LAB REPORT

Submitted by

ANUJ [RA2011003010910]

YASH [RA2011003010914]

BASIM AHAMED [RA2011003010925]

Under the Guidance of

Ms. S NAGADEVI

Assistant Professor
C.Tech

In partial satisfaction of the requirements for the degree of

BACHELOR OF TECHNOLOGY
in
COMPUTER SCIENCE ENGINEERING

with specialization in Core

SCHOOL OF COMPUTING

COLLEGE OF ENGINEERING AND TECHNOLOGY

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

KATTANKULATHUR - 603203

SRM INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)

COLLEGE OF ENGINEERING & TECHNOLOGY
SRM INSTITUTE OF SCIENCE & TECHNOLOGY
S.R.M. NAGAR, KATTANKULATHUR - 603203
Chengalpattu District

BONAFIDE CERTIFICATE

Register No RA2011003010925

Certified to be the bonafide work done by Basim Ahamed Kizhakattil II Year / IV Sem B.Tech Degree course in the **Practical Software Engineering and Project Management 18CSC206J** in **SRM INSTITUTE OF SCIENCE & TECHNOLOGY,** Kattankulathur during the academic year 2021-2022

DATE : 26/6/22

Department of Computing Technology
Kattankulathur
603 203
SRM IST

LAB INCHARGE
Dr. S. NAGA DEVI
Assistant Professor,
Dept. of CTECH

ABSTRACT

Developing a website for college students where in one place they will be able to visualize about their college ongoing events, past records, achievements and able to track their progress. Students are unaware of the ongoing college events, clubs recruitments and other important notification. Campus Wiki is a one stop solution for all the problem faced by students in day to day life. Student will be able to connect with the alumni, seniors and super seniors. The creation and the executives of exact, modern data with respect to an understudies' scholastic profession is fundamentally significant in the college just as universities. Understudy data framework manages all sort of understudy subtleties, scholarly related reports, school subtleties, course subtleties, educational program, cluster subtleties, position subtleties and other asset related subtleties as well. It will likewise have workforce subtleties, clump execution subtleties, understudies' subtleties in all perspectives, the different scholastic notices to the staff and understudies refreshed by the school organization. The client can updadte stuent,staff records eliminate them effectively through the administrator.

TABLE OF CONTENTS

LIST OF FIGURES

Department of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	1
Title of Experiment	To identify the Software Project, Create Business Case, Arrive at a Problem Statement
Name of the candidate	ANUJ
Team Members	ANUJ , YASH , BASIM AHMED KIZHAKATHIL
Register Number	RA2011003010910, RA2011003010914, RA2011003010925
Date of Experiment	22/03/22

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To Frame a project team, analyze and identify a Software project. To create a business case and Arrive at a Problem Statement for the <title of the project>

Team Members:

S. No	Register No	Name	Role
1	RA2011003010910	**ANUJ**	**Lead/Rep**
2	RA2011003010914	**YASH**	**Member**
3	RA2011003010925	BASIM AHMED KIZHAKATHIL	**Member**

Project Title: Campus Wiki

Project Description

We are developing a website for college students where in one place they will be able to visualize about their college ongoing events, past records, achievements and able to track their progress **.**

Business Case

<Incorporate the Business Case template>

ONE PAGE BUSINESS CASE TEMPLATE

DATE	22/3/22
SUBMITTED BY	ANUJ , YASH , BASIM AHMED
TITLE / ROLE	Campus wiki

THE PROJECT

In bullet points, describe the problem this project aims to solve or the opportunity it aims to develop.

- It focuses on the daily problems faced by students at college.
- It makes easier for the student to know about the clubs and events.
- Students will be able to see the achievements and placement details .
- Academic reports are all present at one place.

THE HISTORY

In bullet points, describe the current situation.

- It is very difficult for students to get college updates of events.
- Students are unaware of the past achievements of their alumni.
- It is tiresome to find about college attendance status.

LIMITATIONS

List what could prevent the success of the project, such as the need for expensive equipment, bad weather, lack of special training, etc.

- Lack of college statistics and past records.
- Lack of managing network traffic.
- Time constraint.

APPROACH

List what is needed to complete the project.

- Web tech- HTML , CSS , JavaScript , Bootstrap ,Node JS ,React JS, MongoDB.
- College records and data .
- API's

BENEFITS

In bullet points, list the benefits that this project will bring to the organization.

- Students will be updated with on going events in college.
- Students will be motivated from past achievements of alumni.
- Students will be able to track their progress.

Result

Thus, the project team formed, the project is described, the business case was prepared and the problem statement was arrived.

ONE PAGE BUSINESS CASE TEMPLATE

DATE	22/3/22
SUBMITTED BY	ANUJ , YASH , BASIM AHMED
TITLE / ROLE	Campus wiki

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- Time constraint.

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List what is needed to complete the project.

- Web tech- HTML , CSS , JavaScript , Bootstrap ,Node JS ,React JS, MongoDB.
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Department of Computing Technologies

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	**2**
Title of Experiment	**Identification of Project Methodology and Stakeholder Description**
Name of the candidate	**ANUJ**
Team Members	BASIM AHAMED, YASH, ANUJ
Register Number	RA2011003010925, RA2011003010914, RA2011003010910
Date of Experiment	23-03-2022

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Presentation	5	
2	Project Methodology	2.5	
3	Stakeholder Identification	2.5	
	Total	**10**	

Staff Signature with date

Aim

To identify the appropriate Process Model for the project and prepare Stakeholder and User Description.

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010910	ANUJ	**Lead**
2	RA2011003010914	YASH	**Member**
3	RA2011003010925	BASIM AHAMED KIZHAKATHIL	**Member**

Project Title:

CAMPUS WIKI

1. Executive Summary

1.1 Project Methodology:

Agile Methodology is a people-focused, results-focused approach to software development that respects our rapidly changing world.
It's centred around adaptive planning, self-organization, and short delivery times.
It's flexible, fast, and aims for continuous improvements in quality, to put in simple terms, Agile helps teams in delivering value to customers quickly and effortlessly.
Thus, developing such software management project, Agile methodology brings out the most effective growth out of it.

1.2 Stakeholder Identification:

Internal stakeholders:

The internal stakeholders include the team members, managers, executives who are all internally related.

Project Role	Responsibilities	Team members assigned to
Project Manager	Managing and assigning tasks.	YASH
Technical Lead	Leading the development of the project	ANUJ

Business Analyst	Analysing the market and business model of the project and its profitability	BASIM AHAMED
Developer	Developing the project	ANUJ, BASIM AHAMED
Tester	Testing the project to fix bugs and other errors.	YASH

External stakeholders:

Project Role	Responsibilities	Team members assigned to
End Users	To review the project.	YASH
Investors	To fund the project on regular basis	ANUJ
Advertisers	Advertising and marketing the project	BASIM AHAMED

2. Stakeholder Management

2.1 Interest and Influence matrix

Interest	Influence
High	High
Low	Low
Low	High
High	Low

2.2 STAKEHOLDER INTEREST, INFLUENCE, PRIORITY IDENTIFICATION

Stakeholder	Responsibility	Interest	Influence	Estimated Priority
Owner	To review the proper functioning of team for maximum profitabilty	HIGH	HIGH	HIGH
Sponsor	Providing fund for advertisement	LOW	HIGH	HIGH
Team members	To work according to the task given.	HIGH	LOW	LOW
Project Manager	To assign the task to different members and manage them.	HIGH	HIGH	LOW
Investors	To provide sufficient fund for the development of the project	LOW	HIGH	HIGH
Resource Manager	Managing the resources required for developing the project	LOW	LOW	LOW

Suppliers	To Supply the final product to consumers	HIGH	LOW	HIGH
End Users	To review the final product.	HIGH	HIGH	HIGH

Reference

1. Jon Ducket – Javascript & Query
2. Geeks For Geeks
3. IBM – Web Development Bootcamp.

Result

Thus the Project Methodology was identified stakeholders were described.

Department Of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	3
Title of Experiment	System, Functional and Non-Functional Requirements of the Project
Name of the candidate	Anuj
Team Members	Anuj, Yash, Basim Ahmed
Register Number	Ra2011003010910, Ra2011003010914, Ra2011003010925
Date of Experiment	

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To identify the system, functional and non-functional requirements for the project.

Team Members:

S No	Register No	Name	Role
1	Ra2011003010910	**Anuj**	**Rep/Member**
2	Ra2011003010914	**Yash**	**Member**
3	Ra2011003010925	**Basim Ahmed**	**Member**

Project Title: CAMPUS WIKI

User Requirements

1. All users must be able to interact seamlessly with website elements (Search bars, Buttons, Menus, Text Input Fields etc).
2. Registered users must be required to enter login details before accessing their information.

System Requirements

Server Requirement

- 2x Intel Xeon E5645 – 2.40GHz Hex Core
- 32GB – 8x4GB PC3-10600R DDR3 Registered
- PERC H700 RAID Controller with 512MB Cache
- Redundant 717W Power Supplies
- 2x Dell R-Series 2.5″ SAS 146GB 10K Hard Drive / 2x Dell R-Series 2.5″ SAS 300GB 10K Hard Drive

Functional Requirements

Website:

1. Website must be able to accept and save data from users.
2. Website should allow users to upload files for processing.
3. Website must require users to login to access certain features.
4. Website must be adaptable to all device screen sizes.
5. Website must be able to send and retrieve data to and from the database.

Lecturer/Student/Public*:*

1. Lecturers and students must be able to login using the provided credentials.
2. Lecturers must be able to enter student course grades.
3. Lecturers must be able to manage their courses.
4. Lecturers must be able to give feedback on student grades.
5. Students should be able to view their course grades
6. Students should be able to register courses.
7. Public must be able to access institute information.
8. Public must be able to apply for acceptance.

Non-Functional Requirements

Website

1. Web server must have constant access to the internet.
2. Website must always be available with limited to no downtime.

3. System needs to be capable of handling no less than 100,000 transactions per day.
4. Website must have quick response and processing times.
5. Data integrity must be first priority when transactions are being processed.

System Administrator

1. Admin must be authorized by company executives to create an account to access the web portal to the websites database and backend.
2. Admin must be able to manage user account information.
3. Admin must be able to authorize a user account password change.
4. Admin must be able to update website information.

Result

Thus the requirements were identified and accordingly described.

Department of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	4
Title of Experiment	Prepare Project Plan based on scope, Calculate Project effort based on resources and Job roles and responsibilities
Name of the candidate	ANUJ
Team Members	BASIM AHAMED, YASH
Register Number	RA2011003010910, RA2011003010925, RA2011003010914
Date of Experiment	12/04/2022

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To Prepare Project Plan based on scope, Calculate Project effort based on resources, Find Job roles and responsibilities

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010910	ANUJ	Lead
2	RA2011003010925	BASIM AHAMED	Member
3	RA2011003010914	YASH	Member

Requirements

<Incorporate the Project plan template>

Result:

Thus, the Project Plan was documented successfully.

