class, etc.
- **Database Schema:** A database schema is the skeleton structure that represents the logical view of the entire database. It defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied on the data.
- **Database Instance:** A database instance is a state of operational database with data at any given time. It contains a snapshot of the database. Database instance tend to change with time. A DBMS ensures that its every instance (state) is in a valid state, by diligently following all the validations, constraints and conditions that the database designers have imposed.
- **Attributes:** Entities are represented by means of their properties called attributes. All attributes have values. For example, a student entity may have name, class, and age as attributes. There exists a domain or range of values that can be assigned to attributes. For example, a student's name cannot be a numeric value. It has to be alphabetic. A student's age cannot be negative, etc.
- **Entity-Set and Keys:** Key is an attribute or collection of attributes that uniquely identifies an entity among entity set. For example, the roll_number of a student makes him/her identifiable among students.

  Super Key: A set of attributes (one or more) that collectively identifies an entity in an entity set.Candidate Key: A minimal super key is called a candidate key. An entity set may have more than one candidate key.Primary Key: A primary key is one of the candidate key chosen by the database designer to uniquely identify the entity set.

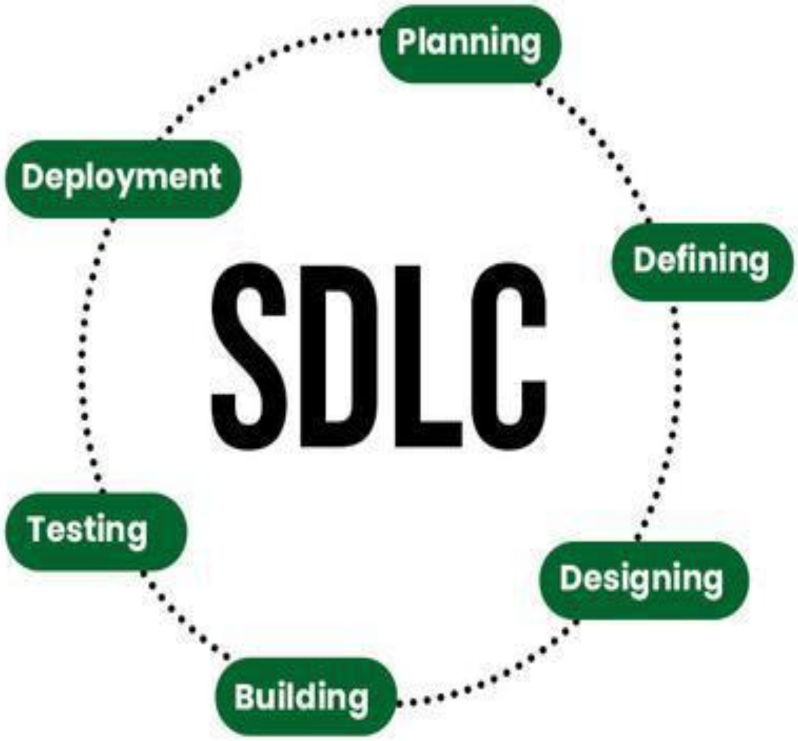
Chapter No:-06

IMPLEMENTATION

6.1.Implementation

Software development life cycle (SDLC)

Software development life cycle (SDLC) is a structured process that is used to design, develop, and test good-quality software. SDLC, or software development life cycle, is a methodology that defines the entire procedure of software development step-by-step.

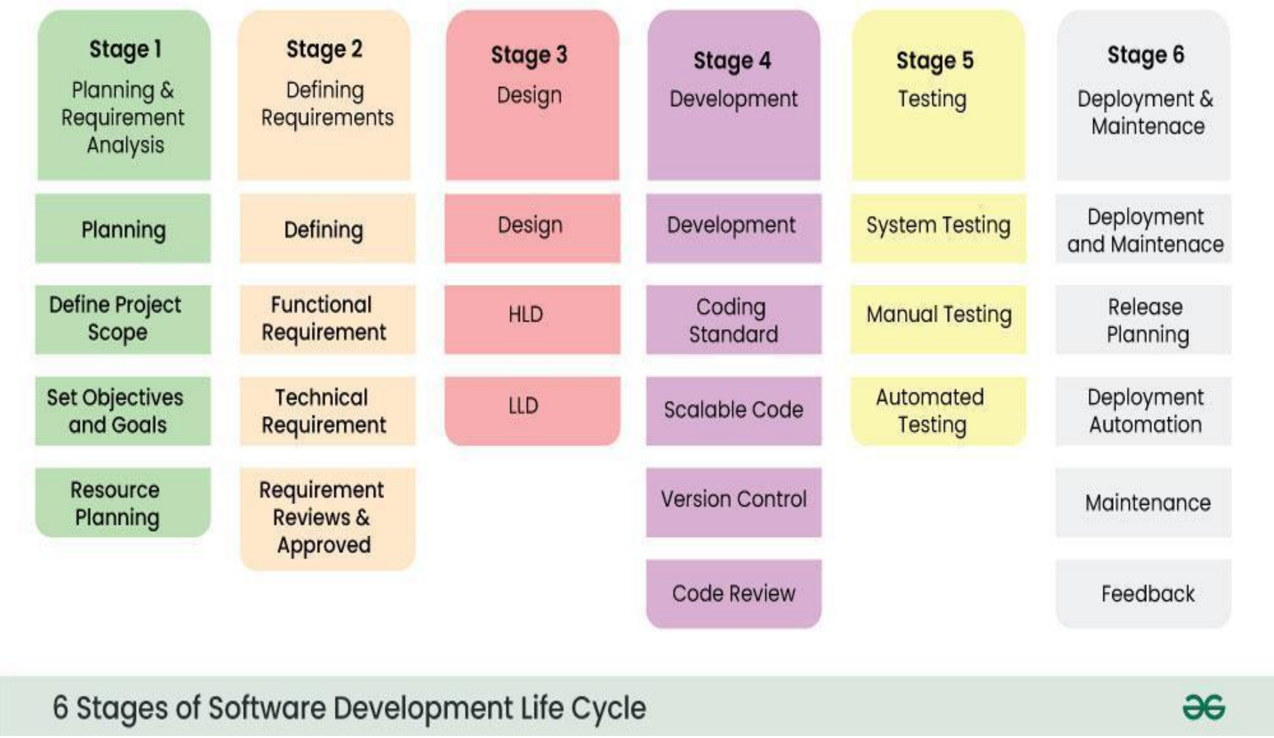


Software Development Life Cycle (SDLC)

The goal of the SDLC life cycle model is to deliver high-quality, maintainable software that meets the user’s requirements. SDLC in software engineering models outlines the plan for each stage so that each stage of the software development model can perform its task efficiently to deliver the software at a low cost within a given time frame that meets users’ requirements.

What is Software Development Life Cycle (SDLC)?

SDLC is a process followed for software building within a software organization. SDLC consists of a precise plan that describes how to develop, maintain, replace, and enhance specific software. The life cycle defines a method for improving the quality of software and the all-around development process.



Stage 1 Planning & Requirement Analysis	Stage 2 Defining Requirements	Stage 3 Design	Stage 4 Development	Stage 5 Testing	Stage 6 Deployment & Maintenace
Planning	Defining	Design	Development	System Testing	Deployment and Maintenace
Define Project Scope	Functional Requirement	HLD	Coding Standard	Manual Testing	Release Planning
Set Objectives and Goals	Technical Requirement	LLD	Scalable Code	Automated Testing	Deployment Automation
Resource Planning	Requirement Reviews & Approved		Version Control		Maintenance
			Code Review		Feedback

