Late Bhausaheb Hiray S.S Trust's Institute of ComputeApplication, Bandra (East)

C E R T I F I C A T E

This is to certify that **Mr. Nishit Harshad Shah** of MCA Semester - II withRoll No **MCA2022051** has completed all practicals of **User Interface Lab** under Asst. Prof. Khyati Manvar's supervision in this college during the year 2022-2023.

CO	Attendance	Performance during Lab session	Innovation in problem solving techniques	Mock Viva during Lab session	Journal
CO1					
CO2					
CO3					
CO4					

Subject In-Charge   Director

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Subject In-Charge   Director

Software Requirements Specification

For

ShareSphere
- A Social Media App

Developed by
Nishit Harshad Shah

Practical No. 1
The UI Life Cycle

Aim: Introduction to UI life Cycle and UI Tools.

A User Interface is the point of human-computer interaction and communication on a device, webpage, or app. User Interface is important to meet user expectations and support effective functionality. A successful user interface should be intuitive, efficient, and user-friendly. A typical graphical user interface, of a software program includes a menu bar, toolbar, windows, buttons, and other controls, which the user can select using a mouse or keyboard. User Interface Design is the craft and process of designing what a user interacts with, when communicating with software.

Types of UI are:
1. Form-based user interface.
2. Graphical user interface
3. Menu-driven user interface
4. Touch user interface
5. Voice user interface

UI Life Cycle
    UI life cycle can be categorized into four following parts:

A. Research and Analysis

In the traditional R & A phase, two categories of information are gathered and analyzed by the user experience team, information about the users of the application, and information about the application itself.

B. Design and Branding

During the D & B phase, UI design is created that addresses the specific needs identified in R & A phase and creates, revise or leverage the applications brand.

C. Prototype Development

Using the approved design document as blueprint, prototypes of the UI designs are created using HTML or Flash. Prototypes can be low fidelity or high fidelity based on user needs.

D. Production

A proper UI and UX team collaboration and integration of UI design from the starting of SDLC can reduce a lot of effort and confusion. Also it can help in successful and timely delivery of the products in any company without any slippages and can increase customer satisfaction.

UI Tools

There are multiple UI tools present, such as:

a. MockFlow

MockFlow WireframePro is the leading tool for designing UI blueprints for websites and apps. It includes ready-made UI components for iOS, Web, Android, Bootstrap, WatchOS, etc.

b. Balsamiq

Balsamiq Wireframes is a UI design tool for creating wireframes (mockups or low-fidelity prototypes)

c. Axure

Axure is a dedicated rapid prototyping tool that allows anyone to create simple wireframes, by dragging shapes onto a canvas and building up your design.

d. Adobe XD

Adobe XD is a vector-based UX design tool for web apps and mobile apps. It supports website wireframing and creating click-through prototypes.

e. Sketch

Sketch is a vector graphics editor for MacOS, primarily used for UI and UX design of websites and mobile apps and does not include print design features.

Practical No: 2

Requirement Gathering

1. Introduction

1.1 Purpose

This software Requirement Specification (SRS) documents key specification, functional & nonfunctional requirements of social networkservice. Social media app tends to share some conventional features. Most often, individual users are encouraged to create profiles containing various information about themselves. Users can often upload pictures of themselves to their profiles, post blog entries for others to read, searchfor other users with similar interests, and compile and share lists of contacts. In addition, user profiles often have a section dedicated to comments from friends and other users. To protect user privacy, social networks usually have controls that allow users to choose who can view their profile, contact them, add them to their list of contacts, and so on.

1.2 Document Convention

The document has used underlined words to highlight the user requirements. It also uses capital lettered words to highlight key words. The document has tried to maintain a priority of requirements. Thepriority has been determined by the judgment of the author and may subject to change. Priority of higher-level requirements is inherited by detailed requirements. The document has used short forms for some commonly abbreviated terms.

1.3 Project

ScopePurpose

The objective of this software is to completely automate the following processes.

- The main objective of the project is to establish a network among the people residing in a specific community all the information can be easily accessed and shared among the people.
- This system provides users to register their various types of profile like social, personal, professional.

- This system provides users to send scrap messages, images, and music files to their friends. User can maintain the scrap book whatever scrap he has sent to users.

- The system provides users to upload the photos so that user can maintain own album.

- This system provides user to join the communities according to their trends or scenario.

- This system provides user to send invitation to another friend to join the community or group and can add to their friend list for future.

Benefits

- One of the many advantages is that you can connect with lost classmates, lost family members on social media apps. Simply typein a name and you might see a picture of someone that you haven't seen in years.

- Another advantage of social media app that's not to be overlooked is the career advantage. By posting information about yourself and your work history, you may just get some job offers.

- As if all of that weren't enough, social apps are just a fun way to kick back and relax. You can write on your web page or post

pictures on your wall. You can even compete against friends in various games that are a lot of fun.

- Stay in touch with contacts, reach out to new people, and show the community you care about company-to-client communication!

Objectives

- To define the functional requirements: One of the key objectives for developing an SRS for a social media mobile application is to define the functional requirements of the application. This involves identifying the features and functionalities that the application should provide to meet user needs and expectations.

- To define the non-functional requirements: Another objective of developing an SRS is to define the non-functional requirements of the application. This includes factors such as performance, reliability, scalability, security, and usability.