1. Project Management Plan

Describe the key issues driving the project. **[Min 3 Focus Areas]**

Focus Area	Details
Integration Management	
Scope Management	
Schedule Management	All the works are divided and scheduled for each team member, Every area of the project is scheduled in a perfect manner,
Cost Management	Very cost effective project, All the costs are distributed and managed perfectly, All the costs are well planned according to the budget.
Quality Management	
Resource Management	All the resources are used efficiently to make the project the best and capable to handle the traffic on site.
Stakeholder	
Communication Management	
Risk Management	
Procurement Management	

2. Estimation

2.1. Effort and Cost Estimation

Activity Description	Sub-Task	Sub-Task Description	Effort (in hours)	Cost in INR
Design the user screen	E1R1A1T1 (Effort-Requirement-Activity-Task)	Confirm the user requirements (acceptance criteria)	3	2000
	E1R1A1T2	Login Page	2	500
	E1R1A1T3	Home Page & Details	8	6000

Identify Data Source for displaying units of Energy Consumption		Go through Interface contract (Application Data Exchange) documents	5	500
		Document	1	500

Effort (hr)	Cost (INR)
1	500

2.2. Infrastructure/Resource Cost [CapEx]

< OneTime Infra requirements >

Infrastructure Requirement	Qty	Cost per qty	Cost per item
IR1	Office Building	10000	10000
IR2	Electricty	3000	3000

2.3 Maintenance and Support Cost [OpEx]

Category	Details	Qty	Cost per qty per annum	Cost per item
People	Network, System, Middleware and DB admin Developer , Support Consultant	3	2000	6000
License	Operating System Database Middleware IDE	10	100	1000
Infrastructures	Server, Storage and Network	20	1000	20,000

3. Project Team Formation

3.1. Identification Team members

Name	Role	Responsibilities
Anuj	Key Business User (Product Owner)	Provide clear business and user requirements
Yash	Project Manager	Manage the project
Basim Ahamed	Business Analyst	Discuss and Document Requirements
Anuj	Technical Lead	Design the end-to-end architecture
Yash	UX Designer	Design the user experience
Anuj	Frontend Developer	Develop user interface
Basim Ahamed	Backend Developer	Design, Develop and Unit Test Services/API/DB

Anuj	Cloud Architect	Design the cost effective, highly available and scalable architecture
Yash	Cloud Operations	Provision required Services
Yash	Tester	Define Test Cases and Perform Testing

3.2. Responsibility Assignment Matrix

RACI Matrix	**Team Members**			
Activity	**Name (BA)**	**Name (Developer)**	**Name (Project Manager)**	**Key Business User**
User Requirement Documentation	Anuj	Anuj/Basim	Basim Ahamed	Yash

A	Accountable
R	Responsible
C	Consult
I	Inform

Reference

1. https://www.pmi.org/
2. https://www.projectmanagement.com/
3. https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/ti-it/ervcpgpm-dsfvpmpt-eng.html

Department of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	5
Title of Experiment	Prepare Work breakdown structure, Timeline chart, Risk identification table
Name of the candidate	Anuj
Team Members	Anuj Yash Basim Ahmed
Register Number	RA2011003010910 RA2011003010914 RA2011003010925
Date of Experiment	11/04/2022

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

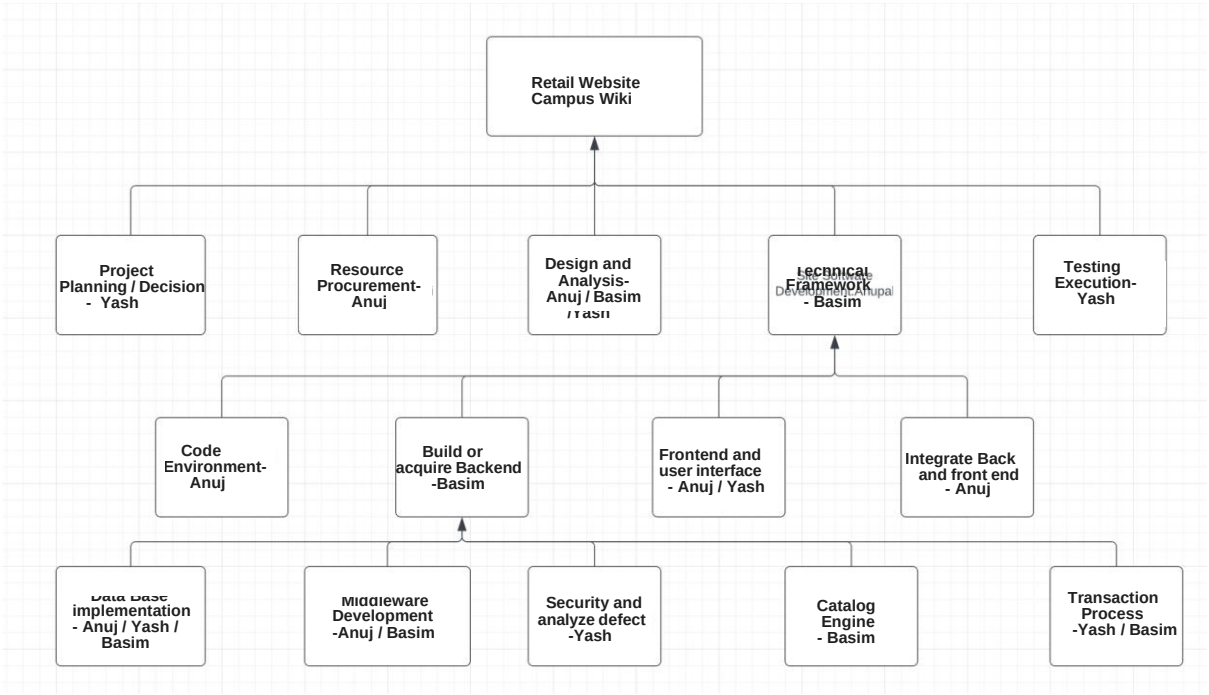
Aim

To Prepare Work breakdown structure, Timeline chart and Risk identification table for Medical Information System

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010910	Anuj	Rep
2	RA2011003010914	Yash	Member
3	RA2011003010925	Basim Ahmed	Member

WBS –



0.0 Retail Web Site

1.0 **Project Planning/ Decision**

2.0 **Resource Procurement**

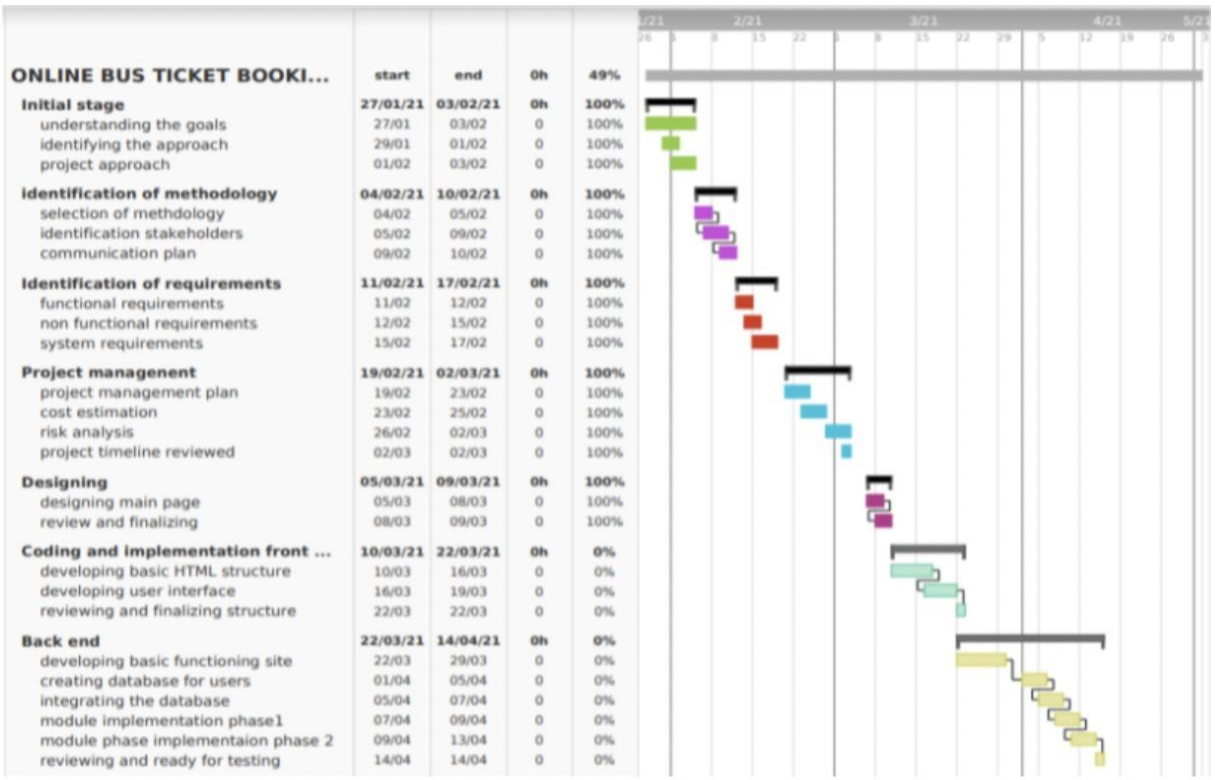
3.0 **Design and Analysis**

4.0 Technical Framework

- 4.1 Code Environment
- 4.2 Build or acquire Back-end
  - 4.2.1 Database Implementation
  - 4.2.2 Middleware Development
  - 4.2.3 Security Subsystems
  - 4.2.4 Catalog Engine
  - 4.2.5 Transaction Processing
- 4.3 Front-end and User interface design
- 4.4 Integrate Front and Back-end

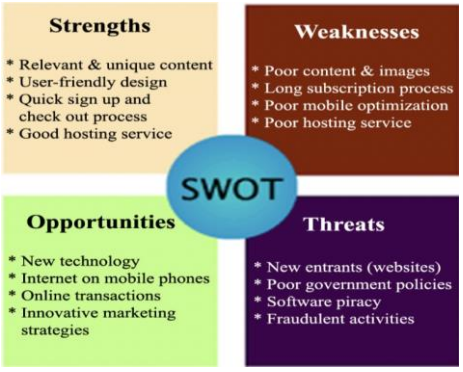
5.0 Testing Execution

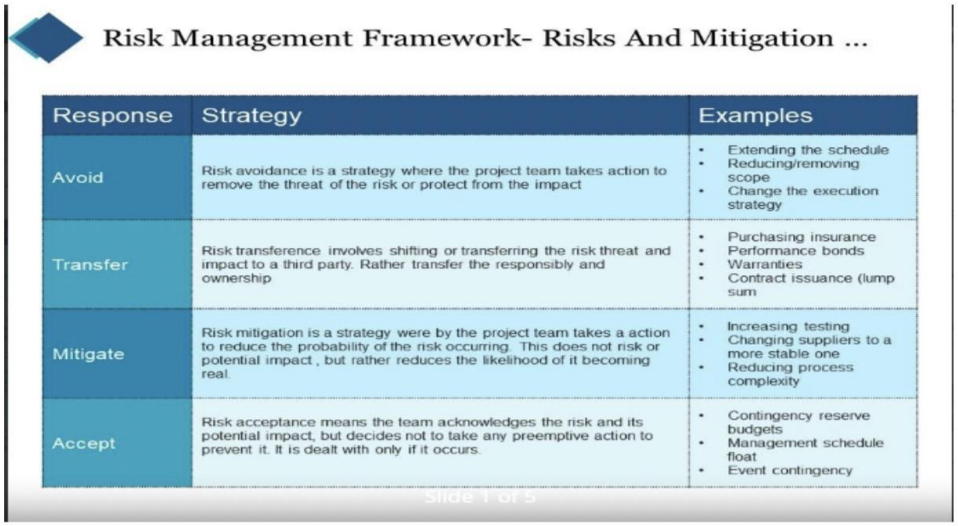
TIMELINE – GANTT CHART:



ONLINE BUS TICKET BOOKI...	start	end	0h	49%
Initial stage	**27/01/21**	**03/02/21**	**0h**	**100%**
understanding the goals	27/01	03/02	0	100%
identifying the approach	29/01	01/02	0	100%
project approach	01/02	03/02	0	100%
identification of methodology	**04/02/21**	**10/02/21**	**0h**	**100%**
selection of methdology	04/02	05/02	0	100%
identification stakeholders	05/02	09/02	0	100%
communication plan	09/02	10/02	0	100%
identification of requirements	**11/02/21**	**17/02/21**	**0h**	**100%**
functional requirements	11/02	12/02	0	100%
non functional requirements	12/02	15/02	0	100%
system requirements	15/02	17/02	0	100%
Project managenent	**19/02/21**	**02/03/21**	**0h**	**100%**
project management plan	19/02	23/02	0	100%
cost estimation	23/02	25/02	0	100%
risk analysis	26/02	02/03	0	100%
project timeline reviewed	02/03	02/03	0	100%
Designing	**05/03/21**	**09/03/21**	**0h**	**100%**
designing main page	05/03	08/03	0	100%
review and finalizing	08/03	09/03	0	100%
Coding and implementation front ...	**10/03/21**	**22/03/21**	**0h**	**0%**
developing basic HTML structure	10/03	16/03	0	0%
developing user interface	16/03	19/03	0	0%
reviewing and finalizing structure	22/03	22/03	0	0%
Back end	**22/03/21**	**14/04/21**	**0h**	**0%**
developing basic functioning site	22/03	29/03	0	0%
creating database for users	01/04	05/04	0	0%
integrating the database	05/04	07/04	0	0%
module implementation phase1	07/04	09/04	0	0%
module phase implementaion phase 2	09/04	13/04	0	0%
reviewing and ready for testing	14/04	14/04	0	0%

RISK ANALYSIS – SWOT & RMMM:





Result:

Thus, the work breakdown structure with timeline chart and risk table were formulated successfully.