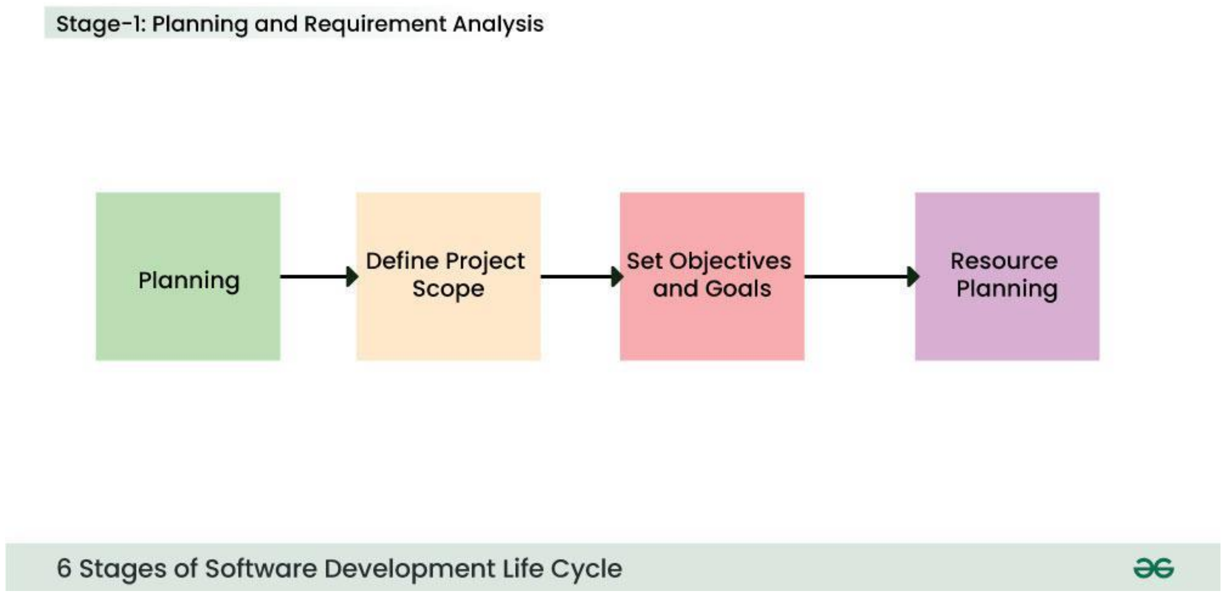
6 Stages of Software Development Life Cycle

Stages of the Software Development Life Cycle Model SDLC

The **SDLC model involves six phases or stages** while developing any software. SDLC is a collection of these six stages, and the stages of SDLC are as follows:

Stage-1: Planning and Requirement Analysis

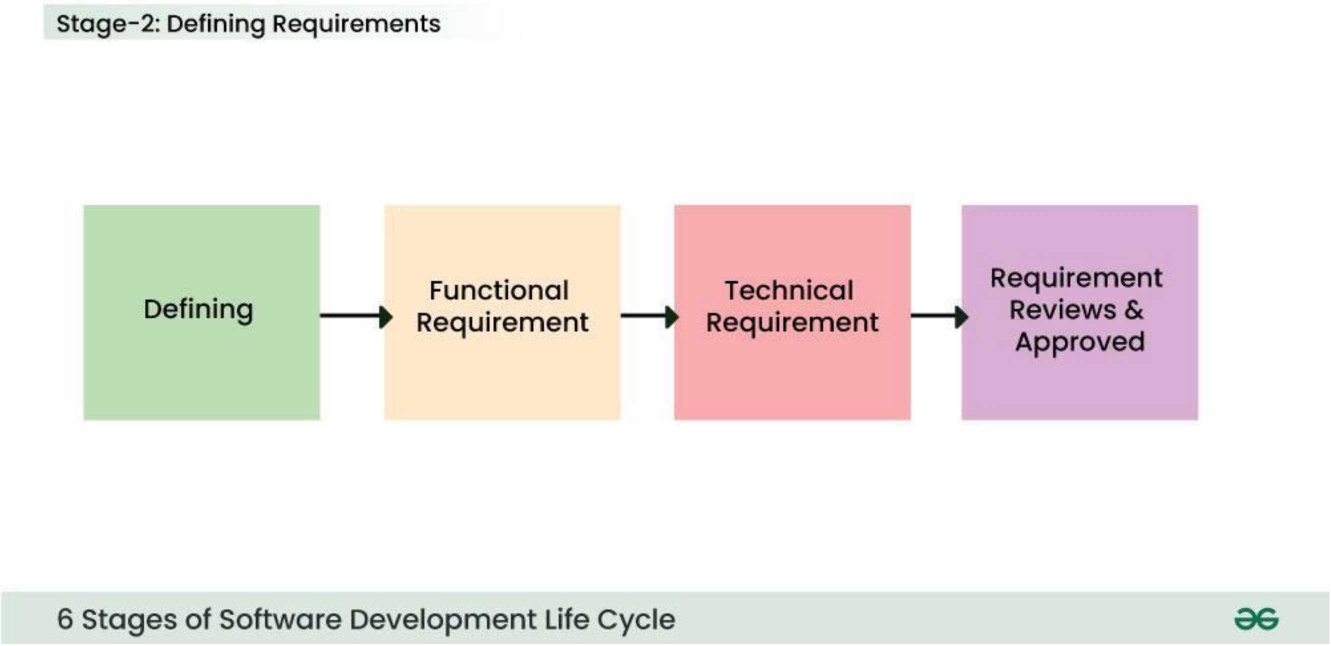
Planning is a crucial step in everything, just as in software development. In this same stage, requirement analysis is also performed by the developers of the organization. This is attained from customer inputs, and sales department/market surveys.
The information from this analysis forms the building blocks of a basic project. The quality of the project is a result of planning. Thus, in this stage, the basic project is designed with all the available information.


Stage-1: Planning and Requirement Analysis
Planning
Define Project Scope
Set Objectives and Goals
Resource Planning
6 Stages of Software Development Life Cycle

Stage-1 : Planning and Requirement Analysis

Stage-2: Defining Requirements

This is a sort of document that specifies all those things that need to be defined and created during the entire project cycle.

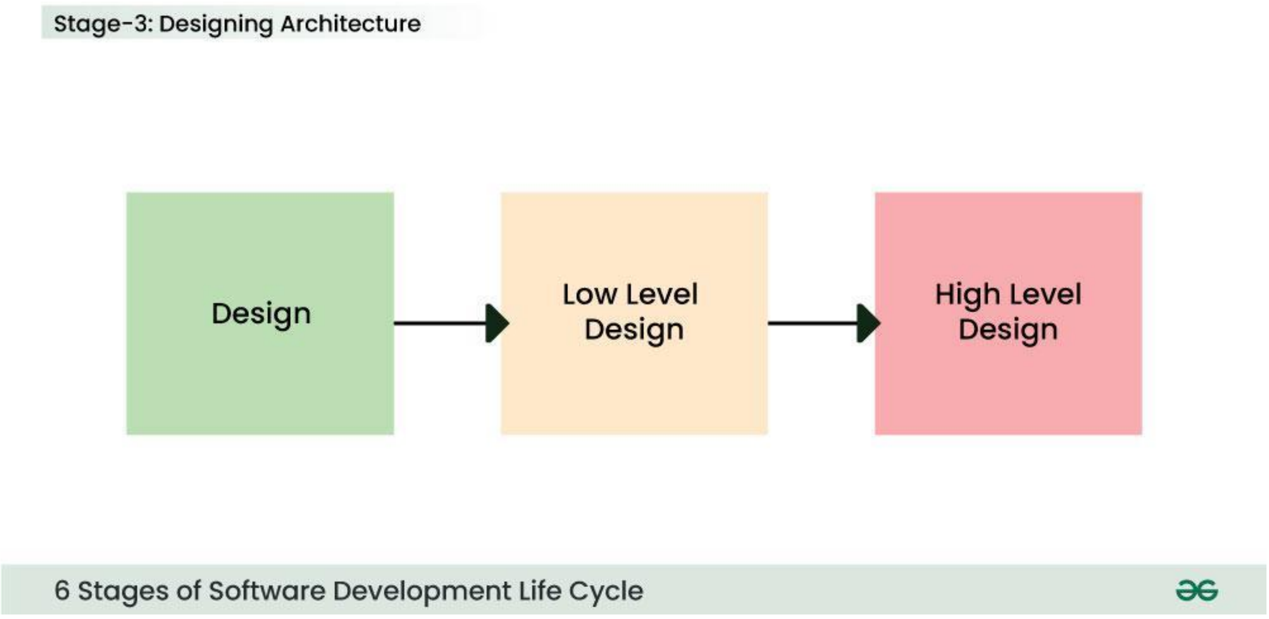

Stage-2: Defining Requirements
Defining
Functional Requirement
Technical Requirement
Requirement Reviews & Approved
6 Stages of Software Development Life Cycle

Stage-2 : Defining Requirements

Stage-3: Designing Architecture

SRS is a reference for software designers to come up with the best architecture for the software. Hence, with the requirements defined in SRS, multiple designs for the product architecture are present in the Design Document Specification (DDS).