- To ensure clarity and consistency: An objective of developing an SRS is to ensure clarity and consistency in the requirements documentation. This involves using clear and concise language,

avoiding ambiguity, and maintaining consistency across thedocument.

- To prioritize requirements: Another objective is to prioritize the requirements based on their importance to the application's success. This involves identifying the critical requirements that must be implemented first and those that can be deferred to future releases.

2. Overall Description

2.1 Product Perspective

Social media app makes young people more social and help them communicate with others. Social media app are places where young people can maintain and nurse their existing (offline) friendships and create new (online) friendships. Social media app are places where young people learn the crucial importance of being able to network which they can benefit from in their future professional life.

2.2 Product Functions

- Maintenance of detail of various users.

- Online update the information.

- Status of all users and community details easily available.

2.3 Design and Implementation Constraints

The project operates under a number of design and implementation constraints. Some of these are as outlined below:

- **Hardware and Software constraints:**

Since the project has been developed entirely using Flutter and object- oriented methodology, it is largely independent. The project can be run on any platform. However, it still needs a Flutter Framework.

- End user constraints:

As mentioned above the major constraints for the end user is having a Flutter framework on his computer. Also, he should be familiar with the operation with the system to a certain extent, although a help document will be provided to oriented users.

3. System Features

An application has divided its working in different modules. Each module consists of different working for proper functioning of application. All modules are integrated together to make robust application. These modules provide various features of system

- Registration.
- Login.
- Profile Display.
- User Profile. (Personalize your profile with status updates &photos)
- Messages. (Text, chat and have group conversations)
- Stories
- Settings.
- Search.
- Push notification.
- Add to friend.
- Get notified when friends Like and Comment on your Posts.
- Pictures can be post from camera or gallery.
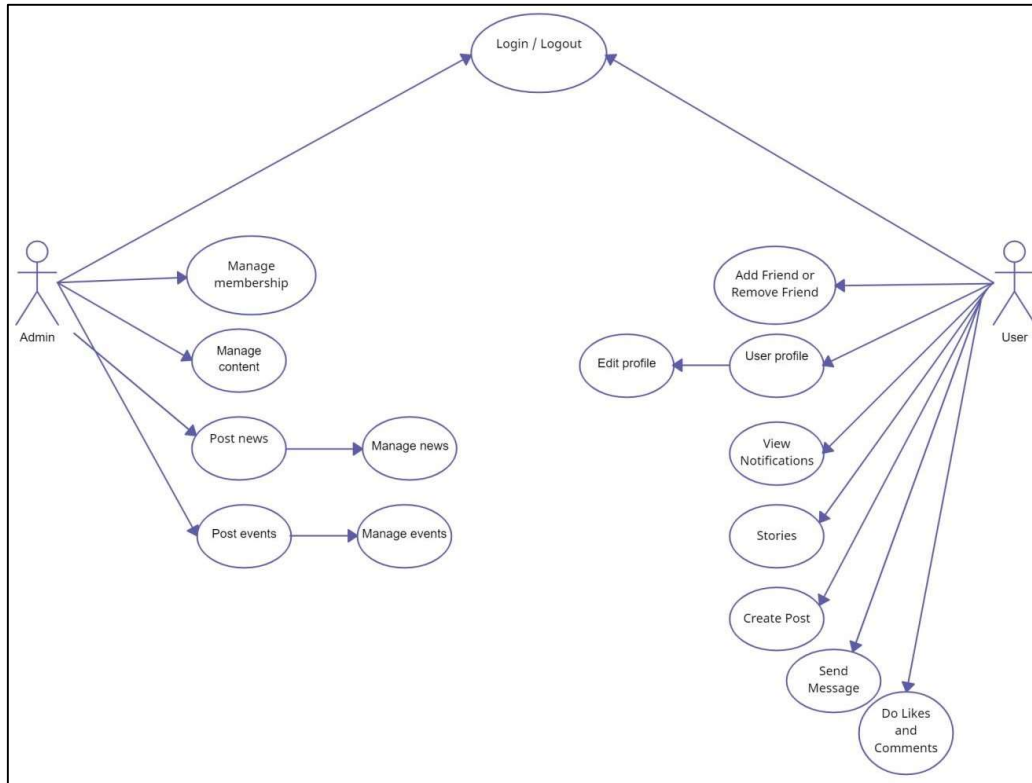- Edit, Share, Comment & Like Photos.