School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	6
Title of Experiment	Design a System Architecture, Use Case and Class Diagram
Name of the candidate	Anuj
Team Members	Yash, Basim
Register Number	RA2011003010910,RA2011003010914,RA2011003010925
Date of Experiment	

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

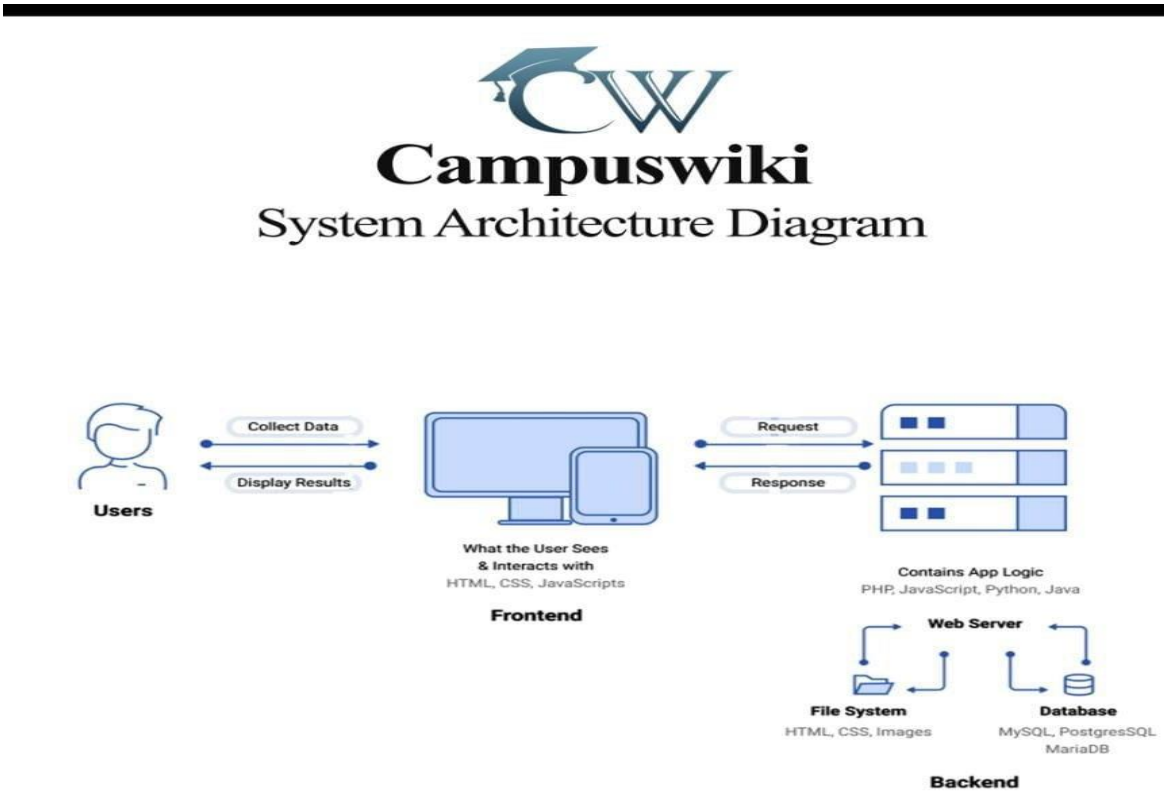
Aim

To Design a System Architecture, Use case and Class Diagram

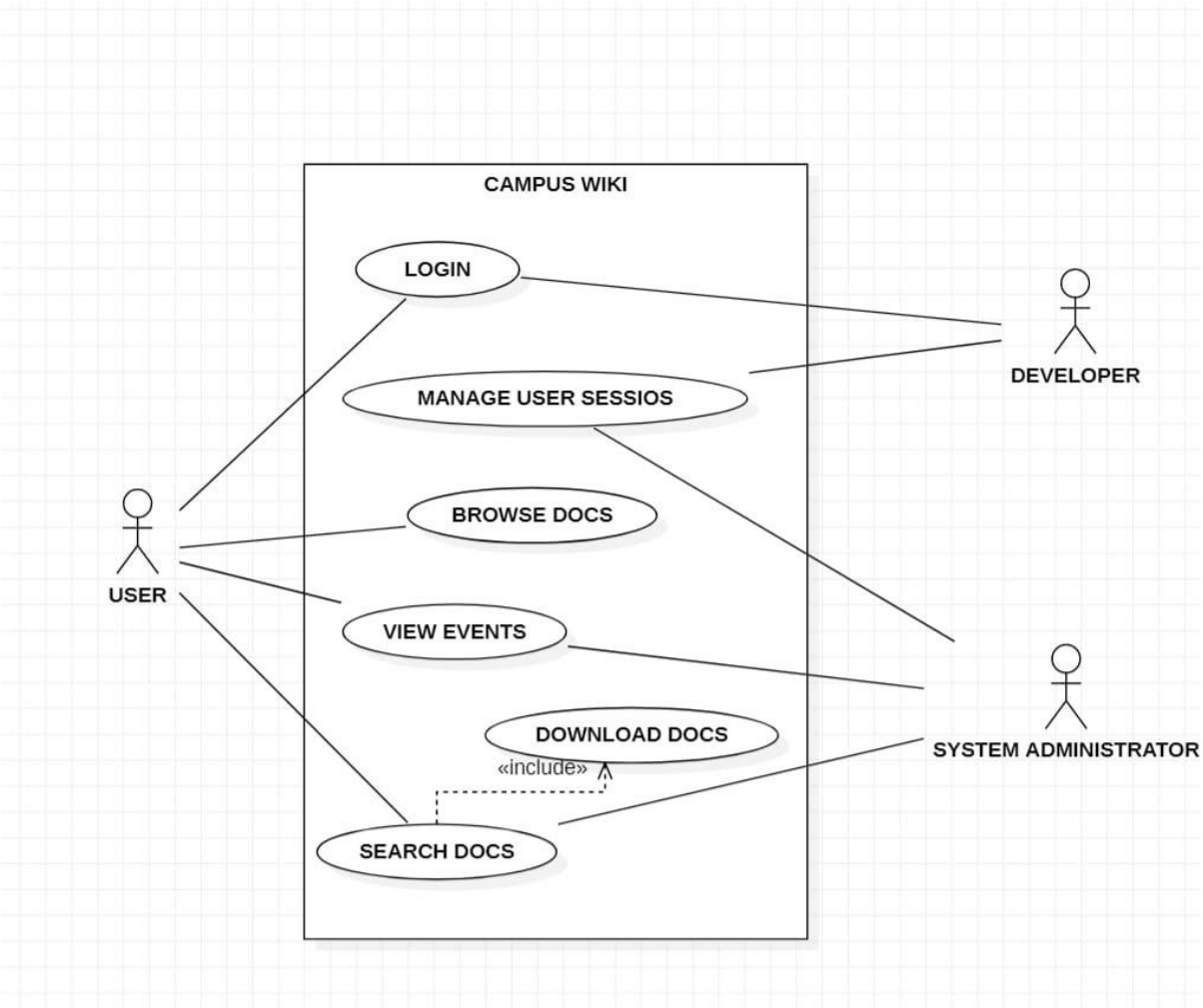
Team Members:

Sl No	Register No	Name	Role
1	RA2011003010910	**Anuj**	**Rep**
2	RA2011003010914	**Yash**	**Member**
3	RA2011003010925	**Basim**	**Member**

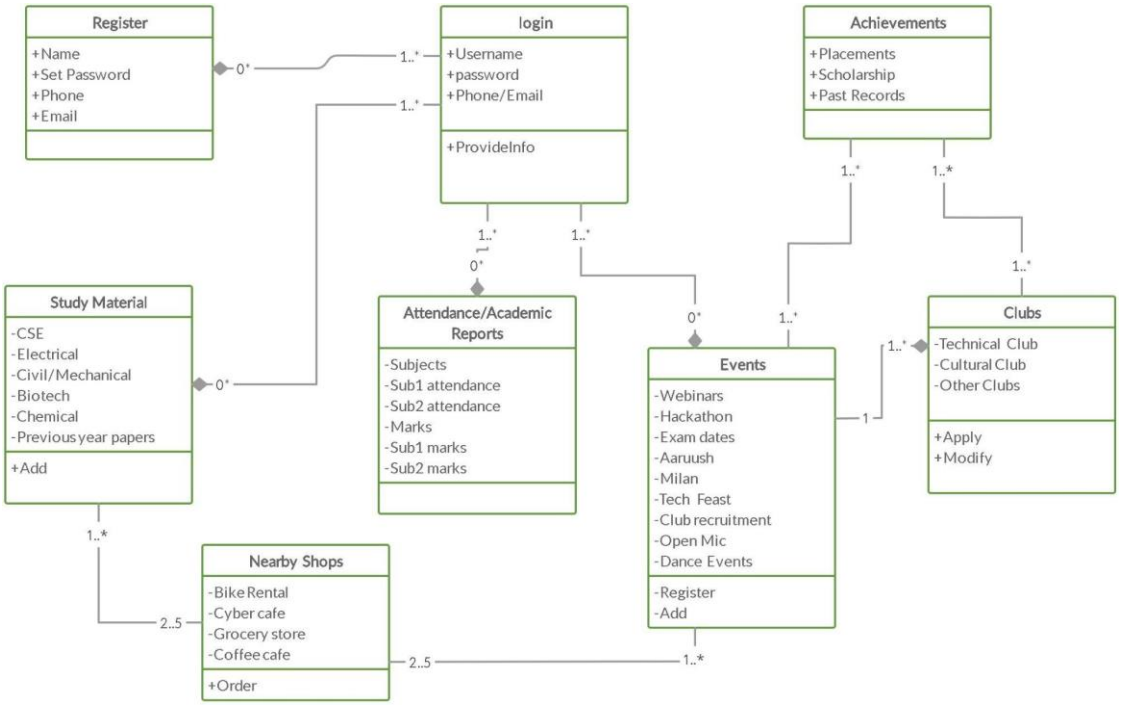
SYSTEM ARCHITECTURE



USECASE DIAGRAM


CAMPUS WIKI
LOGIN
MANAGE USER SESSIOS
BROWSE DOCS
VIEW EVENTS
DOWNLOAD DOCS
«include»
SEARCH DOCS
USER
DEVELOPER
SYSTEM ADMINISTRATOR

CLASS DIAGRAM



Result:

Thus, the system architecture, use case and class diagram created successfully.

School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	7
Title of Experiment	Design a Entity relationship diagram
Name of the candidate	ANUJ
Team Members	BASIM AHAMED, YASH
Register Number	RA2011003010910,RA2011003010914,RA2011003010925
Date of Experiment	6/5/2022

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

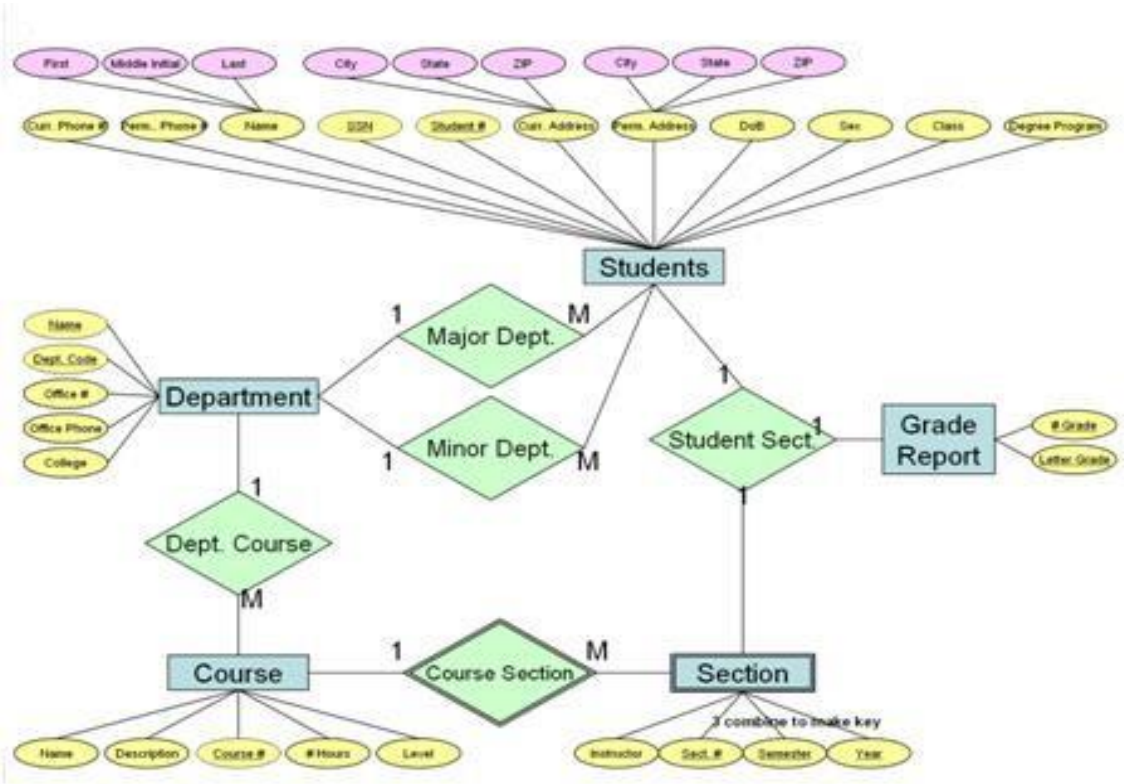
Staff Signature with date

Aim

To create the Entity Relationship Diagram

Team Members:

S No	Register No	Name	Role
1	RA2011003010910	ANUJ	TECH
2	RA2011003010914	YASH	CORPORATE
3	RA2011003010925	BASIM AHAMED	DESIGN



Result:

Thus, the entity relationship diagram was created successfully.