This DDS is assessed by market analysts and stakeholders. After evaluating all the possible factors, the most practical and logical design is chosen for development.

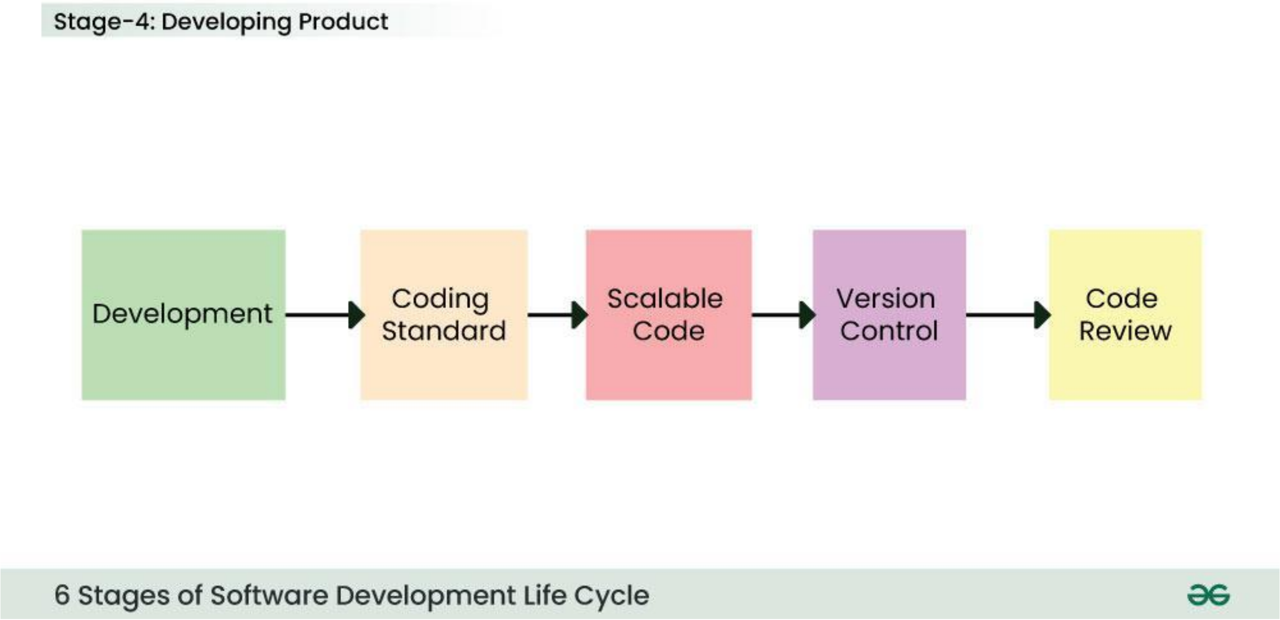

Stage-3: Designing Architecture
Design
Low Level Design
High Level Design
6 Stages of Software Development Life Cycle

Stage 3: Design

Stage-4: Developing Product

At this stage, the fundamental development of the product starts. For this, developers use a specific programming code as per the design in the DDS. Hence, it is important for the coders to follow the protocols set by the association.

Conventional programming tools like compilers, interpreters, debuggers, etc. are also put into use at this stage. Some popular languages like C/C++, Python, Java, etc. are put into use as per the software regulations.


Stage-4: Developing Product
Development
Coding Standard
Scalable Code
Version Control
Code Review
6 Stages of Software Development Life Cycle

Stage 4: Development

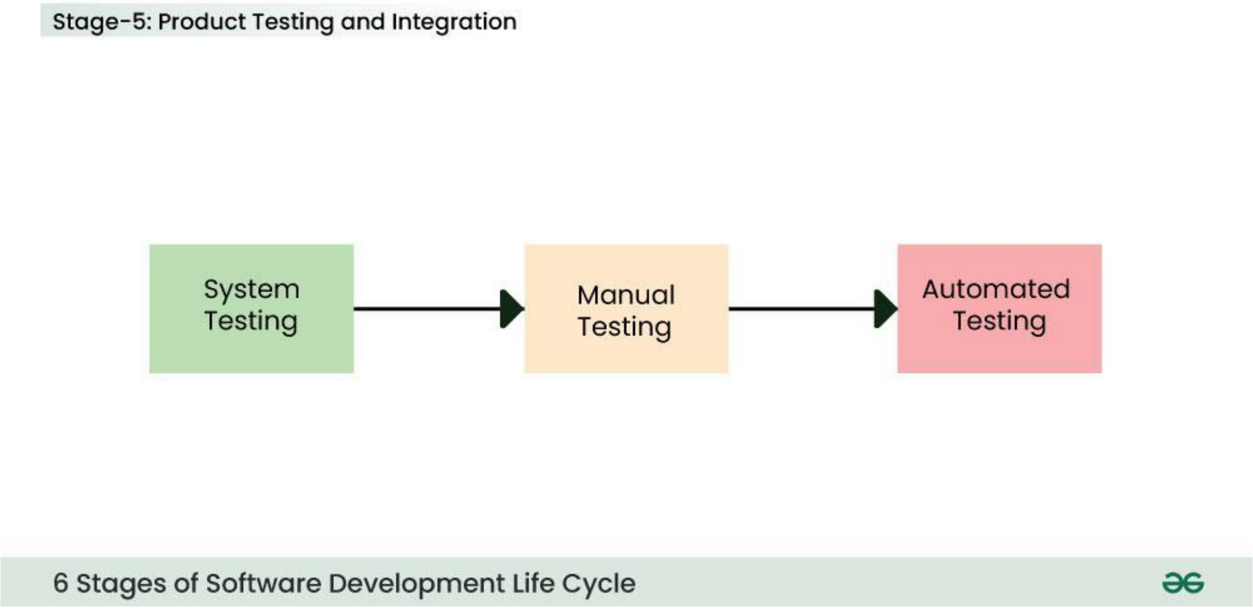
Stage-5: Product Testing and Integration

After the development of the product, testing of the software is necessary to ensure its smooth execution. Although, minimal testing is conducted at every stage of SDLC.

Therefore, at this stage, all the probable flaws are tracked, fixed, and retested. This ensures that the product confronts the quality requirements of SRS.

Documentation, Training, and Support: Software documentation is an essential part of the software development life cycle. A well-written document acts as a tool and means to information repository necessary to know about software processes, functions, and maintenance. Documentation also provides information about how to use the product.

Training in an attempt to improve the current or future employee performance by increasing an employee's ability to work through learning, usually by changing his attitude and developing his skills and understanding.

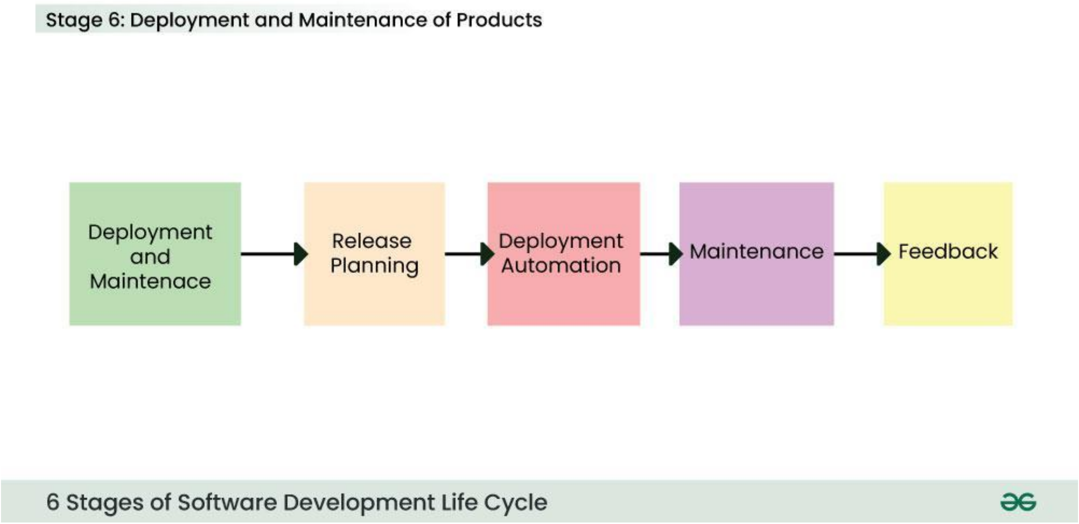

Stage-5: Product Testing and Integration
System Testing
Manual Testing
Automated Testing
6 Stages of Software Development Life Cycle

Stage 5: Testing

Stage-6: Deployment and Maintenance of Products

After detailed testing, the conclusive product is released in phases as per the organization’s strategy. Then it is tested in a real industrial environment. It is important to ensure its smooth performance.