1. Flow Chart:
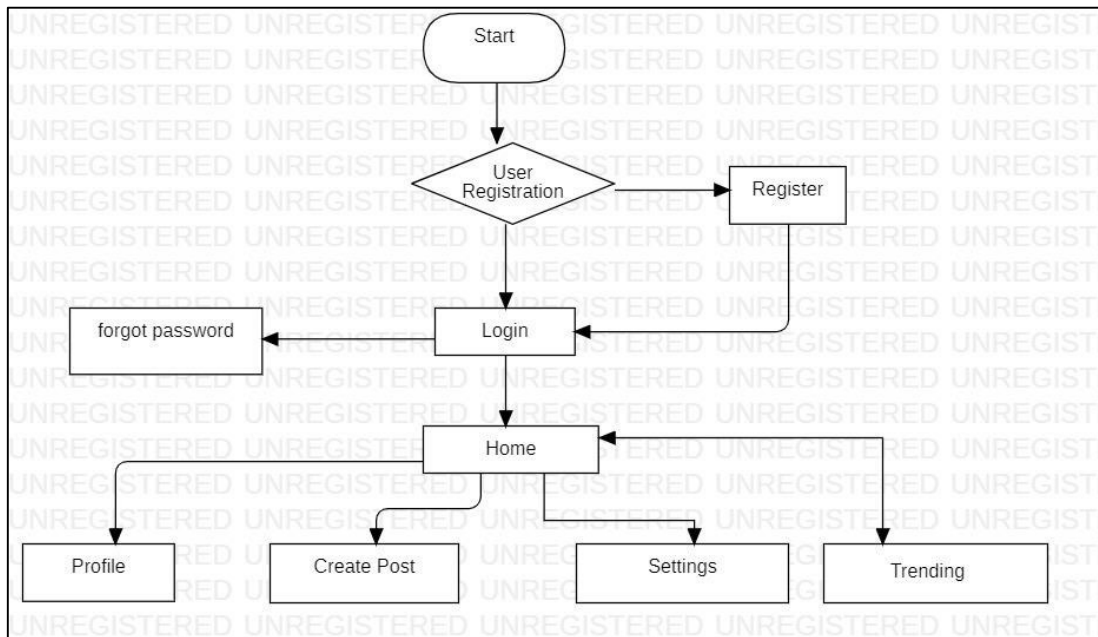
2. Data Flow Diagram
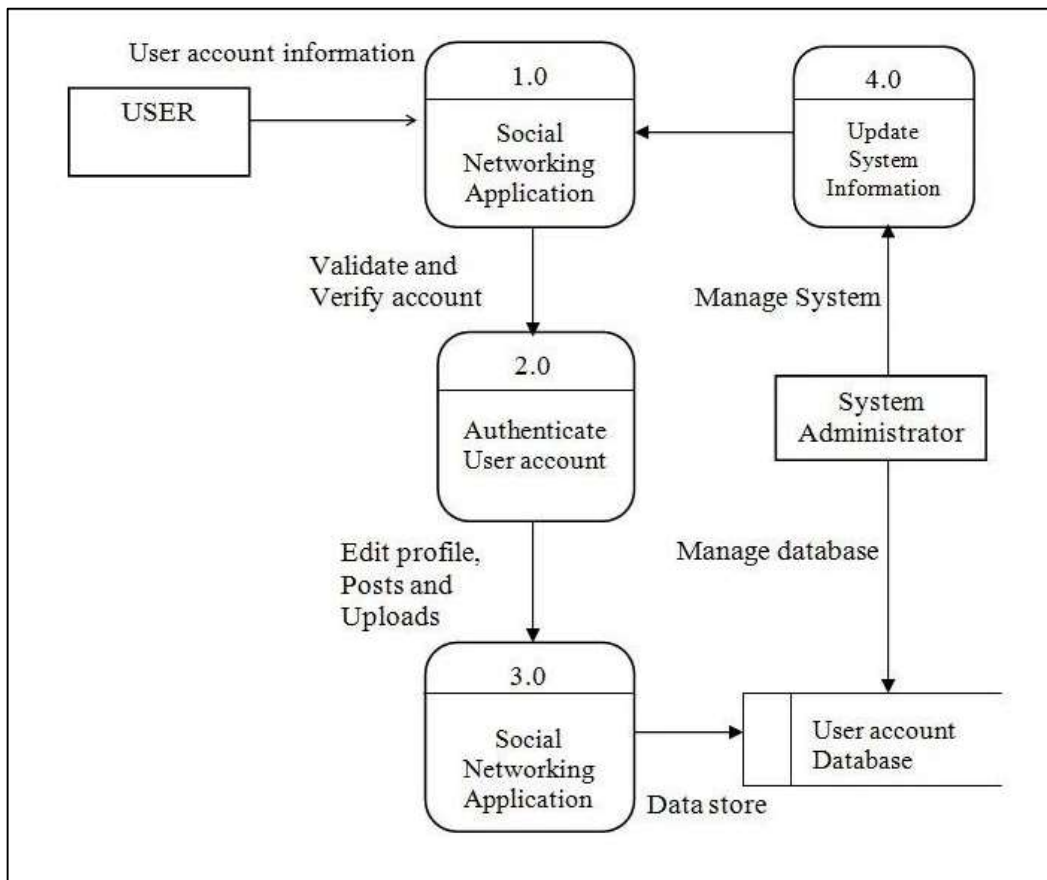