<u>*/ ER Diagram, Notation and Example</u>

What is ER Diagram?

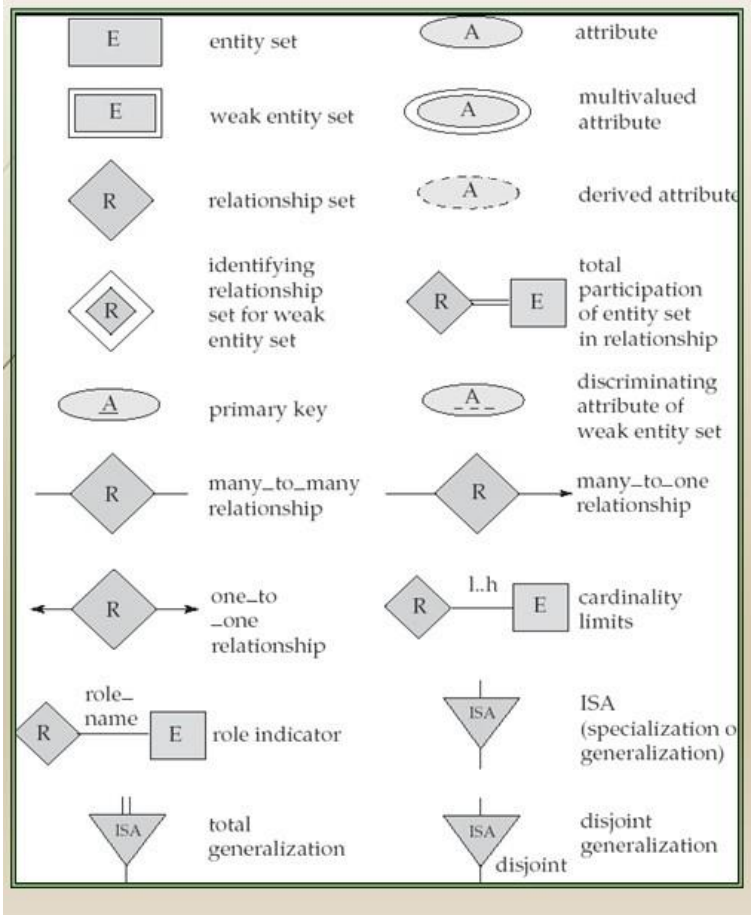
- ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.
- ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships.
- At first look, an ER diagram looks very similar to the flowchart. However, ER Diagram includes many specialized symbols, and its meanings make this model unique. The purpose of ER Diagram is to represent the entity framework infrastructure.

What is ER Model?
- ER Model stands for Entity Relationship Model is a high-level conceptual data model diagram. ER model helps to systematically analyze data requirements to produce a well-designed database.
- ER Model represents real-world entities and the relationships between them. Creating an ER Model in DBMS is considered as a best practice before implementing your database.
- ER Modeling helps you to analyze data requirements systematically to produce a well-designed database. So, it is considered a best practice to complete ER modeling before implementing your database.

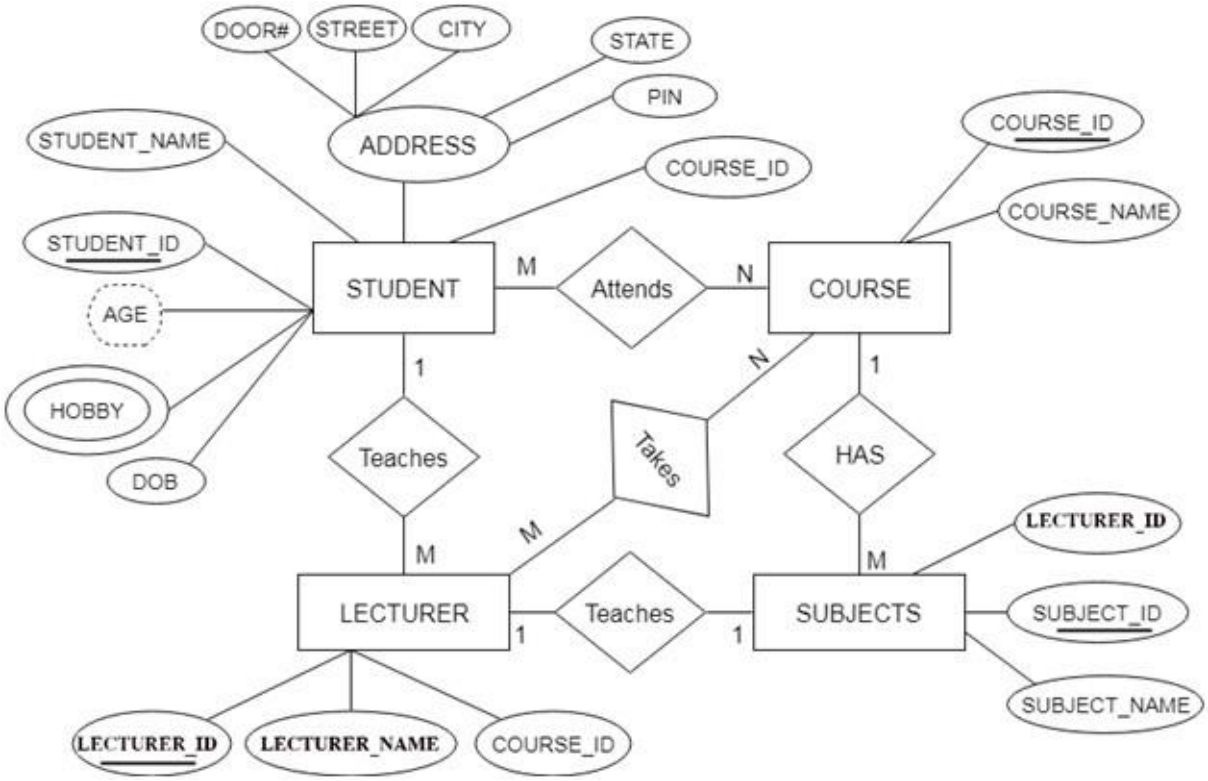
Why use ER Diagrams?
Here, are prime reasons for using the ER Diagram
- Helps you to define terms related to entity relationship modeling
- Provide a preview of how all your tables should connect, what fields are going to be on each table
- Helps to describe entities, attributes, relationships
- ER diagrams are translatable into relational tables which allows you to build databases quickly
- ER diagrams can be used by database designers as a blueprint for implementing data in specific software applications
- The database designer gains a better understanding of the information to be contained in the database with the help of ERP diagram
- ERD Diagram allows you to communicate with the logical structure of the database to users

Components of the ER Diagram
This model is based on three basic concepts: Entities, Attributes, Relationships

ER Diagram – Notations
- Rectangles represent entity sets.
- Diamonds represent relationship sets.
- Lines link attributes to entity sets and entity sets to relationship sets.
- Ellipses represent attributes
- Double ellipses represent multivalued attributes.
- Dashed ellipses denote derived attributes.
- Underline indicates primary key attributes



ER Diagram of University Database



ADDITIONAL NOTES

- A database can be modeled as a collection of entities, relationship among entities.
- An entity is an object that exists and is distinguishable from other objects.
Example: specific person, company, event, plant
- Entities have attributes.
Example: people have names and addresses
- An entity set is a set of entities of the same type that share the same properties.
Example: set of all persons, companies, trees, holidays

- Express the number of entities to which another entity can be associated via a relationship set.
- Most useful in describing binary relationship sets.
- We express cardinality constraints by drawing either a directed line (->), signifying "one," or an undirected line (—), signifying "many," between the relationship set and the entity set.

- An entity is represented by a set of attributes, that is descriptive properties possessed by all members of an entity set.
Example: customer = (customer-id, customer-name, customer-street, customer-city)
loan = (loan-number, amount)
- Domain – the set of permitted values for each attribute
- Attribute types:
1. Simple and composite attributes.
2. Single-valued and multi-valued attributes
E.g. multivalued attribute: phone-numbers
3. Derived attributes-Can be computed from other attributes

E.g. age, given date of birth

Cardinality

- For a binary relationship set the mapping cardinality must be one of the following types:

1. One to one

A customer is associated with at most one loan via the relationship borrower. A loan is associated with at most one customer via borrower

2. One to many

A loan is associated with at most one customer via borrower, a customer is associated with several (including 0) loans via borrower

3. Many to one

A loan is associated with several (including 0) customers via borrower, a customer is associated with at most one loan via borrower

4. Many to many

A loan is associated with several (including 0) customers via borrower, a customer is associated with several loans (including 0) via borrower

Weak Entity Set

- An entity set that does not have a primary key is referred to as a weak entity set and represented by double outlined box in E-R diagram.

Example : Consider the entity set payment which got three attributes : payment_number, payment_date and payment_amount. Payment numbers are sequential starting from 1 generally separately for each loan. Although each payment entity is distinct, payments for different loans may share the same payment number. Thus this entity set does not have a primary key.

Discriminator

- The discriminator (or partial key) of a weak entity set is the set of attributes that distinguishes among all the entities of a weak entity set

Example: discriminator of weak entity set payment is the attribute payment_number since for each loan a payment number uniquely identifies one single payment for that loan.

Specialization-Generalization-ISA

- E-R model provides means of representing these distinctive entity groupings
- Process of designating subgroupings within an entity set is called specialization depicted by triangle component labelled ISA (“is a”)
- Bottom up design process in which multiple entity sets are synthesized into higher level entity set - Generalization
- ISA relationship may also be referred to as superclass-subclass relationship
- Higher and lower level entity sets are designated by the terms superclass and subclass.
- Specialization and generalization are simple inversions of each other; they are represented in an E-R diagram in the same way.

Total & Partial Participation

- Total participation (indicated by double line): every entity in the entity set participates in at least one relationship in the relationship set

E.g. participation of loan in borrower is total, every loan must have a customer associated to it via borrower

- Partial participation: some entities may not participate in any relationship in the relationship set

Example: participation of customer in borrower is partial

Cardinality limits

- Cardinality limits can also express participation constraints
- Minimum and maximum cardinality is expressed as l..h where l is the minimum and h is the maximum cardinality
- Minimum value of 1 indicates total participation of entity set in relationship set
- Maximum value of 1 indicates entity participates in atmost one relationship set.
- Maximum value of * indicates no limit

Role indicator

- Entity sets of a relationship need not be distinct
- The labels "manager" and "worker" are called roles; they specify how employee entities interact via the works-for relationship set.
- Roles are indicated in E-R diagrams by labeling the lines that connect diamonds to rectangles.
- Role labels are optional, and are used to clarify semantics of the relationship

Disjoint Generalization

- Disjointness constraint requires that an entity belong to more than one lower level entity set.

Example: account entity can satisfy only one condition for account_type attribute ; entity can either be savings or chequing account but not both.