If it performs well, the organization sends out the product as a whole. After retrieving beneficial feedback, the company releases it as it is or with auxiliary improvements to make it further helpful for the customers. However, this alone is not enough. Therefore, along with the deployment, the product’s supervision.


Stage 6: Deployment and Maintenance of Products
Deployment and Maintenace
Release Planning
Deployment Automation
Maintenance
Feedback
6 Stages of Software Development Life Cycle

Stage 6: Deployment and Maintenance

6.2.Software Development Life Cycle Models

To this day, we have more than 50 recognized SDLC models in use. But None of them is perfect, and each brings its favourable aspects and disadvantages for a specific software development project or a team.

In this article, We've listed the **top five** most popular SDLC models below.

1. Waterfall Model

It is the fundamental model of the software development life cycle. This is a very simple model. The **waterfall model** is not in practice anymore, but it is the basis for all other SDLC models. Because of its simple structure, the waterfall model is easier to use and provides a tangible output. In the waterfall model, once a phase seems to be completed, it cannot be changed, and due to this less flexible nature, the waterfall model is not in practice anymore.

2. Agile Model

The agile model was mainly designed to adapt to changing requests quickly. The main goal of the **Agile model** is to facilitate quick project completion. The agile model refers to a group of development processes. These processes have some similar characteristics but also possess certain subtle differences among themselves.

3. Iterative Model

In the **iterative model**, each cycle results in a semi-developed but deployable version; with each cycle, some requirements are added to the software, and the final cycle results in the software with the complete requirement specification.

4. Spiral Model

The spiral model is one of the most crucial SDLC models that provides support for risk handling. It has various spirals in its diagrammatic representation; the number of spirals depends upon the type of project. Each loop in the spiral structure indicates the *Phases of the* **Spiral model.**

5. V-Shaped Model

The **V-shaped model** is executed in a sequential manner in V-shape. Each stage or phase of this model is integrated with a testing phase. After every development phase, a testing phase is associated with it, and the next phase will start once the previous phase is completed, i.e., development & testing. It is also known as the verification or validation model.

6. Big Bang Model

The Big Bang model in SDLC is a term used to describe an informal and unstructured approach to software development, where there is no specific planning, documentation, or well-defined phases.

What is the need for SDLC?

SDLC is a method, approach, or process that is followed by a software development organization while developing any software. SDLC models were introduced to follow a disciplined and systematic method while designing software. With the software development life cycle, the process of software design is divided into small parts, which makes the problem more understandable and easier to solve. SDLC comprises a detailed description or step-by-step plan for designing, developing, testing, and maintaining the software.

6.3. SDLC Waterfall Model

The waterfall model is a software development model used in the context of large, complex projects, typically in the field of information technology. It is characterized by a structured, sequential approach to project management and software development.

The waterfall model is useful in situations where the project requirements are well-defined and the project goals are clear. It is often used for large-scale projects with long timelines, where there is little room for error and the project stakeholders need to have a high level of confidence in the outcome.

Features of the SDLC Waterfall Model

1. **Sequential Approach:** The waterfall model involves a sequential approach to software development, where each phase of the project is completed before moving on to the next one.
2. **Document-Driven:** The waterfall model relies heavily on documentation to ensure that the project is well-defined and the project team is working towards a clear set of goals.
3. **Quality Control:** The waterfall model places a high emphasis on quality control and testing at each phase of the project, to ensure that the final product meets the requirements and expectations of the stakeholders.
4. **Rigorous Planning: The** waterfall model involves a rigorous planning process, where the project scope, timelines, and deliverables are carefully defined and monitored throughout the project lifecycle.

Overall, the waterfall model is used in situations where there is a need for a highly structured and systematic approach to software development. It can be effective in ensuring that large, complex projects are completed on time and within budget, with a high level of quality and customer satisfaction.

Importance of SDLC Waterfall Model

1. **Clarity and Simplicity:** The linear form of the Waterfall Model offers a simple and unambiguous foundation for project development.

2. **Clearly Defined Phases:** The Waterfall Model’s phases each have unique inputs and outputs, guaranteeing a planned development with obvious checkpoints.

3. **Documentation:** A focus on thorough documentation helps with software comprehension, upkeep, and future growth.

4. **Stability in Requirements:** Suitable for projects when the requirements are clear and steady, reducing modifications as the project progresses.

6.4. Phases of SDLC Waterfall Model –

The Waterfall Model is a classical software development methodology that was first introduced by Winston W. Royce in 1970. It is a linear and sequential approach to software development that consists of several phases that must be completed in a specific order.

The Waterfall Model has six phases which are:

1. **Requirements:** The first phase involves gathering requirements from stakeholders and analyzing them to understand the scope and objectives of the project.

2. **Design:** Once the requirements are understood, the design phase begins. This involves creating a detailed design document that outlines the software architecture, user interface, and system components.

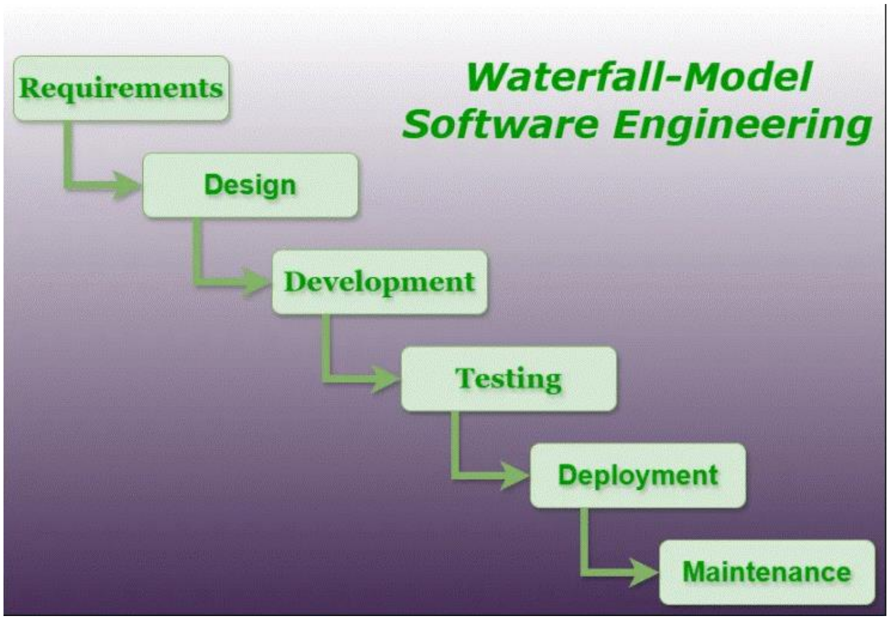
3. **Development:** The Development phase include implementation involves coding the software based on the design specifications. This phase also includes unit testing to ensure that each component of the software is working as expected.

4. **Testing:** In the testing phase, the software is tested as a whole to ensure that it meets the requirements and is free from defects.

5. **Deployment:** Once the software has been tested and approved, it is deployed to the production environment.

6. **Maintenance:** The final phase of the Waterfall Model is maintenance, which involves fixing any issues that arise after the software has been deployed and ensuring that it continues to meet the requirements over time.

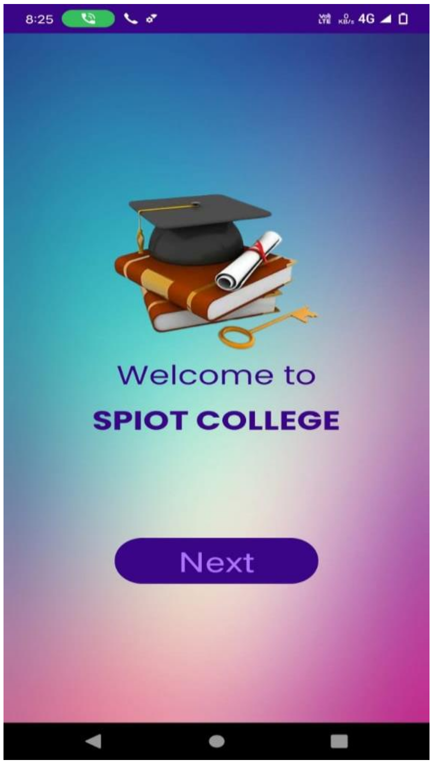
The classical waterfall model divides the life cycle into a set of phases. This model considers that one phase can be started after the completion of the previous phase. That is the output of one phase will be the input to the next phase. Thus the development process can be considered as a sequential flow in the waterfall. Here the phases do not overlap with each other. The different sequential phases of the classical waterfall model are shown in the below figure.