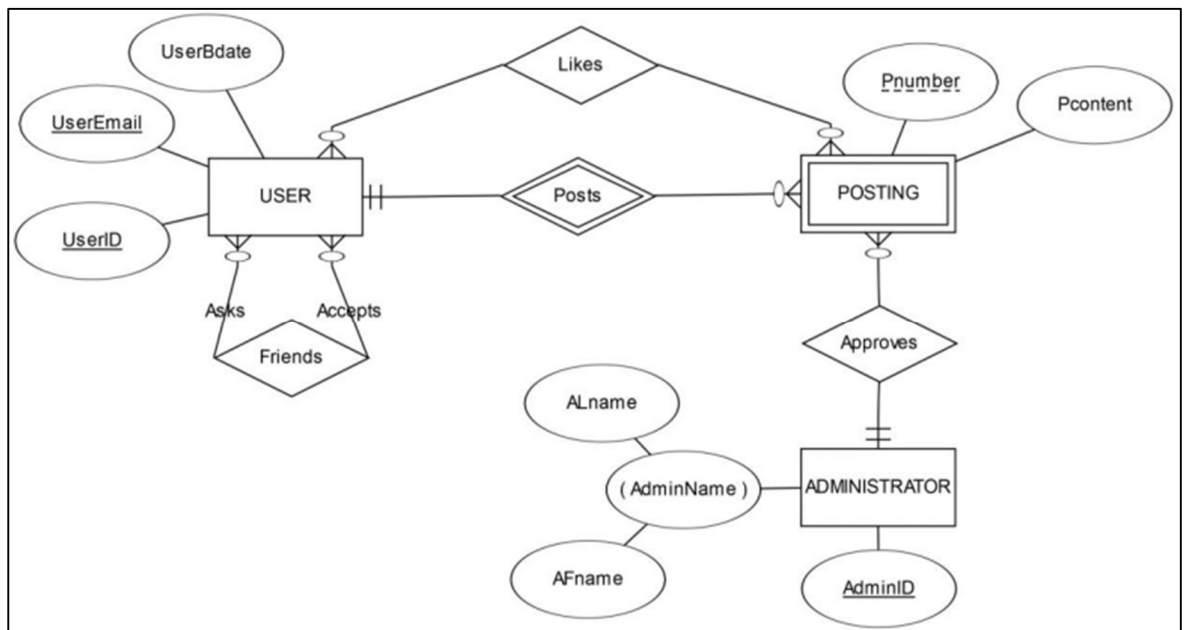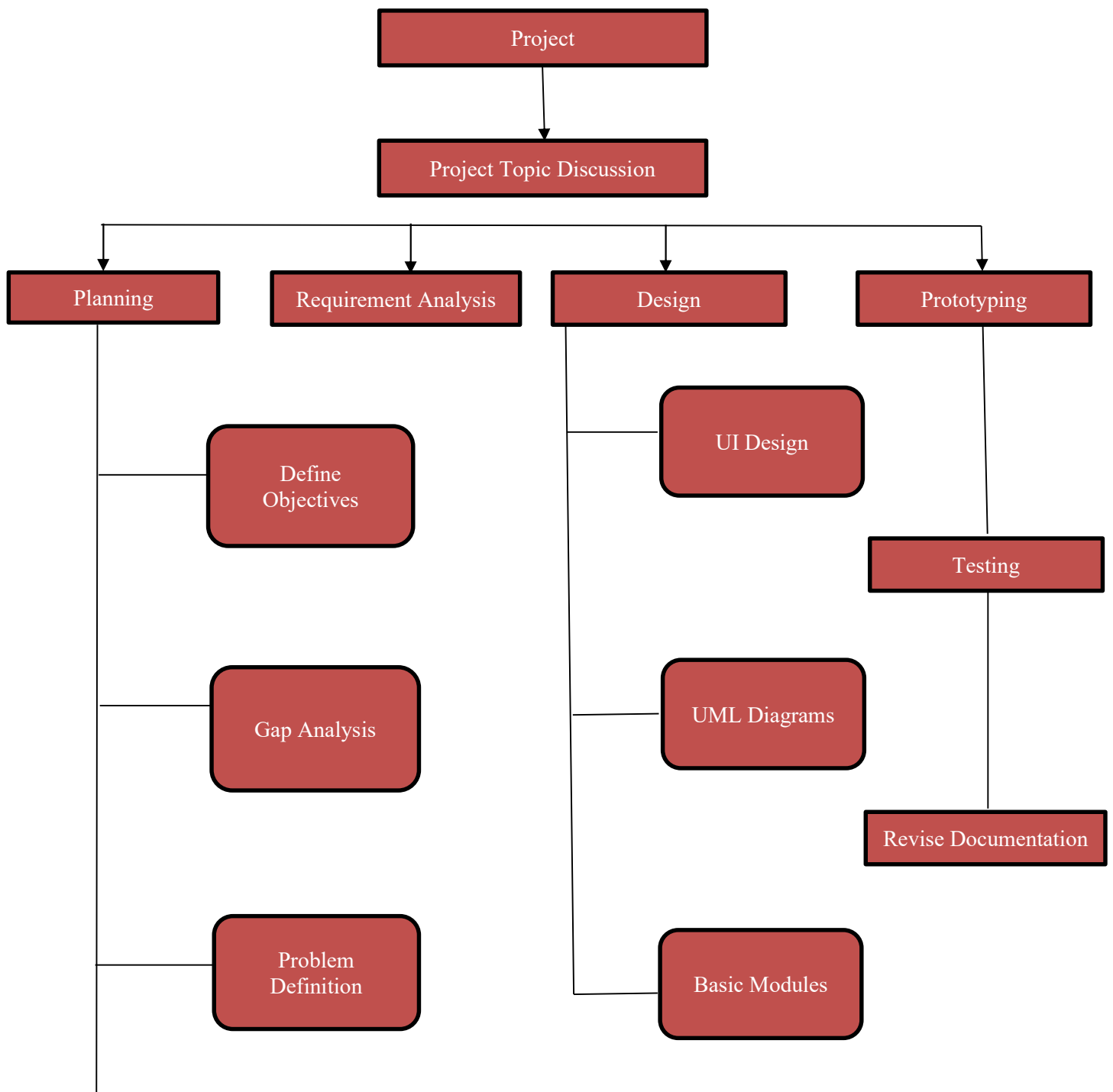# Practical No: 3 - Analysis