School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	8
Title of Experiment	Develop a Data Flow Diagram (Process-Up to Level 1)
Name of the candidate	Anuj
Team Members	Basim Ahamed, Yash
Register Number	RA2011003010910, RA2011003010925, RA2011003010914
Date of Experiment	02-06-2022

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

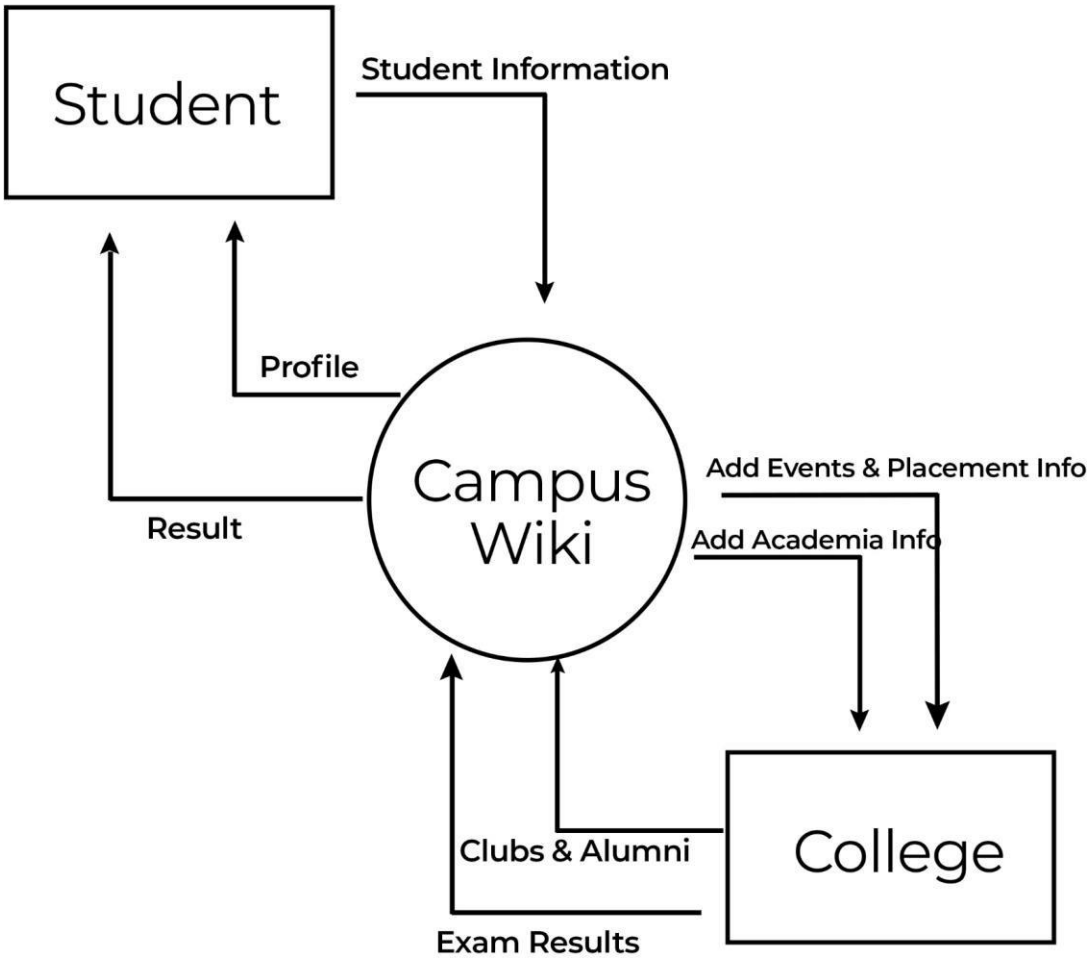
Aim

To develop the data flow diagram up to level 1 for the <project name>

Team Members:

S No	Register No	Name	Role
1	RA2011003010910	**Anuj**	**Rep**
2	RA2011003010925	**Basim Ahamed**	**Member**
3	RA2011003010914	**Yash**	**Member**

CAMPUS WIKI
DATA FLOW DIAGRAM



Result:

Thus, the data flow diagrams have been created for the <project name>.

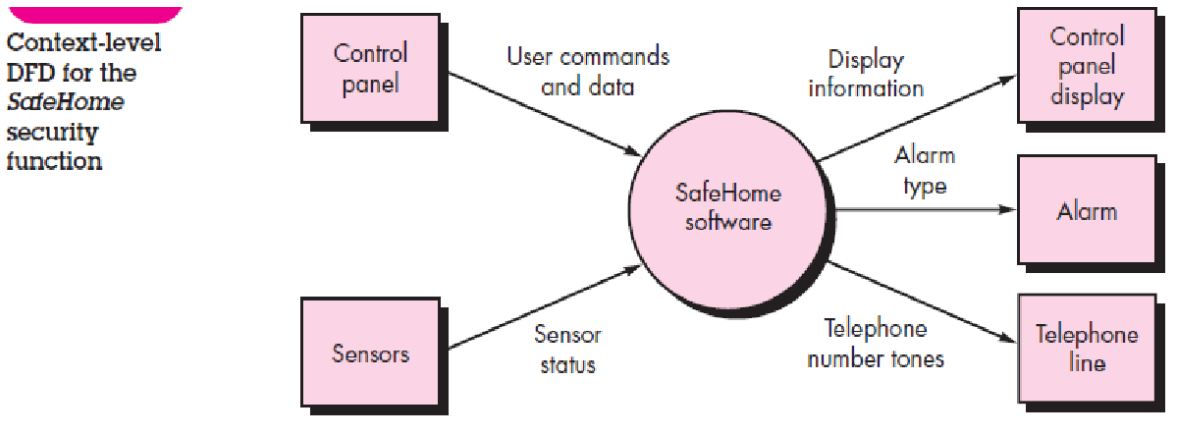
Data Flow Diagram

The DFD takes an input-process-output view of a system. That is, data objects flow into the software, are transformed by processing elements, and resultant data objects flow out of the software. Data objects are represented by labeled arrows, and transformations are represented by circles (also called bubbles). The DFD is presented in a hierarchical fashion. That is, the first data flow model (sometimes called a level 0 DFD or context diagram) represents the system as a whole. Subsequent data flow diagrams refine the context diagram, providing increasing detail with each subsequent level.

The data flow diagram enables you to develop models of the information domain and functional domain. As the DFD is refined into greater levels of detail, you perform an implicit functional decomposition of the system. At the same time, the DFD refinement results in a corresponding refinement of data as it moves through the processes that embody the application.
A few simple guidelines can aid immeasurably during the derivation of a data flow diagram:
(1) Level 0 data flow diagram should depict the software/system as a
single bubble;
(2) Primary input and output should be carefully noted;
(3) Refinement should begin by isolating candidate processes, data objects, and data stores to be represented at the next level;
(4) All arrows and bubbles should be labeled with meaningful names;
(5) Information flow continuity must be maintained from level to level and
(6) One bubble at a time should be refined. There is a natural tendency to overcomplicate the data flow diagram. This occurs when you attempt to show too much detail too early or represent procedural aspects of the software in lieu of information flow.

*/ For Example

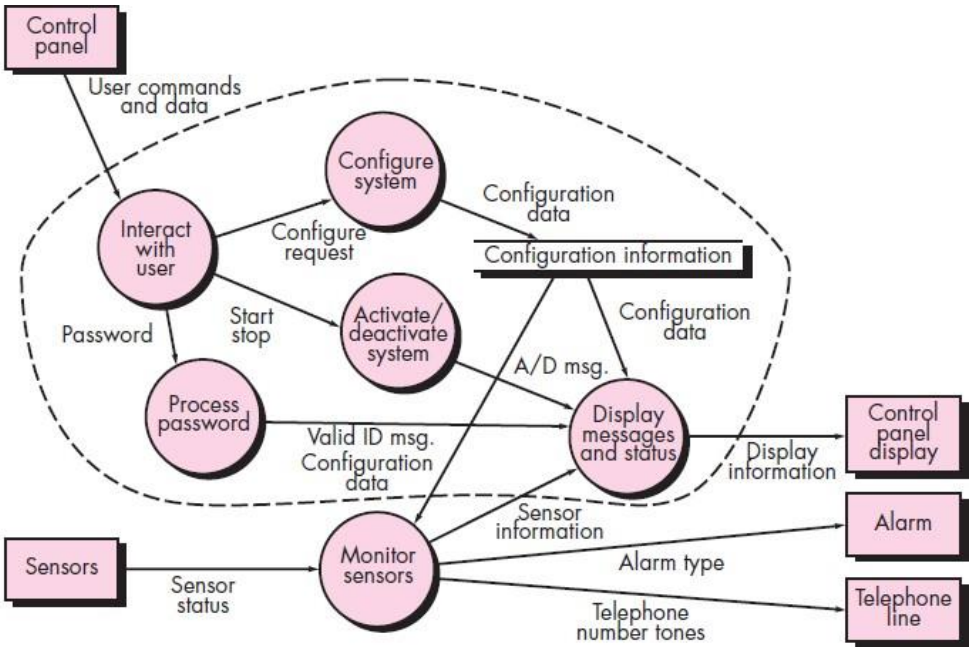
DFD Level 0



Context-level DFD for the *SafeHome* security function

DFD Level 1

Level 1 DFD for the *SafeHome* security function



School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	9
Title of Experiment	Design a Sequence and Collaboration Diagram
Name of the candidate	Anuj
Team Members	Yash, Basim
Register Number	RA2011003010910, RA2011003010914, RA2011003010925
Date of Experiment	

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To create the sequence and collaboration diagram for the <project name>

Team Members:

S No	Register No	Name	Role
1	RA2011003010910	Anuj	**Rep/Member**
2	RA2011003010914	Yash	**Member**
3	RA2011003010925	Basim	**Member**

<Sequence and Collaboration Diagram>

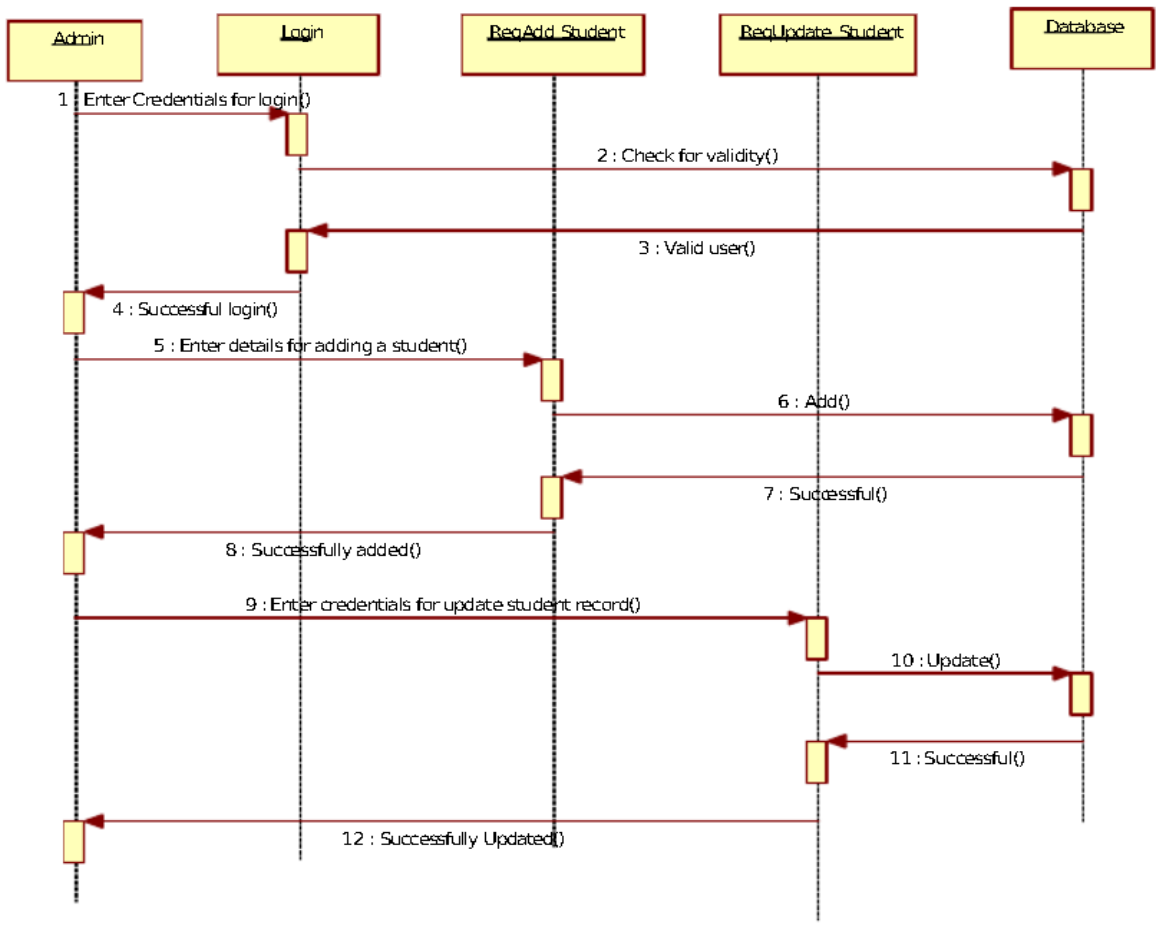
Result:

Thus, the sequence and collaboration diagrams were created for the <project name>.