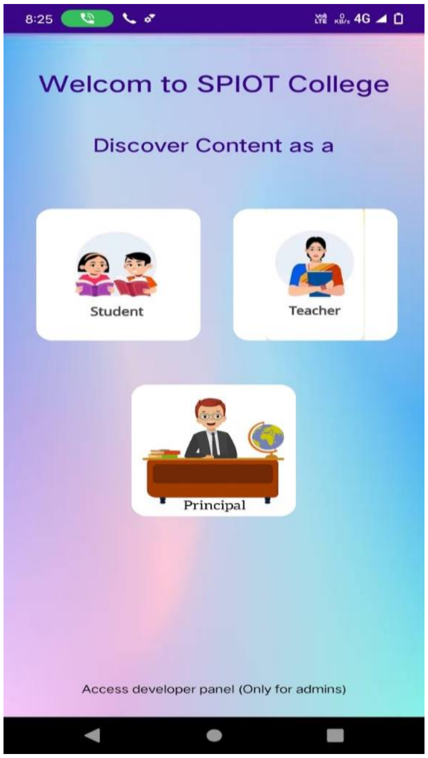


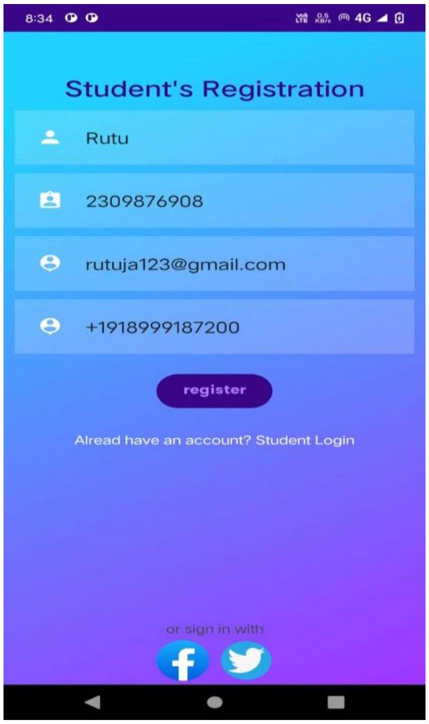
Waterfall Model-Software Engineering

6.5. SPIOT Project Outputs

AS A STUDENT







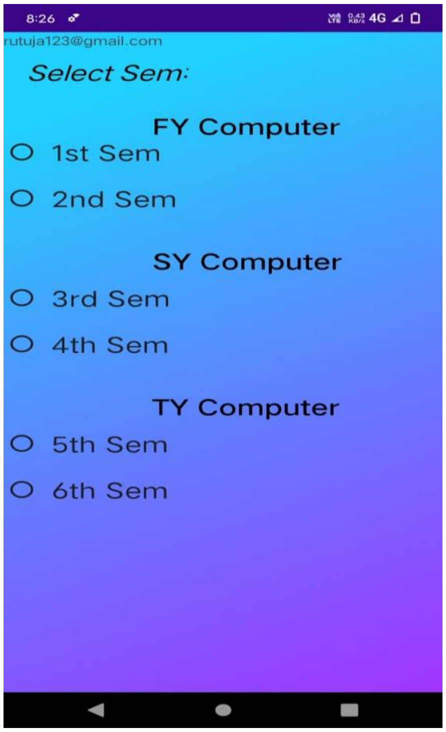
Student's Registration

Rutu

2309876908

rutuja123@gmail.com

+1918999187200



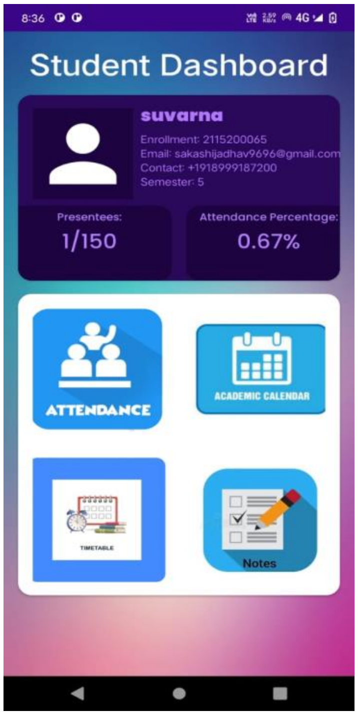
rutuja123@gmail.com

Select Sem:

FY Computer
○ 1st Sem
○ 2nd Sem

SY Computer
○ 3rd Sem
○ 4th Sem

TY Computer
○ 5th Sem
○ 6th Sem



8:36

Student Dashboard

suvarna

Enrollment: 2115200065

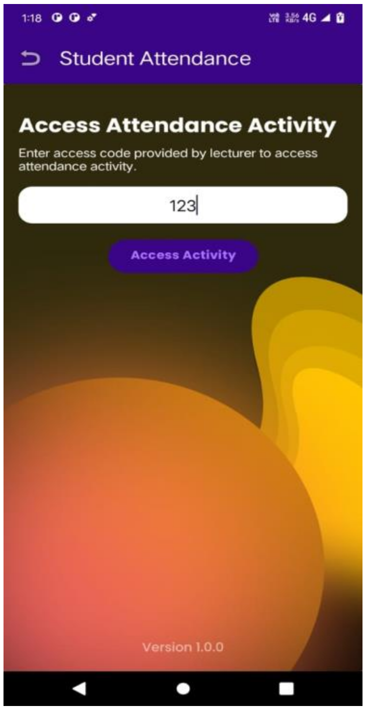
Email: sakashijadhav9696@gmail.com

Contact: +1918999187200

Semester: 5

Presentees: 1/150

Attendance Percentage: 0.67%



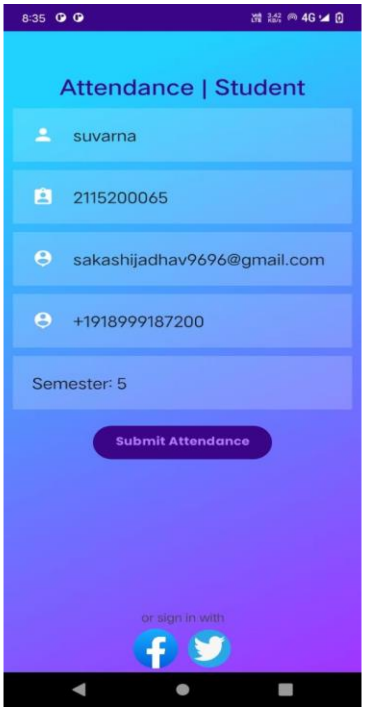
1:18

Student Attendance

Access Attendance Activity

Enter access code provided by lecturer to access attendance activity.

123



8:35

Attendance | Student

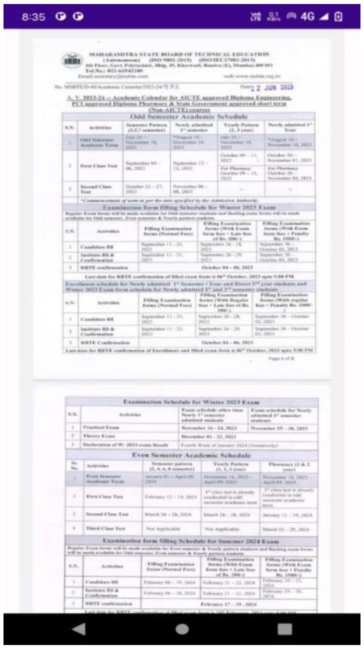
suvarna

2115200065

sakashijadhav9696@gmail.com

+1918999187200

Semester: 5



8:35

MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION
(Autonomous) (ISO 9001:2015) (ISO/IEC 27001:2013)
4th Floor, Govt. Polytechnic Bldg. 49, Kherwadi, Bandra (E), Mumbai-400 051
Tel.No.: 022-62542100
Email: secretary@msbte.com web: www.msbte.org.in

No. MSBTE/D-40/Academic Calendar/2023-24/[illegible] Date: 22 JUN 2023

A. Y. 2023-24 – Academic Calendar for AICTE approved Diploma Engineering, PCI approved Diploma Pharmacy & State Government approved short term (Non-AICTE) courses

Odd Semester Academic Schedule

S.N.	Activities	Semester Pattern (3,5,7 semester)	Newly admitted 1st semester	Yearly Pattern (2,3 year)	Newly admitted 1st Year
1	Odd Semester Academic Term	July 24 – November 10, 2023	*August 16 – November 24, 2023	July 24 – November 10, 2023	*August 16 – November 10, 2023
2	First Class Test	September 04 – 06, 2023	September 13 – 15, 2023	October 09 – 11, 2023 For Pharmacy October 09 – 14, 2023	October 30 – November 01, 2023 For Pharmacy October 30 – November 04, 2023
3	Second Class Test	October 25 – 27, 2023	November 06 – 08, 2023	--	--

*Commencement of term as per the date specified by the Admission Authority.