1. Use Case Diagram:

2. ERD(Entity Relationship Diagram):

3. Work Breakdown Structure

```
                           ┌─────────────┐
                           │   Project   │
                           └──────┬──────┘
                                  │
                      ┌───────────────────────┐
                      │ Project Topic Discussion │
                      └───────────┬───────────┘
        ┌─────────────┬───────────┼───────────────┐
   ┌─────────┐ ┌──────────────────┐ ┌────────┐ ┌──────────────┐
   │ Planning │ │ Requirement Analysis │ │ Design │ │ Prototyping │
   └─────────┘ └──────────────────┘ └────────┘ └──────────────┘
```

Planning		Design		Prototyping
Define Objectives		UI Design		Testing
Gap Analysis		UML Diagrams		Revise Documentation
Problem Definition		Basic Modules		

4. Gantt Chart

ShareSphere	3-05-2023	5-05-2023	7-06-2023	10-07-2023	15-09-2023	18-09-2023	28-10-2023	25-11-2023
Porject Initiation	██	██	██					
Research and Planning		██	██	██				
User Interface Design			██	██				
Frontend Development				██	██			
Backend Development			██	██	██	██		
Feature Implementation					██	██		
Testing and Quality Assurance						██	██	
Deployment and Launch							██	
Maintenance and Support							██	██

Practical No: 4 - USER PERSONA

Scenario:

➢ A scenario is a short story in which one possible outcome of the future is developed through characters and plot. Scenarios are predictions of the futureand are written as though the future was the present.

Step 1: Registration & Login.

1. User must register herself/himself with the ShareSphere Application.
2. Details of the User includes its Email-ID , Username, and Password and ConfirmPassword.
3. After registration the user can login to the (ShareSphere) Application using itsUsername & Password has to be set when user had registered herself/himself.

Step 2: Create Post and Delete Post.

1. Register and Login into the (ShareSphere) Application.
2. Authentication will be checked if the user is not Authenticated then the application can't allow the user to Login or Register into the Application.
3. User will enter on a home screen or landing page of (ShareSphere) Application.
4. User can view others users or their mutual friend's Story for 5s.
5. User can post their images or videos and also tweet of their ideas or thoughtsthrough (ShareSphere) Application.

Step 3: Send and Accept Friend Request.

1. After register and login to the application.
2. User gets a friend request, visible in the notification tab.
3. From there the user can click on accept button and the request gets accepted.
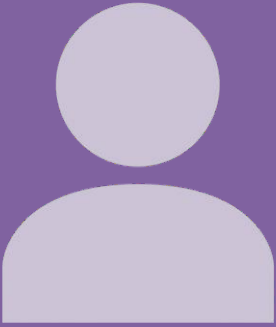4. User can send a friend request to another user by visiting another user's profileand clicking on follow button.

Step 4: Like and Comment.

1. User can like other user's or their mutual friends post or videos.
2. User gets to see other users' images and videos on their home screen or homepage.
3. User can explore or get the other like travelling media images or videos.

Step 5: View Profile and Update Profile.

1. User can view their profile photo and also users can update or delete their bio or profile image as they want.
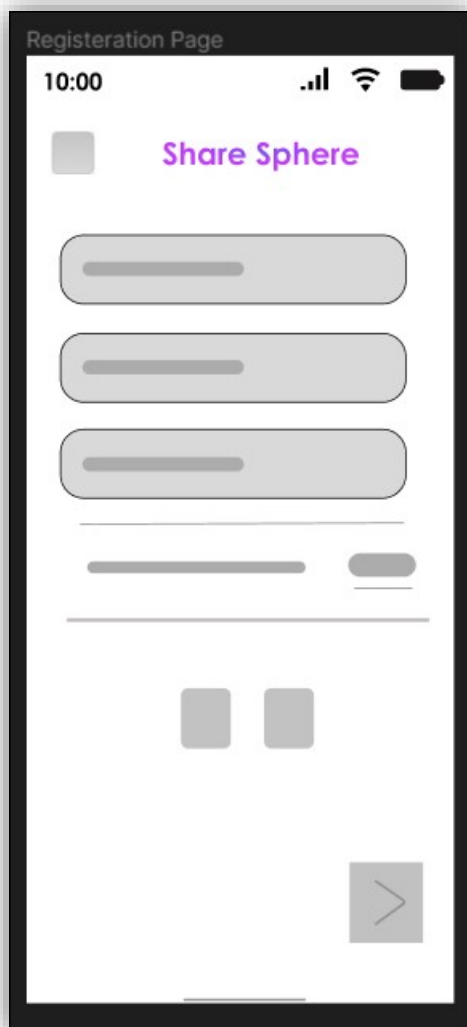2. Users can view only other user's profile image and can search other users.

User Persona:

GOALS

➢ Share images with friends and get likes on them.

➢ Connect with friends and family.

➢ Feel stay contended by Sharing Stories, Posts & Reels.

Name: Emily Carter
Age: 26
Occupation: Software - Engineer
Location: Chicago, USA

EXPECTATIONS

➢ User loves trying out new features and is always ready for any updates.

➢ Users expect it to beuser-friendly i.e., easy to navigate with no complex features.

➢ Users wants to feel connected to what's going on in their friends' lives using this app.

➢ A platform where they can showcase their creativity.

➢ A platform through which they can gain support in their tough times.