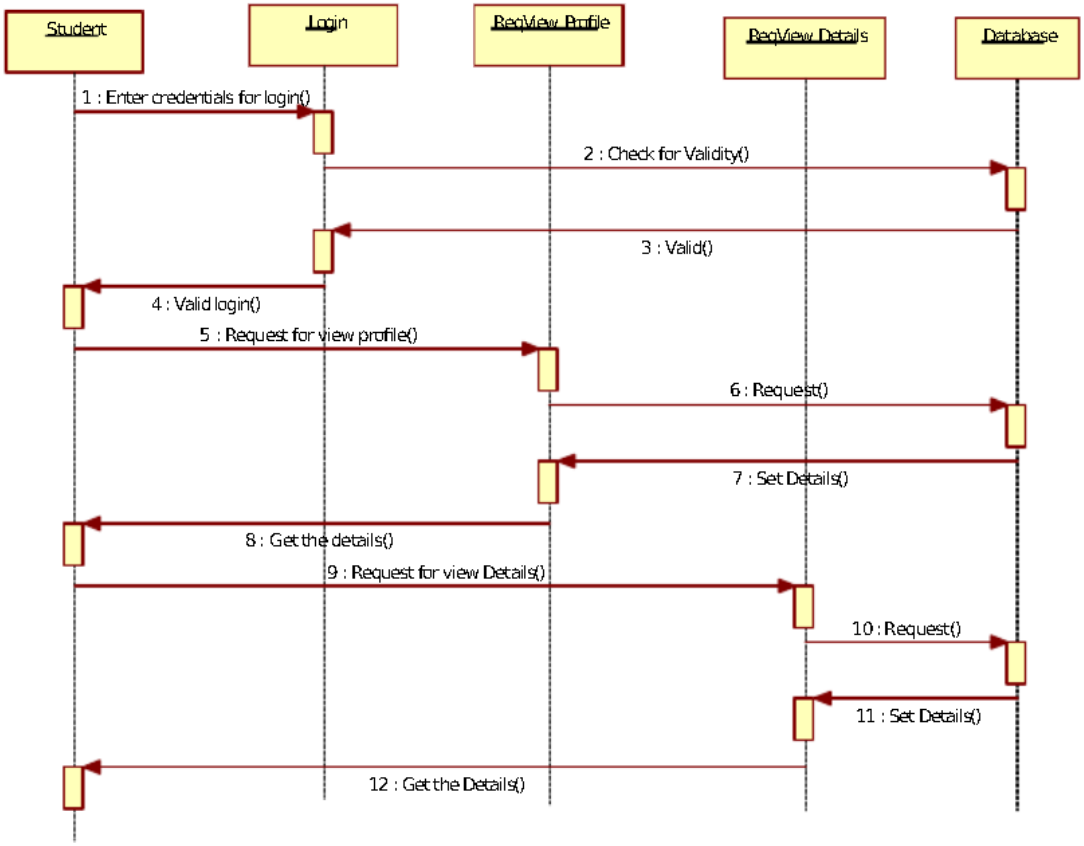
***/ For Example**

Sequence Diagram

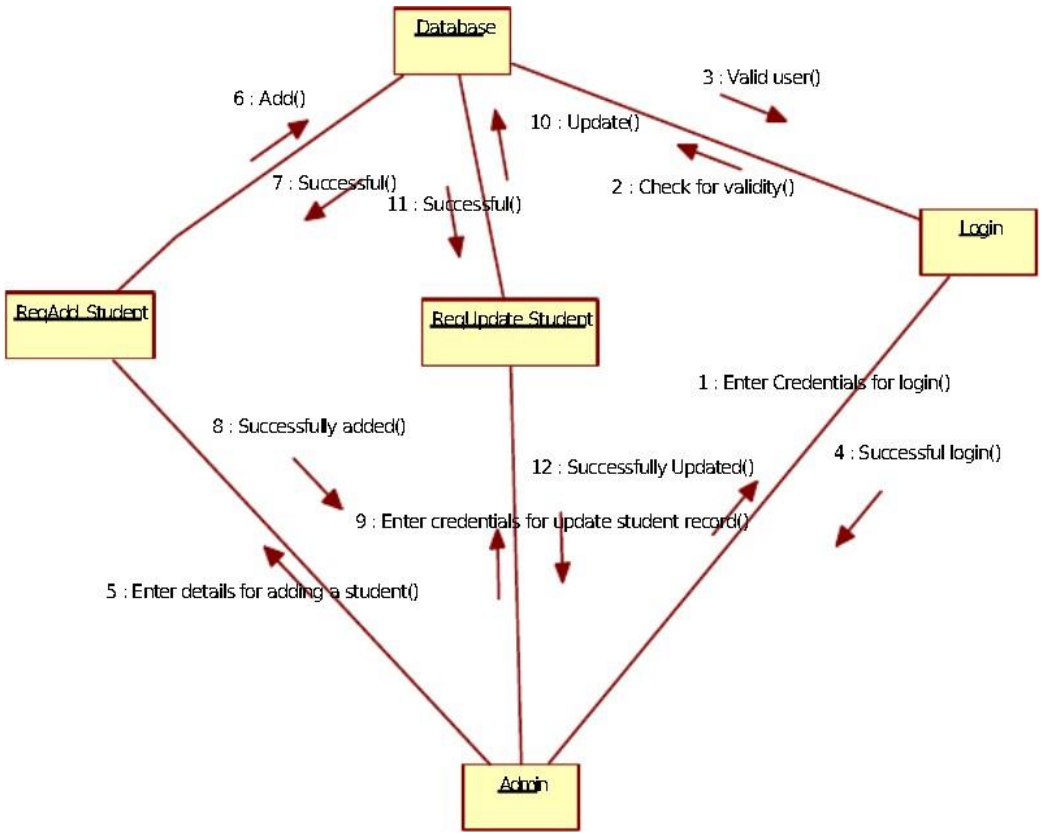
For Administrator:

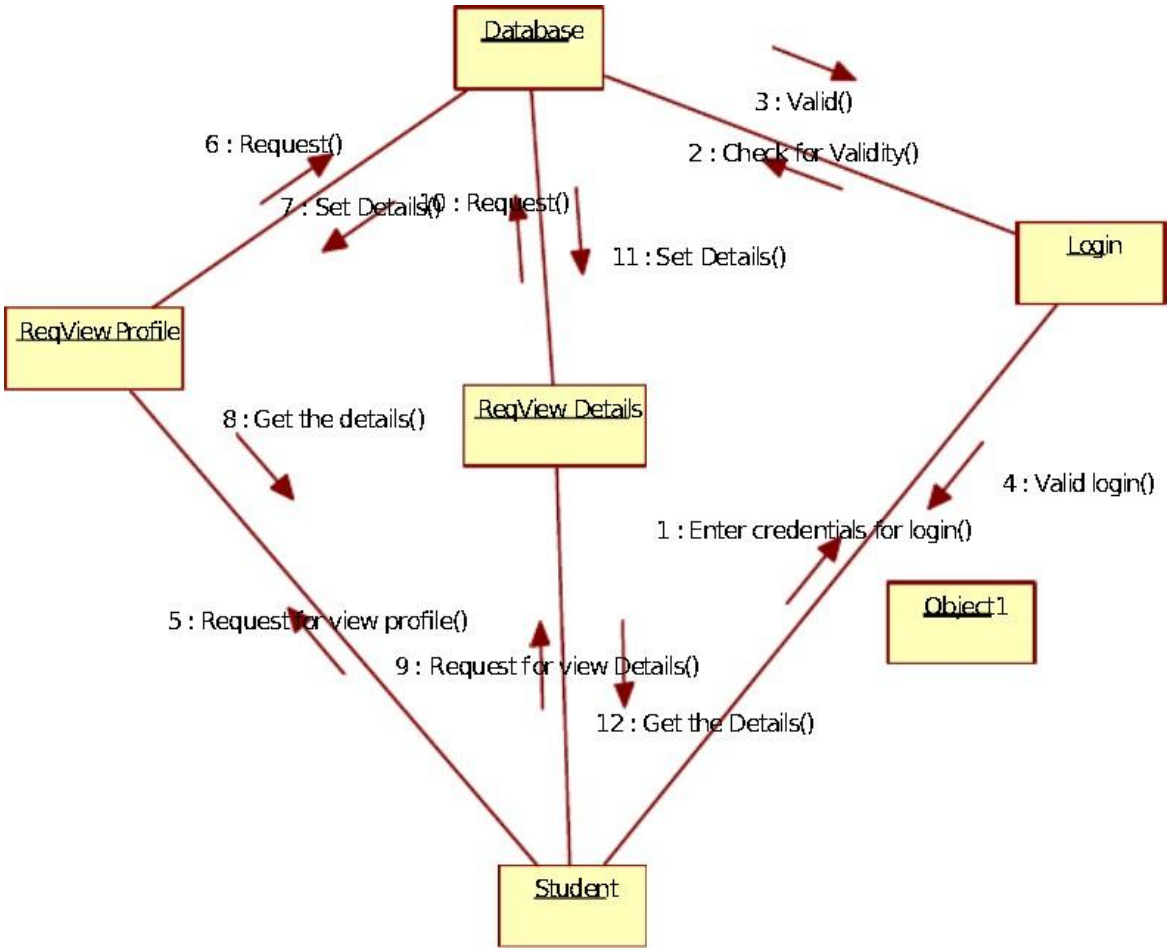


For Student:



Collaboration Diagram




Database
3 : Valid()
6 : Request()
2 : Check for Validity()
7 : Set Details()
10 : Request()
11 : Set Details()
Login
ReqView Profile
ReqView Details
8 : Get the details()
4 : Valid login()
1 : Enter credentials for login()
Object1
5 : Request for view profile()
9 : Request for view Details()
12 : Get the Details()
Student

School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	10
Title of Experiment	Develop a Testing Framework/User Interface
Name of the candidate	Anuj
Team Members	Yash, Basim
Register Number	RA2011003010910, RA2011003010914, RA2011003010925
Date of Experiment	10/6/22

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To develop the testing framework and/or user interface framework for the CampusWiki.

Team Members:

S No	Register No	Name	Role
1	RA2011003010910	Anuj	Rep/Member
2	RA2011003010914	Yash	Member
3	RA2011003010925	Basim	Member

Executive Summary

Software testing is an activity which aims at evaluating the quality of a software product and also to improve it by identifying defects. Software testing strives to achieve its objectives but has certain limitations. However, adherence to the established objectives ensures effective testing.

Objectives to test the software application

- Improve performance and speed and fulfill various functional and nonfunctional requirements.
- To verify the fulfillment of all specified requirements
- To validate if the test object is complete and works as per the expectation of the users and the stakeholders
- To prevent defects in the software product
- To find defects in the software product
- To reduce the level of risk of insufficient software quality

The approach to test the software application is manual using word template and checking for each

sample test case and maintain a test manual and check for expected and actual outcome.

Functional and Non-functional Testing

IT is a process that includes several testing parameters like user interface, APIs, database testing, security testing, client and server testing and basic website functionalities. Functional testing is very convenient and it allows users to perform both manual and automated testing. It is performed to test the functionalities of each feature on the website.

- Interface testing
- Database testing
- System testing
- Acceptance testing

Non-functional testing is a type of a software testing non-functional parameters such as reliability, load test, performance and accountability of the Website. These include

- Performance testing
- Security testing
- Usability testing
- Compatibility testing

Test Plan

Scope of Testing

The testing will cover testing the home page, signup/login page and post page on things like valid passwords, creation and display of posts, etc. and testing various non-functional requirements like speed, performance, delay.

Functional: All functional requirements are being taken care of. For ex: - creating a club, Applying for club etc.

Non-Functional: Almost all non- functional requirements are being taken care of. For ex: - Performance, Speed, Time delay, huge traffic of users

Types of Testing, Methodology, Tools

Category	Methodology	Tools Required
Unit Testing	Manual Testing or Automated Testing	NUnit or JUnit or HTML unit
Integration testing	Bottom-up approach or Top-down approach	Rational Integration testing
Performance testing	Load testing, Stress testing, Soak testing	LoadRunner
Security testing	Security Scanning, Penetration Testing, Risk Assessment	SQLMap, Owasp
End-to-end testing	Includes User Functions, Conditions, Test Cases	Avo Assure, testRigor

Result:

Thus, the testing framework/user interface framework has been created for the CampusWiki

School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	11
Title of Experiment	Test Cases
Name of the candidate	Anuj
Team Members	Yash and Basim
Register Number	Ra2011003010910, Ra2011003010914, Ra2011003010925
Date of Experiment	

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To develop the test cases manual for the <project name>

Team Members:

S No	Register No	Name	Role
1	RA2011003010910	Anuj	Rep
2	RA2011003010914	Yash	Member
3	RA2011003010925	Basim	Member

<Utilize the templates below and incorporate the project's test cases - Manual Test case to be written for at least one module >

Result:

Thus, the test case manual has been created for the CAMPUSWIKI.