Examination form filling Schedule for Winter 2023 Exam

Regular Exam forms will be made available for Odd semester students and Backlog exam forms will be made available for Odd semester, Even semester & Yearly pattern students

S.N.	Activities	Filling Examination forms (Normal Fees)	Filling Examination forms (With Exam form fees + Late fees of Rs. 200/-)	Filling Examination forms (With Exam form fees + Penalty Rs. 1500/-)
1	Candidate fill	September 11 - 24, 2023	September 26 - 28, 2023	September 30 – October 02, 2023
2	Institute fill & Confirmation	September 11 - 25, 2023	September 26 - 29, 2023	September 30 – October 03, 2023
3	RBTE confirmation	October 04 – 06, 2023		

Last date for RBTE confirmation of filled exam form is 06th October, 2023 upto 5:00 PM

Enrollment schedule for Newly admitted 1st Semester / Year and Direct 2nd year students and Winter 2023 Exam form schedule for Newly admitted 1st and 3rd semester students

S.N.	Activities	Filling Examination forms (Normal Fees)	Filling Examination forms (With Regular fees + Late fees of Rs. 200/-)	Filling Examination forms (With regular fees + Penalty Rs. 1500/-)
1	Candidate fill	September 11 - 24, 2023	September 26 – 28, 2023	September 30 – October 02, 2023
2	Institute fill & Confirmation	September 11 - 25, 2023	September 26 - 29, 2023	September 30 – October 03, 2023
3	RBTE Confirmation	October 04 – 06, 2023		

Last date for RBTE confirmation of Enrollment and filled exam form is 06th October, 2023 upto 5:00 PM

Page 1 of 8

Examination Schedule for Winter 2023 Exam

S.N.	Activities	Exam schedule other than Newly 1st semester admitted students	Exam schedule for Newly admitted 1st semester students
1	Practical Exam	November 16 - 24, 2023	November 25 – 30, 2023
2	Theory Exam	December 01 – 22, 2023	
3	Declaration of W- 2023 exam Result	Fourth Week of January 2024 (Tentatively)	

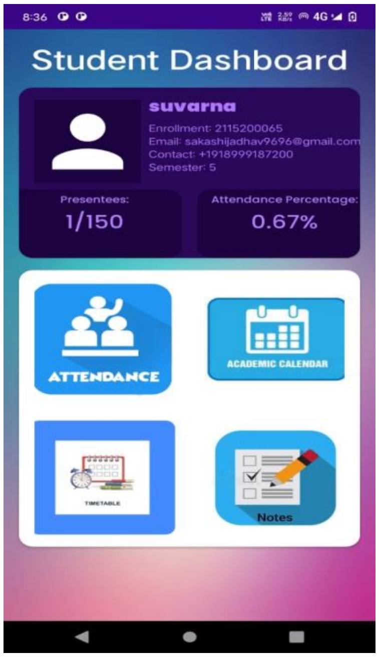
Even Semester Academic Schedule

Sr. No.	Activities	Semester pattern (2,4,6,8 semester)	Yearly Pattern (1,2,3 year)	Pharmacy (1 & 2 year)
1	Even Semester Academic Term	January 01 – April 09, 2024	November 16, 2023 – April 09, 2024	November 16, 2023 – April 09, 2024
2	First Class Test	February 12 – 14, 2024	1st class test is already conducted in odd semester academic term	1st class test is already conducted in odd semester academic term
3	Second Class Test	March 26 – 28, 2024	March 26 – 28, 2024	January 15 – 19, 2024
4	Third Class Test	Not Applicable	Not Applicable	March 23 – 29, 2024

Examination form filling Schedule for Summer 2024 Exam

Regular Exam forms will be made available for Even semester & Yearly pattern students and Backlog exam forms will be made available for Odd semester, Even semester & Yearly pattern students

S.N.	Activities	Filling Examination forms (Normal Fees)	Filling Examination forms (With Exam form fees + Late fees of Rs. 200/-)	Filling Examination forms (With Exam form fees + Penalty Rs. 1500/-)
1	Candidate fill	February 06 – 19, 2024	February 21 – 22, 2024	February 24 – 25, 2024
2	Institute fill & Confirmation	February 06 – 20, 2024	February 21 – 23, 2024	February 24 – 26, 2024
3	RBTE confirmation	February 27 – 29, 2024		



8:36

Student Dashboard

suvarna

Enrollment: 2115200065

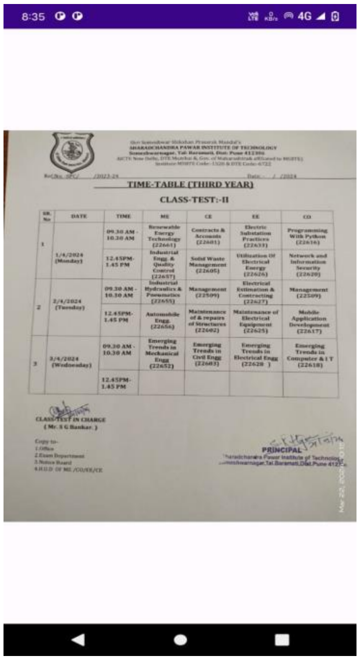
Email: sakashijadhav9696@gmail.com

Contact: +1918999187200

Semester: 5

Presentees: 1/150

Attendance Percentage: 0.67%



8:35

Shri Someshwar Shikshan Prasarak Mandal's
SHARADCHANDRA PAWAR INSTITUTE OF TECHNOLOGY
Someshwarnagar, Tal: Baramati, Dist: Pune 412306
AICTE New Delhi, DTE Mumbai & Govt. of Maharashtra & affiliated to MSBTE)
Institute MSBTE Code: 1520 & DTE Code: 6722

Ref.No. SPC/ /2023-24 Date: / /2024

TIME-TABLE (THIRD YEAR)

CLASS-TEST:-II

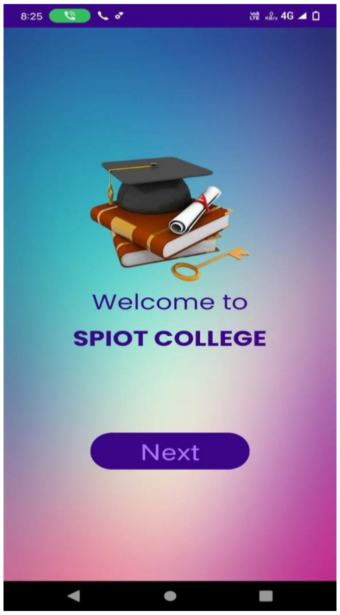
SR. No	DATE	TIME	ME	CE	EE	CO
1	1/4/2024 (Monday)	09.30 AM - 10.30 AM	Renewable Energy Technology (22661)	Contracts & Accounts (22601)	Electric Substation Practices (22633)	Programming With Python (22616)
		12.45PM-1.45 PM	Industrial Engg. & Quality Control (22657)	Solid Waste Management (22605)	Utilization Of Electrical Energy (22626)	Network and Information Security (22620)
2	2/4/2024 (Tuesday)	09.30 AM - 10.30 AM	Industrial Hydraulics & Pneumatics (22655)	Management (22509)	Electrical Estimation & Contracting (22627)	Management (22509)
		12.45PM-1.45 PM	Automobile Engg. (22656)	Maintenance of & repairs of Structures (22602)	Maintenance of Electrical Equipment (22625)	Mobile Application Development (22617)
3	3/4/2024 (Wednesday)	09.30 AM - 10.30 AM	Emerging Trends in Mechanical Engg (22652)	Emerging Trends in Civil Engg (22603)	Emerging Trends in Electrical Engg (22628)	Emerging Trends in Computer & I T (22618)
		12.45PM-1.45 PM				

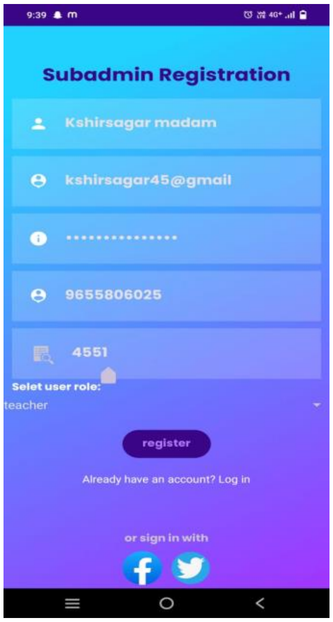
CLASS-TEST IN CHARGE
(Mr. S G Bankar.)