➢ A platform where users can share their values, opinions, etc. on any social issue

FRUSTRATION

➢ Security issues unauthorized access to the account.
➢ There should be no limitation on the number of shared images/videos.
➢ There should be end-to-end encryption between two users when communicating with each other.
➢ Users should not post or share sensitive contents.

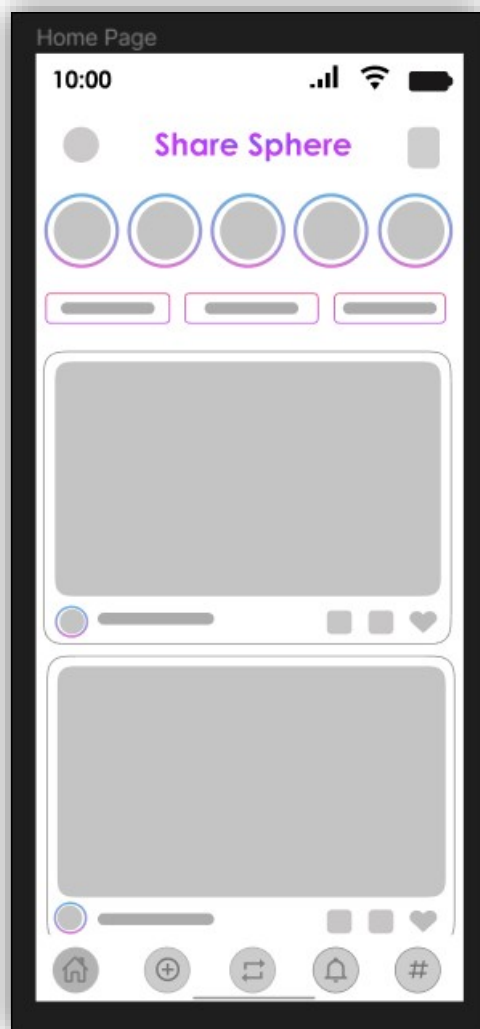# Practical No: 5 WIREFRAMING

➢ **ShareSphere Wireframing:**

1. Registration Screen

2. Login Screen

3. Home Screen
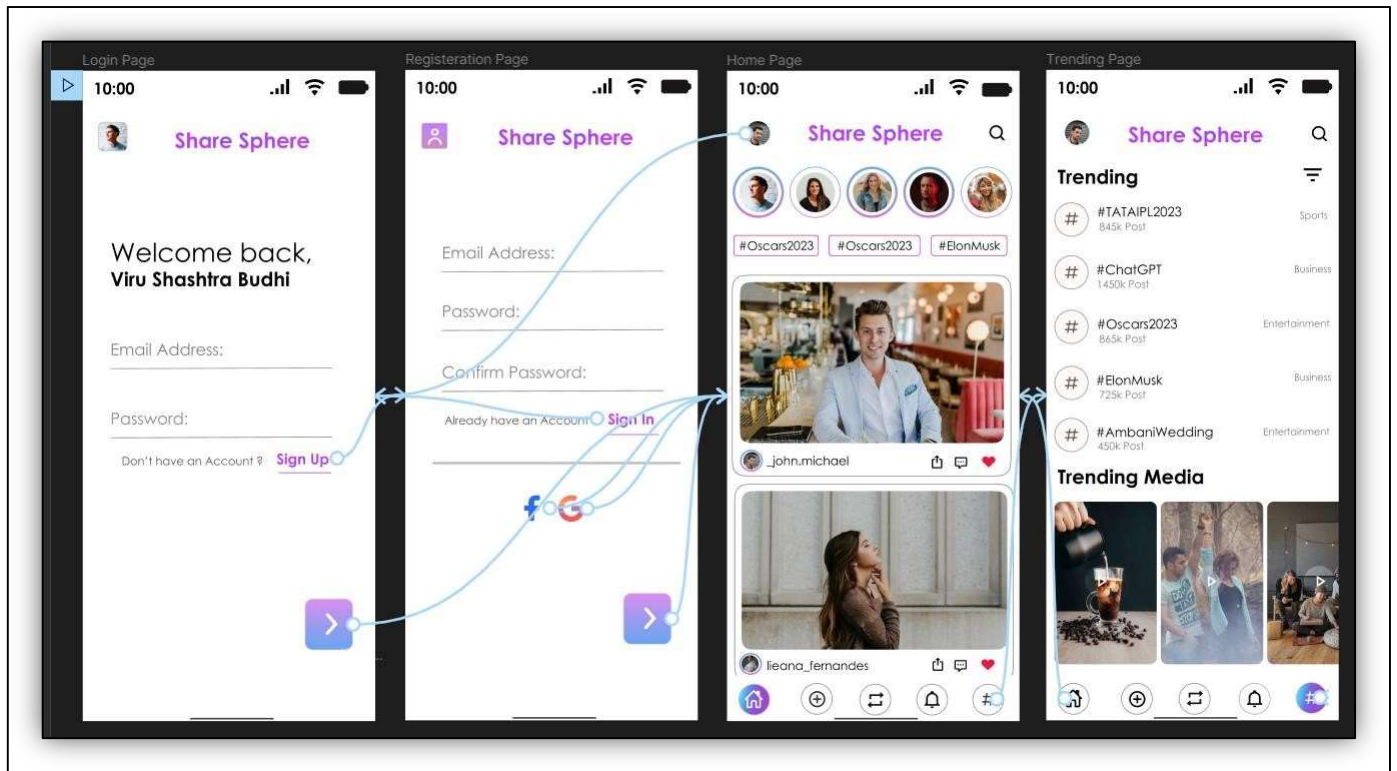

4.Trending Screen

Practical No: 6 – PROTOTYPE

Aim: To create prototype

What is Prototyping?