***/ For example**

Test Case

Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status	Remarks
1	Check Student login with valid data	accept valid email and password	1. Go to site www.CampusWiki.com 2 Enter userid 3 Enter password	User should login in to the website	As expected	pass	success

			4 click submit				
2	check student login with invalid data	Dont expect invalid email and password	1. Go to site www.CampusWiki.com 2 Enter userid 3 Enter password 4 click submit	User should not login on to the website	As expected	pass	success
3	Launch website	Launch Campus Wiki home	www.CampusWiki.com	Campus Wiki home	As expected	pass	[Anuj 16/06/22 11:35am] Launch successful

Non-Functional Test Cases

Test ID (#)	Test Case	Domain	Status	Remarks
1	Application load time should not be more than 5 secs up to 1000 users accessing it simultaneously	Performance Testing	pass	successful
2	All web images should have alt tags	Accessibility Testing	pass	successful

School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	12
Title of Experiment	Manual Test Case Reporting
Name of the candidate	Anuj
Team Members	Yash, Basim
Register Number	RA2011003010910,RA2011003010914,RA2011003010925
Date of Experiment	

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To prepare the manual test case report for the CampusWiki

Team Members:

S No	Register No	Name	Role
1	RA2011003010910	**Anuj**	**Rep/Member**
2	RA2011003010914	**Yash**	**Member**
3	RA2011003010925	**Basim**	**Member**

Testing manual was prepared and manual test cases were tested covering the given scope of all functional and non-functional requirements.

present obstacles to proceed further

In non-functional requirements the time delay and performance can be improved to achieve excellence in the development of software.

help from stakeholders to remove obstacles/constraints

Using paid and renowned web hosting service through the help of stakeholders can improve the performance, response time and reduce latency in the software.

Using high speed network can also contribute to the enhancement of software.

Category	Progress Against Plan	Status
Functional Testing	Green	Completed
Non-Functional Testing	Amber	In-Progress

Functional	Test Case Coverage (%)	Status
Home page	100%	Completed
Login/Signup	90%	Completed
Alumini Page	95%	Completed
Club Page	90%	Completed
Achievement Page	95%	Completed

Result:

Thus, the test case report has been created for the CampusWiki

School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	13
Title of Experiment	Provide the details of Architecture Design/Framework/Implementation
Name of the candidate	Anuj
Team Members	Yash, Basim
Register Numbers	RA2011003010910, RA2011003010914, RA2011003010925
Date of Experiment	10/6/2022

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
	Total	**10**	

Staff Signature with date

Aim

To provide the details of architectural design/framework/implementation

Team Members:

S No	Register No	Name	Role
1	Ra2011003010910	Anuj	Rep/Member
2	Ra2011003010914	Yash	Member
3	Ra2011003010925	Basim	Member

< Provide the details of architectural design/framework/implementation with screenshots - Minimum three modules to be completed (excluding login page) use of software on their choice to implement>

Full documentation with the coding

Index page:

```
<!DOCTYPE html>
<html>
     <head>
        <title>Campus Wiki - Alumni</title>
        <link rel="preconnect" href="https://fonts.googleapis.com">
        <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
        <link
href="https://fonts.googleapis.com/css2?family=Montserrat:wght@100&family=Ubun
tu:wght@300&display=swap" rel="stylesheet">
         <!-- CSS Stylesheet -->
        <link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.0/dist/css/bootstrap.min.css"
integrity="sha384-
B0vP5xmATw1+K9KRQjQERJvTumQW0nPEzvF6L/Z6nronJ3oUOFUFpCjEUQouq2+l"
crossorigin="anonymous">
          <link rel="stylesheet" href="/styles.css">
          <!-- Script -->
          <script src="https://kit.fontawesome.com/ef5d552ae1.js"
crossorigin="anonymous"></script>
          <script defer src="/your-path-to-fontawesome/js/all.js"></script>
          <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-
DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
```

```
        <script
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integrity="sha384-
9/reFTGAW83EW2RDu2S0VKaIzap3H66lZH81PoYlFhbGU+6BZp6G7niu735Sk7lN"
crossorigin="anonymous"></script>
        <script
src="https://cdn.jsdelivr.net/npm/bootstrap@4.6.0/dist/js/bootstrap.min.js"
integrity="sha384-
+YQ4JLhjyBLPDQt//I+STsc9iw4uQqACwlvpslubQzn4u2UU2UFM80nGisd026JF"
crossorigin="anonymous"></script>
     </head>
     <body>
        <section id="title">

            <!-- Nav Bar -->

            <nav class="navbar bg-dark navbar-expand-lg navbar-dark">
              <a class="navbar-brand" href="">Campus Wiki</a>
              <button class="navbar-toggler" type="button" data-
toggle="collapse" data-target="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle
navigation">
                  <span class="navbar-toggler-icon"></span>
              </button>
              <div class="collapse navbar-collapse"
id="navbarSupportedContent">
                <ul class="navbar-nav ml-auto">
                  <li class="nav-item">
                      <a class="nav-link" href="index.html">Home</a>
                  </li>

                  <li class="nav-item">
                      <a class="nav-link"
href="https://academia.srmist.edu.in/" target="_blank">Academia</a>
                  </li>
                  <li class="nav-item">
                    <a class="nav-link" href="Clubs.html">Clubs</a>
                </li>
                <li class="nav-item">
                    <a class="nav-link" href="alumni.html">Alumni</a>
                </li>
                  <li class="nav-item">
                    <a class="nav-link" href="#footer">Contact us</a>
                </li>
                  </ul>
              </div>
          </nav>
```

```
          <CENTER><h1>ALUMNI STUDENTS</h1>
            <HR WIDTH=1400 COLOR="BLACK"></HR>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_00d8240f650f161eea89788f551b7ec2_thumb.jpg" height="150px" width="150px"
hspace="70"></img><br><FONT SIZE=5>Vasuda Gupta</FONT>
            <BR><BR>MBBS<BR>2022<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
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hspace="70"></img><BR><FONT SIZE=5>Shrey Choudhary</FONT>
            <BR><BR>B.Tech<BR>2022 Mech<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>

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hspace="70"></img><BR><FONT SIZE=5>Dr. Anant Goyal</FONT>
            <BR><BR>MBBS<BR>2022<BR><BR>
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VALUE="Connect"></INPUT></DIV>

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hspace="70"></img><BR><FONT SIZE=5>Kruthika A</FONT>
            <BR><BR>LLB<BR>H(2022)<BR><BR>
            <INPUT TYPE="BUTTON"  CLASS="BUTTON"
VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_c5e751b574793bcb4df70b79031182c6_thumb.jpg" height="150px" width="150px"
hspace="70"></img><BR><FONT SIZE=5>Leslie Ryan</FONT>
            <BR><BR>Bcom<BR>2022 General<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_8c4e5510fedca51893f40763030c7ee5_thumb.jpg" height="150px" width="150px"
hspace="70"></img><BR><FONT SIZE=5>V Kavi Yarasu</FONT>
            <BR><BR>LLB<BR>(H)2022<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>
```
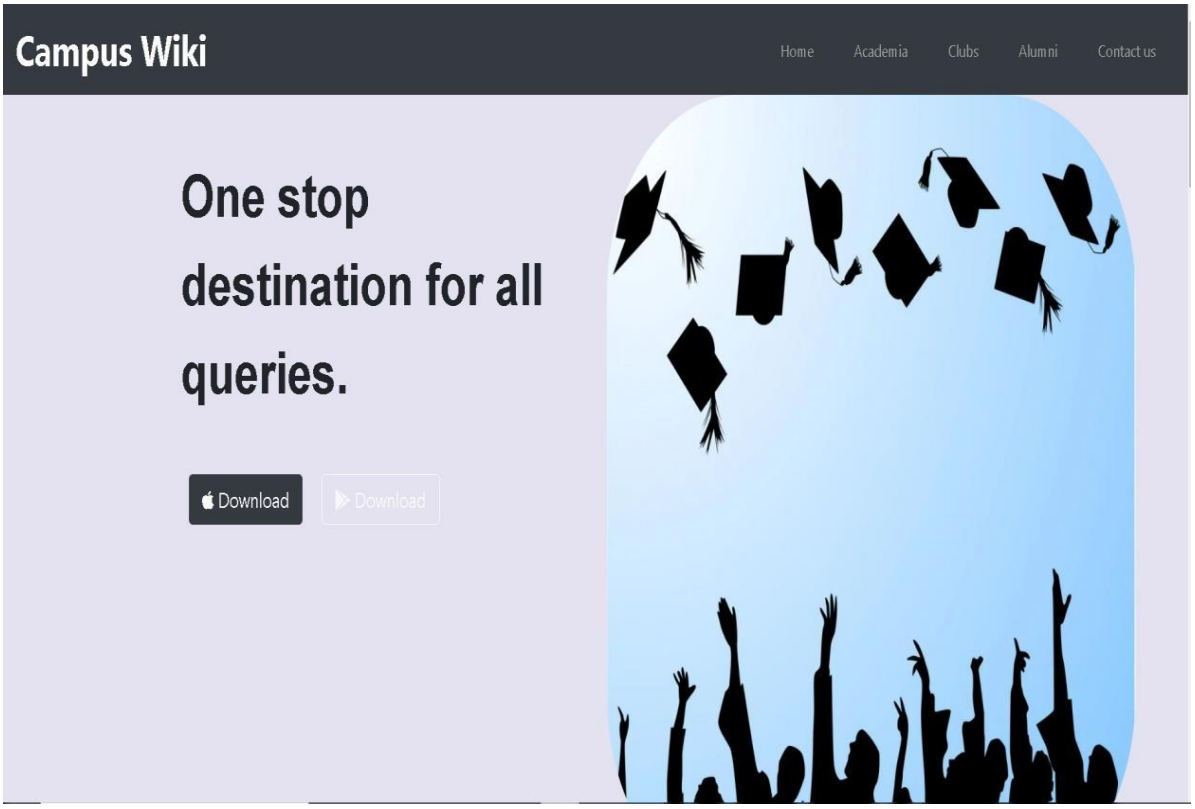

```
            <HR WIDTH=1400 COLOR="BLACK"></HR>
            </center>

        <div class="container-fluid">

            <footer id="footer">
                <i class="footer-pic fab fa-instagram"></i>
                <i class="footer-pic fab fa-facebook"></i>
                <i class="footer-pic fab fa-youtube"></i>
                <i class="footer-pic fab fa-app-store"></i>
                <p>© Copyright 2021 Campus Wiki</p>

              </footer>
    </body>
</html>
```

Index Page Screenshot:



One Stop Solution

One stop destination for all your academic needs.

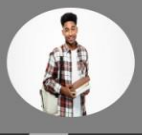
Fast & Secure

Our Website is 100% fast & Secure.

Free service

This website is totally free.

Best Students service .



Anuj

A Website for Every Student Needs

One stop solution for all student needs.

Alumni

All Alumni details

Get Connected with the alumni

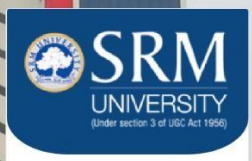
Know more

Clubs

Know About All the club details

Join the best clubs in SRM

Know More

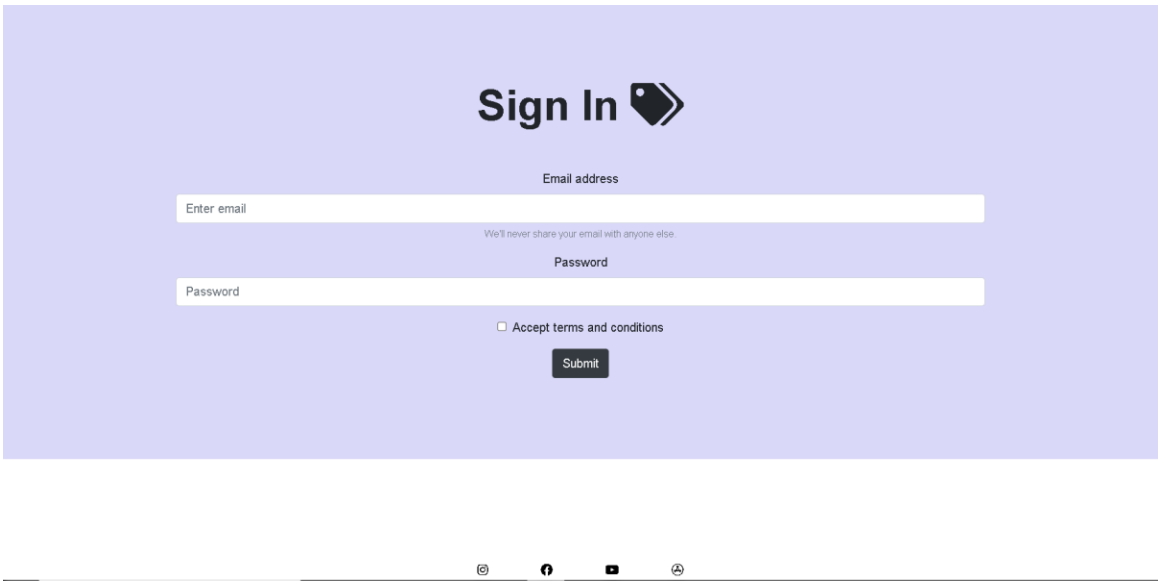


Academia

Know your attendance and marks

All student details available here

Know More



Alumni page code:

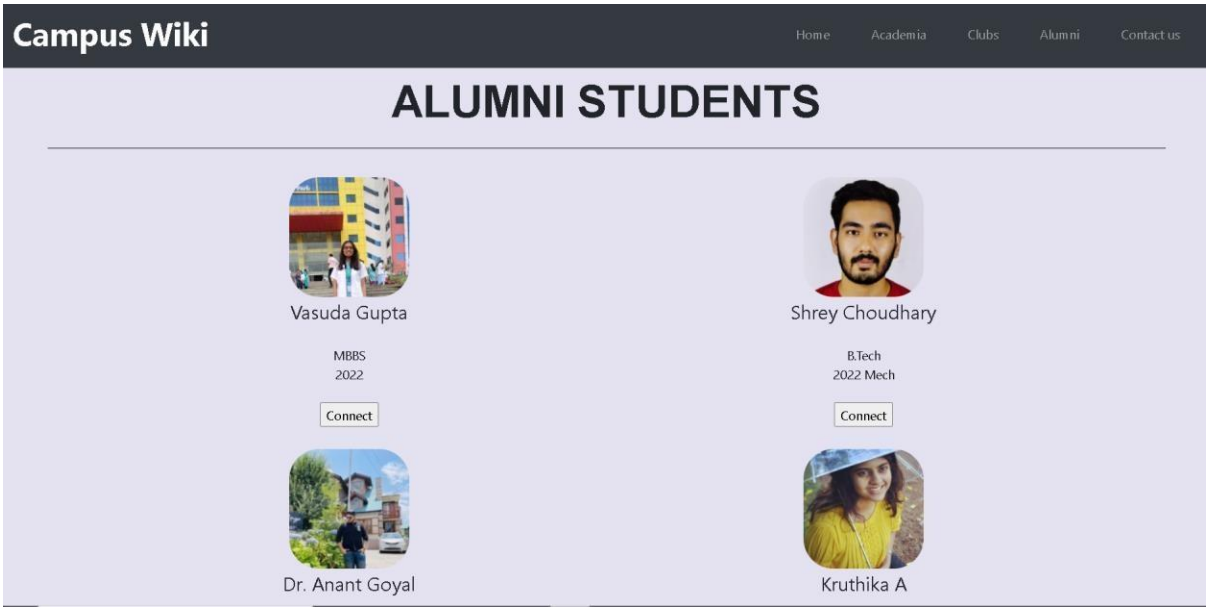
```
<!DOCTYPE html>
<html>
     <head>
        <title>Campus Wiki - Alumni</title>
        <link rel="preconnect" href="https://fonts.googleapis.com">
        <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
        <link
href="https://fonts.googleapis.com/css2?family=Montserrat:wght@100&family=Ubun
tu:wght@300&display=swap" rel="stylesheet">
         <!-- CSS Stylesheet -->
        <link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.0/dist/css/bootstrap.min.css"
integrity="sha384-
B0vP5xmATw1+K9KRQjQERJvTumQW0nPEzvF6L/Z6nronJ3oUOFUFpCjEUQouq2+l"
crossorigin="anonymous">
          <link rel="stylesheet" href="/styles.css">
          <!-- Script -->
          <script src="https://kit.fontawesome.com/ef5d552ae1.js"
crossorigin="anonymous"></script>
          <script defer src="/your-path-to-fontawesome/js/all.js"></script>
          <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-
DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
        <script
src="https://cdn.jsdelivr.net/npm/popper.js@1.16.1/dist/umd/popper.min.js"
integrity="sha384-
```

```
9/reFTGAW83EW2RDu2S0VKaIzap3H66lZH81PoYlFhbGU+6BZp6G7niu735Sk7lN"
crossorigin="anonymous"></script>
        <script
src="https://cdn.jsdelivr.net/npm/bootstrap@4.6.0/dist/js/bootstrap.min.js"
integrity="sha384-
+YQ4JLhjyBLPDQt//I+STsc9iw4uQqACwlvpslubQzn4u2UU2UFM80nGisd026JF"
crossorigin="anonymous"></script>
     </head>
     <body>
        <section id="title">

            <!-- Nav Bar -->

            <nav class="navbar bg-dark navbar-expand-lg navbar-dark">
              <a class="navbar-brand" href="">Campus Wiki</a>
              <button class="navbar-toggler" type="button" data-
toggle="collapse" data-target="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle
navigation">
                  <span class="navbar-toggler-icon"></span>
              </button>
              <div class="collapse navbar-collapse"
id="navbarSupportedContent">
                <ul class="navbar-nav ml-auto">
                  <li class="nav-item">
                      <a class="nav-link" href="index.html">Home</a>
                  </li>

                  <li class="nav-item">
                      <a class="nav-link"
href="https://academia.srmist.edu.in/" target="_blank">Academia</a>
                  </li>
                  <li class="nav-item">
                    <a class="nav-link" href="Clubs.html">Clubs</a>
                </li>
                <li class="nav-item">
                    <a class="nav-link" href="alumni.html">Alumni</a>
                </li>
                  <li class="nav-item">
                    <a class="nav-link" href="#footer">Contact us</a>
                </li>
                  </ul>
              </div>
          </nav>

          <CENTER><h1>ALUMNI STUDENTS</h1>
            <HR WIDTH=1400 COLOR="BLACK"></HR>
```

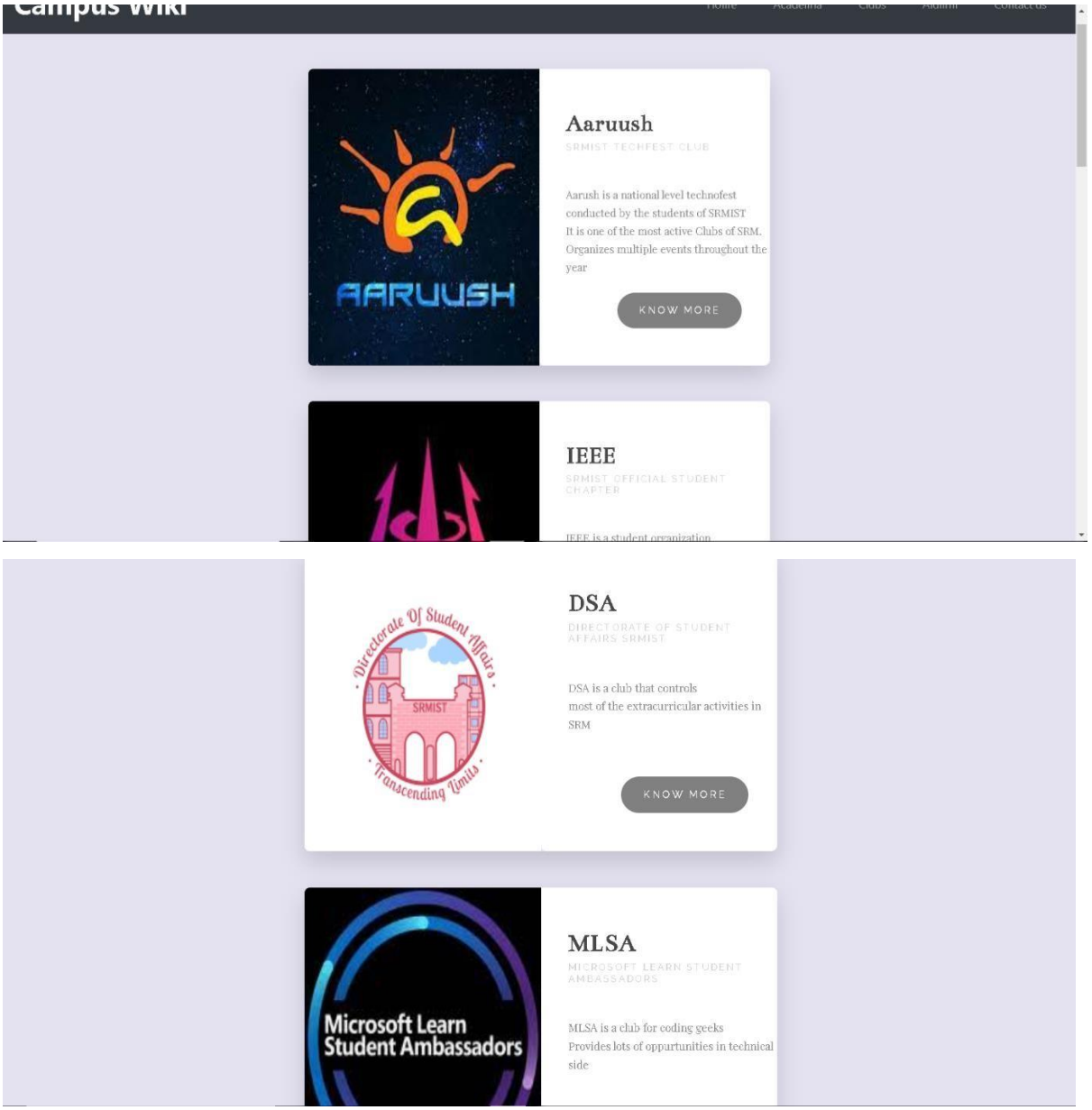
```
            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_00d8240f650f161eea89788f551b7ec2_thumb.jpg" height="150px" width="150px"
hspace="70"></img><br><FONT SIZE=5>Vasuda Gupta</FONT>
            <BR><BR>MBBS<BR>2022<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_c2a953289f7734247109a21c79f7f5c1_thumb.jpg" height="150px" width="150px"
hspace="70"></img><BR><FONT SIZE=5>Shrey Choudhary</FONT>
            <BR><BR>B.Tech<BR>2022 Mech<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_51c3f56fac94c0b539c4cab8ecde20b4_thumb.jpeg" height="150px" width="150px"
hspace="70"></img><BR><FONT SIZE=5>Dr. Anant Goyal</FONT>
            <BR><BR>MBBS<BR>2022<BR><BR>
            <INPUT TYPE="BUTTON"  CLASS="BUTTON"
VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_4e471a4149464fc058ce0f63a014f39d_thumb.jpeg" height="150px" width="150px"
hspace="70"></img><BR><FONT SIZE=5>Kruthika A</FONT>
            <BR><BR>LLB<BR>H(2022)<BR><BR>
            <INPUT TYPE="BUTTON"  CLASS="BUTTON"
VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_c5e751b574793bcb4df70b79031182c6_thumb.jpg" height="150px" width="150px"
hspace="70"></img><BR><FONT SIZE=5>Leslie Ryan</FONT>
            <BR><BR>Bcom<BR>2022 General<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>

            <div class="floating-box"><img
src="https://vaave.s3.amazonaws.com/album_photos/851f5ac9941d720844d143ed9cfcf
60a_8c4e5510fedca51893f40763030c7ee5_thumb.jpg" height="150px" width="150px"
hspace="70"></img><BR><FONT SIZE=5>V Kavi Yarasu</FONT>
            <BR><BR>LLB<BR>(H)2022<BR><BR>
            <INPUT TYPE="BUTTON" CLASS="BUTTON" VALUE="Connect"></INPUT></DIV>



            <HR WIDTH=1400 COLOR="BLACK"></HR>
            </center>
```

```
        <div class="container-fluid">

            <footer id="footer">
                <i class="footer-pic fab fa-instagram"></i>
                <i class="footer-pic fab fa-facebook"></i>
                <i class="footer-pic fab fa-youtube"></i>
                <i class="footer-pic fab fa-app-store"></i>
                <p>© Copyright 2021 Campus Wiki</p>

              </footer>
    </body>
</html>
```

Alumni Screenshot:



Club page Screenshot:



Result:

Thus, the details of architectural design/framework/implementation along with the screenshots were provided.

Conclusions

The respondents of the study encountered a high degree of difficulty on the existing system, which is relevant to the researchers of the study. This indicates that the respondents experienced problems in securing students records, searching and retrieving student grades, the use of manual procedures by the Registrar's Office in keeping the students record are not secured from alteration or loss, and the students encountered problems in requesting grades at the registrar's office and as well as, the faculty in submitting error-free grade sheets. The extent of need of the respondents in the development of Student Records Management System is very often needed which shows that the respondents needed the developed system in the record services and the development of Student Records Management System is highly recommended. Important features should be included in the development of the system such as login. logout, grade sheets, reports, database maintenance, and help assistant. Majority of the respondents prefer to change the current registrar system for accurate, fast, and accessible for the students, faculty, department chairman, and the registrar itself. The Automated Student Record System is the possible solution to the problems in grade issuance, securing student's grades from alteration or loss, in submitting error-free grades sheets by the faculty, and to maintain relevant, accurate, and confidential student's record.

References

1. www.google.com
2. www.academia.srmist.edu.in
3. www.w3school.com
4. www.srmist.edu.in
5. www.geeksforgeeks.com
6. www.tutorials.point.com