Copy to-
1.Office
2.Exam Department
3.Notice Board
4.H.O.D. OF ME /CO/EE/CE

PRINCIPAL
Sharadchandra Pawar Institute of Technology
Someshwarnagar,Tal Baramati,Dist.Pune 412306

AS A TEACHER


Welcome to
SPIOT COLLEGE


Subadmin Registration

Kshirsagar madam

kshirsagar45@gmail

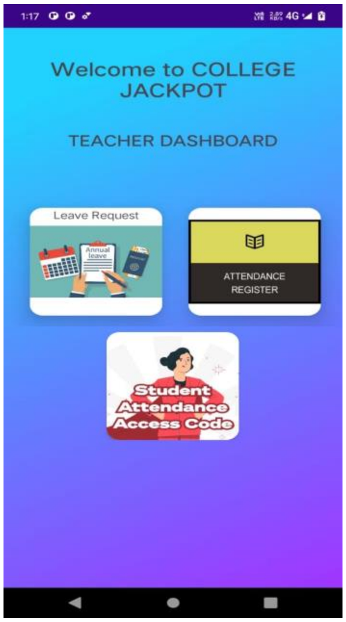
•••••••••••••••

9655806025

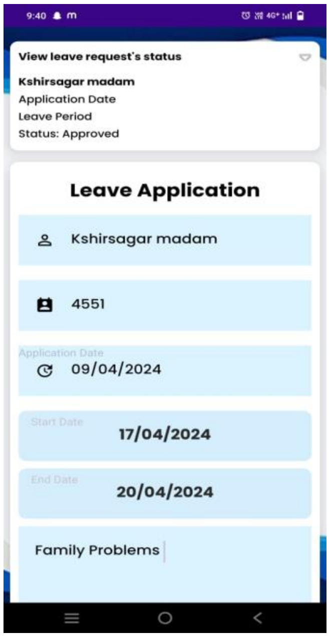
4551

Selet user role:
teacher

Already have an account? Log in


Welcome to COLLEGE JACKPOT

TEACHER DASHBOARD


View leave request's status
Kshirsagar madam
Application Date
Leave Period
Status: Approved

Leave Application

Kshirsagar madam

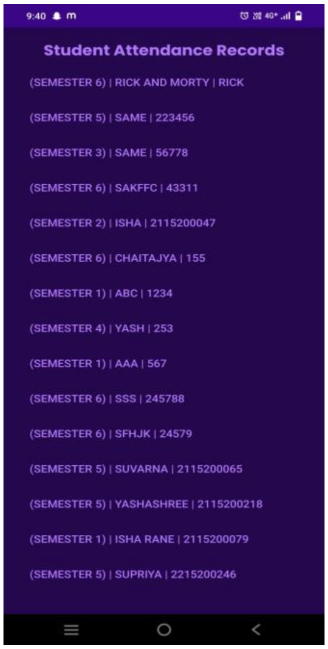
4551

Application Date
09/04/2024

Start Date
17/04/2024

End Date
20/04/2024

Family Problems


Student Attendance Records

(SEMESTER 6) | RICK AND MORTY | RICK

(SEMESTER 5) | SAME | 223456

(SEMESTER 3) | SAME | 56778

(SEMESTER 6) | SAKFFC | 43311

(SEMESTER 2) | ISHA | 2115200047

(SEMESTER 6) | CHAITAJYA | 155

(SEMESTER 1) | ABC | 1234

(SEMESTER 4) | YASH | 253

(SEMESTER 1) | AAA | 567

(SEMESTER 6) | SSS | 245788

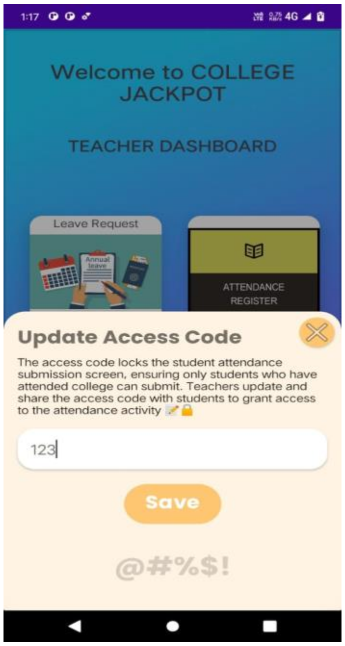
(SEMESTER 6) | SFHJK | 24579

(SEMESTER 5) | SUVARNA | 2115200065

(SEMESTER 5) | YASHASHREE | 2115200218

(SEMESTER 1) | ISHA RANE | 2115200079

(SEMESTER 5) | SUPRIYA | 2215200246


Welcome to COLLEGE JACKPOT

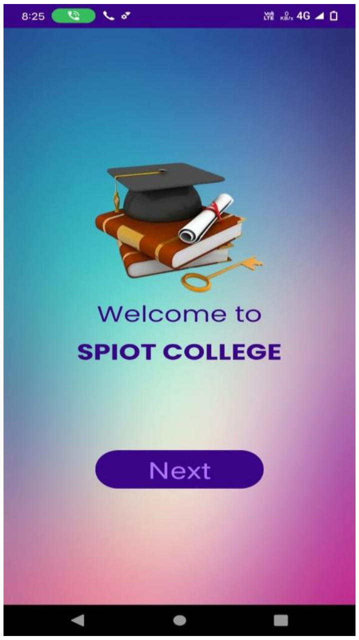
TEACHER DASHBOARD

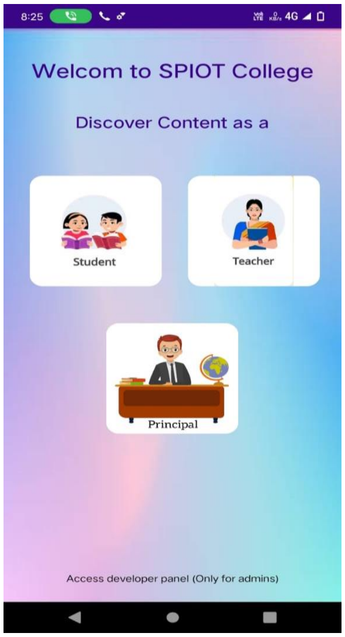
Update Access Code

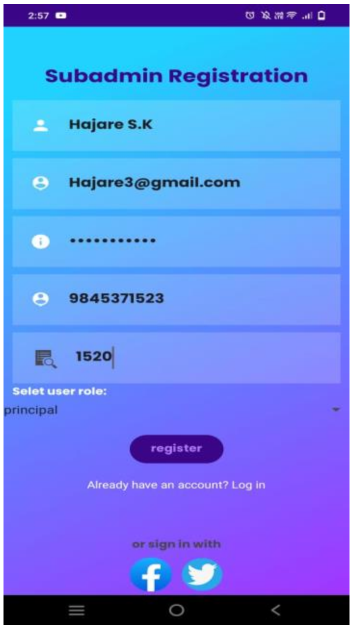
The access code locks the student attendance submission screen, ensuring only students who have attended college can submit. Teachers update and share the access code with students to grant access to the attendance activity 📝🔒