A prototype is a simple model or a mock-up of a concept, idea, product or service. It is used to test or validate design assumptions that were made to construct the prototype quickly and in a less expensive way than developing a full-fledged product or service. The prototype also gives an idea of how to refine or alter it to move closer to the finished product or service offering.
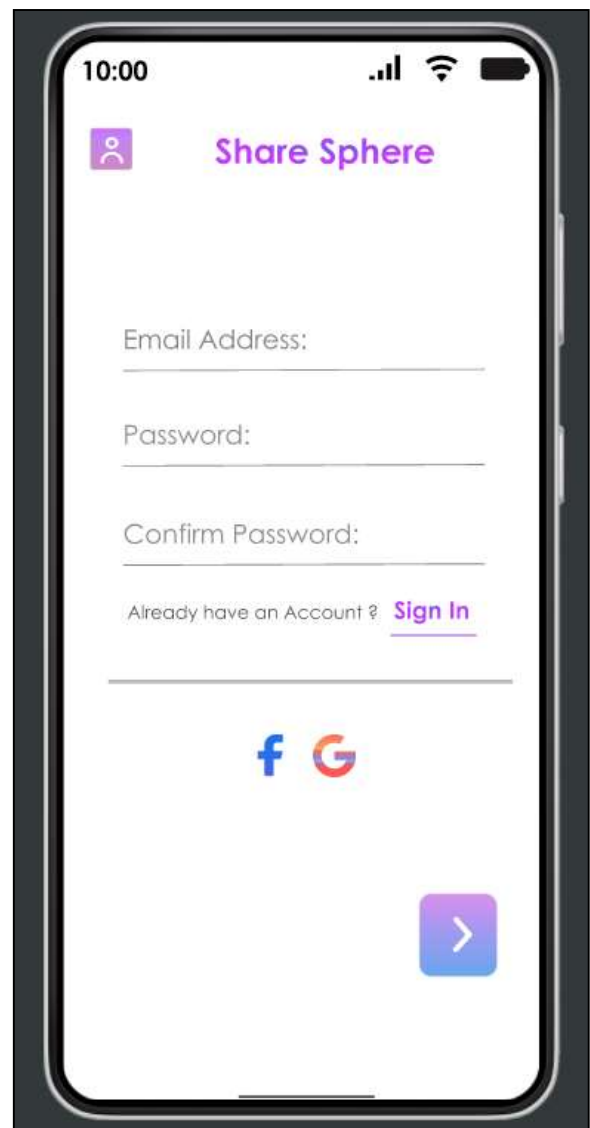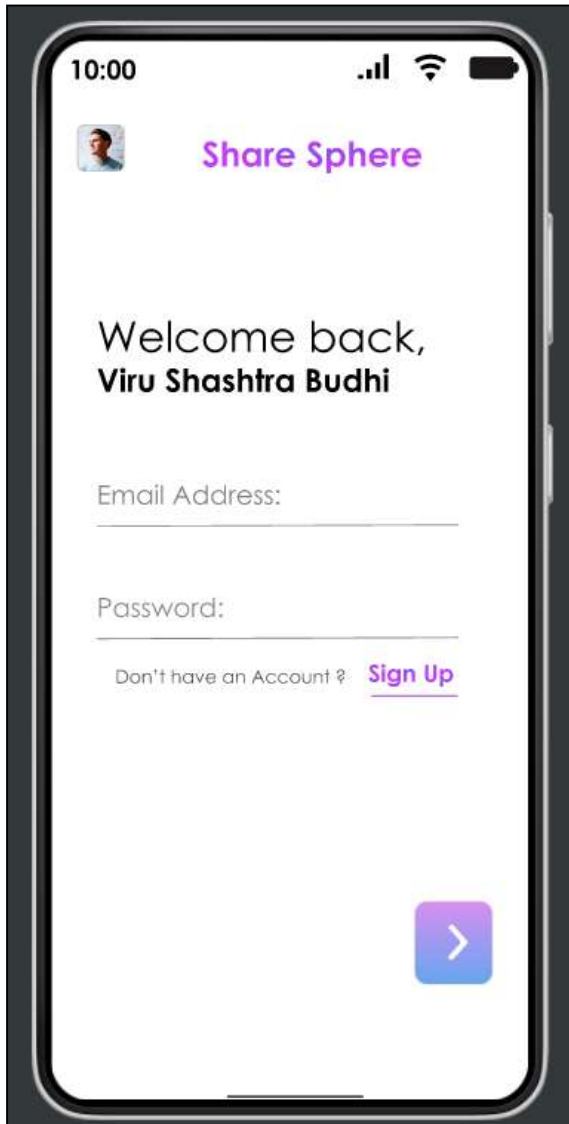
Simple sketches, storyboards, mood boards, paper or cardboard models, or a skit of a service offering are all examples of prototypes. This means that a prototype doesn't always have to be tangible. In fact, a prototype doesn't have to be complete either. A small part of a proposed product solution or service offering can just as easily be prototyped to test. The point of prototyping is to bring ideas or concepts to life and explore the real-world acceptance, impact or