123

AS A PRINCIPAL







Subadmin Registration

Hajare S.K

Hajare3@gmail.com

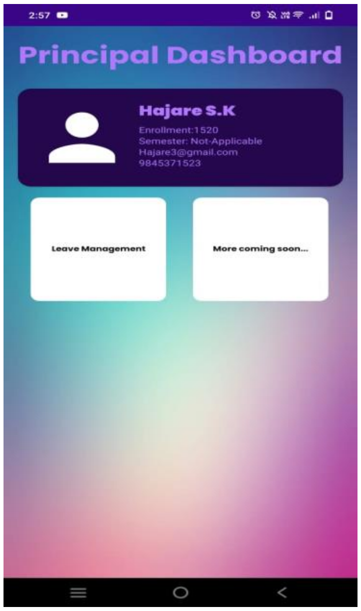
•••••••••••

9845371523

1520

Selet user role:

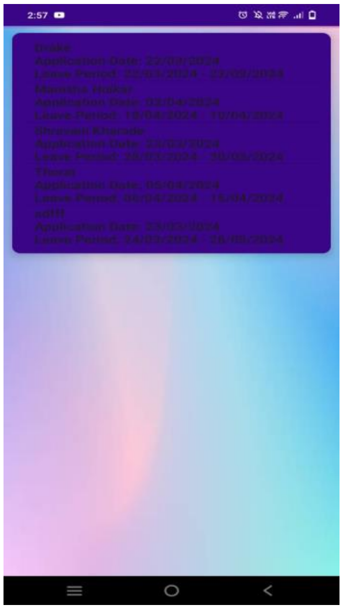
principal



Principal Dashboard

Hajare S.K

Enrollment:1520
Semester: Not-Applicable
Hajare3@gmail.com
9845371523



Snake
Application Date: 22/03/2024
Leave Period: 22/03/2024 - 23/03/2024
Manisha Holkar
Application Date: 02/04/2024
Leave Period: 18/04/2024 - 10/04/2024
Shivnath Khande
Application Date: 23/03/2024
Leave Period: 26/03/2024 - 30/03/2024
Thosar
Application Date: 05/04/2024
Leave Period: 09/04/2024 - 15/04/2024
adfff
Application Date: 23/03/2024
Leave Period: 24/03/2024 - 28/03/2024

Chapter No:-07

TESTING

7.1. SYSTEM TESTING

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub assemblies, assemblies and/or a finished product It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

7.2. TYPES OF TESTS

- Unit testing
- Integration testing
- System testing
- Acceptance testing
- Functional testing

UNIT TESTING

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive.In this project based on the this testing separately test the modules, fields and each and every data this has been tested based on efficient and the custom needs.

INTEGRATION TESTING

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. The combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

In this testing the each and every module are linked together by using the data to be transfer from one module field to another**.**

SYSTEM TEST

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

In this testing it is based on the coding to assigning or performs the function by using the methods and data for the program to be run.In this testing testing are two types are namely

- White box testing
- Black box testing

WHITE BOX TESTING

White Box Testing is a testing in which in which the software tester has knowledge of the inner coding, structure and language of the software.

BLACK BOX TESTING

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document.

It is a testing in which the software under test is treated, as a black box .you cannot "see" into it. The test provides inputs and responds to outputs without considering how the software works.

TEST OBJECTIVES

- All field entries must work properly.
- Pages must be activated from the identified link.
- The entry screen, messages and responses must not be delayed.

FEATURES TO BE TESTED

- Verify that the entries are of the correct format
- No duplicate entries should be allowed
- All links should take the user to the correct page.

ACCEPTANCE TESTING

User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the functional requirements.

In this testing performed that the customer satisfaction are fulfilled and also in this testing we can performing various access namely as follows, likely the various functions are can be done are adding some fields needed, modifying the fields etc., any changes are done by using the testing.

FUNCTIONAL TESTING

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

7.3.Generate Test cases to Validate Supplier details like mobile_no and email_id.

Test ID	**Test Case Objectives**	**Prerequisites**	**Steps**	**Input Data**	**Expected Result**	**Actual Result**	**Status**
1.	Check The Validity of mobile no field.	Mobile No field is available.	Click on mobile No field.	Number	Mobile No should be 10 digits.	Accepting.	Pass
2.	Check The Validity of mobile no field.	Mobile No field is available.	Click on mobile No field.	Number	Mobile No should not be 10 digits.	Not Accepting.	Fail
3.	Check The Validity of email_id field.	Email id field is available.	Click on email id field.	Alphabets &@symbol	Email id should be alphabets and @ symbol.	Accepting.	Pass

Chapter No:-08

LANGUAGE SPECIFICATION

8.1. Language Specification

JAVA

Java is a general-purpose computer programming language that is concurrent, class-based, object-oriented and specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere" (WORA) meaning that compiled Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to byte code that can run on any Java virtual machine (JVM) regardless of computer architecture.

There were five primary goals in the creation of the Java language:

- It must be "simple, object-oriented, and familiar".
- It must be "robust and secure".
- It must be "architecture-neutral and portable".
- It must execute with "high performance".

CHARACTERISTICS OF JAVA

The target of Java is to write a program once and then run this program on multiple operating systems.

Java has the following properties

Platform independent: Java programs use the Java virtual machine as abstraction and do not access the operating system directly. This makes Java programs highly portable. A Java program (which is standard-compliant and follows certain rules) can run unmodified on all supported platforms, e.g., Windows or Linux.

Object-orientated programming language: Except the primitive data types, all elements in Java are objects.

Strongly-typed programming language: Java is strongly-typed, e.g., the types of the used variables must be pre-defined and conversion to other objects is relatively strict, e.g., must be done in most cases by the programmer.

Interpreted and compiled language: Java source code is transferred into the byte code format which does not depend on the target platform. These byte code instructions will be interpreted by the Java Virtual machine (JVM). The JVM contains a so called Hotspot-Compiler which translates performance critical byte code instructions into native code instructions.

Automatic memory management: Java manages the memory allocation and de-allocation for creating new objects. The program does not have direct access to the memory. The so-called garbage collector automatically deletes objects to which no active pointer exists.

The Java syntax is similar to C++. Java is case-sensitive, e.g., variables called myValue and my value are treated as different variables.

Development Process with Java

Java source files are written as plain text documents. The programmer typically writes Java source code in an Integrated Development Environment (IDE) for programming. An IDE supports the programmer in the task of writing code, e.g., it provides auto-formatting of the source code, highlighting of the important keywords, etc.

At some point the programmer (or the IDE) calls the Java compiler (javac). The Java compiler creates the byte code instructions. These instructions are stored in .class files and can be executed by the Java Virtual Machine.

Garbage collector

The JVM automatically re-collects the memory which is not referred to by other objects.The Java garbage collector checks all object references and finds the objects which can be automatically released.

While the garbage collector relieves the programmer from the need to explicitly manage memory, the programmer still need to ensure that he does not keep unneeded object reference; otherwise the garbage collector cannot release the associated memory. Keeping unneeded object references are typically called memory leaks.

INSTALLATION OF JAVA

Check installation

To run Java programs on your computer you must at least have the Java runtime environment (JRE) installed. This might already be the case on your machine. You can test is the JRE is installed and in your current path by opening a console (if you are using Windows: Win+R, enter cmd and press Enter) and by typing in the following command:

```
java -version
```

If the JRE is installed and within your path, this commands print information about your Java installation. If the command line returns the information that the program could not be found, you have to install Java.

8.2.Salient Features

The features of ‘College Management System’ include:-

1. Modern, easy to use interface
2. As per SDLC Standards
3. Easy Export of data to .csv file
4. Share basic data through QR code
5. Display scheduled notices to chosen students
6. Automated book fine system
7. Dedicated Activity section to track students Activities
8. View history of book data
9. Easy Display curriculum
10. Access from all over the globe
11. Customizable Background UI
12. Allotment of Marks Using one single file
13. Library Book Assignment
14. Create Bulk Student Logins
15. Responsive Platform (Usable from android or iOS devices too)
16. Secure authentication and mass enrolment
17. Bulk course creation and easy backup
18. Add/Remove Teachers
19. Double Authentication of Data

Chapter No:-09

CONCLUSION

9.1. Conclusion

I have concluded, this application student can easily access the modules like to see the all subjects questions paper , academic calendar , syllabus ,attendance etc.

The Application is easy to use, reasonably secure and enforces data integrity resulting from the use of a relational database management system.

The software design if effectively implemented will solve the problems associated with manual processing of teacher leave application.

College Management System deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details and other resource related details too.

It tracks all the details of a student from the day one to the end of his course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result;

In our project, the college management system is particularly designed to provide marks and attendance updates from the college to the parents of the respective students.

REFERENCES

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