value that idea or concept can have. Prototyping also helps in thinking through, building an understanding of customer or user experiences and bridge the gap between the solution devised and the user needs. Prototypes also help poke holes in design research that would be difficult to spot before developing the actual product or service.
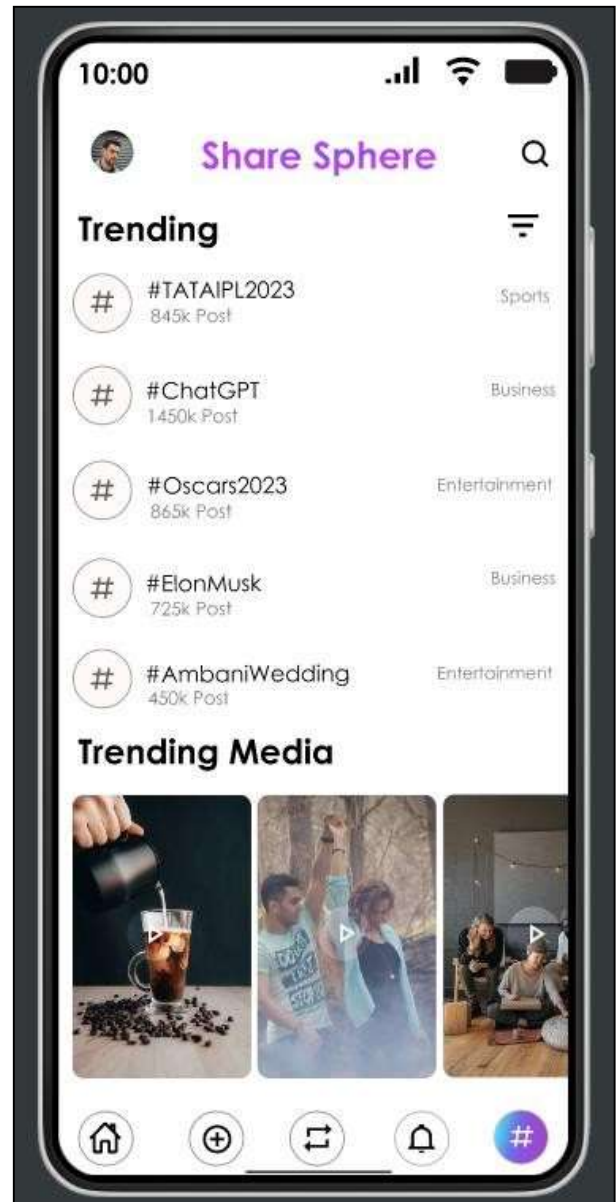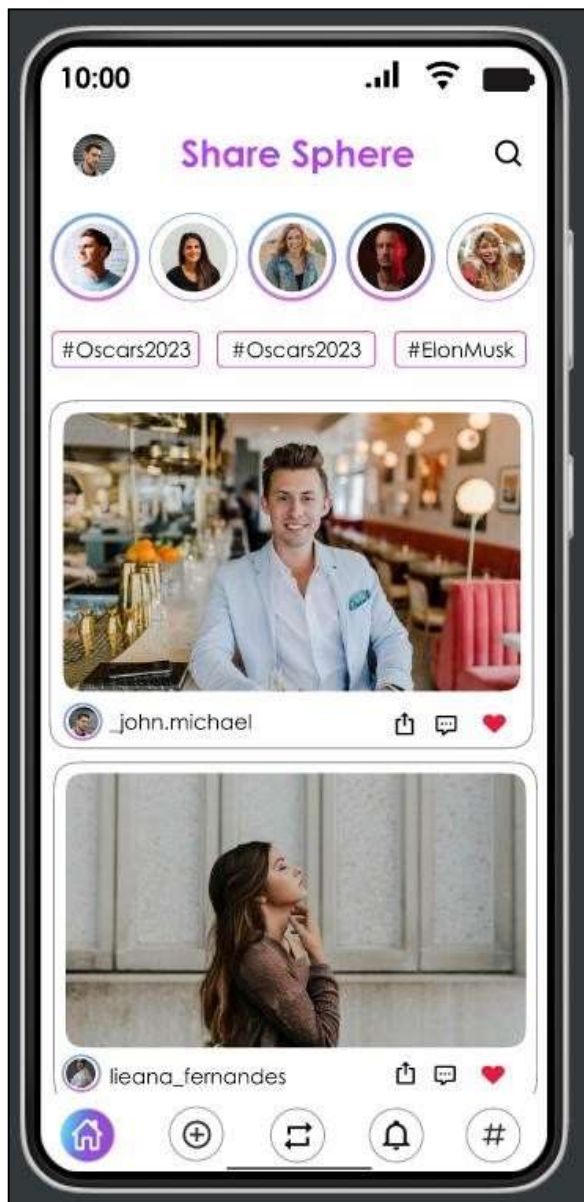
A service prototype can also be called a pilot. It is, therefore, important to test out these solutions through prototyping to collect a form of feedback and incorporate changes before designing the final product or service for launch in the market for a wider audience. Prototyping can be time-consuming so an expedited version of prototyping i.e., Rapid Prototyping can also be used to speed user testing, feedback, and iteration.

Practical No: 7
IMPLEMENTATION

Screen 1 — Home Feed

10:00

Share Sphere

#Oscars2023   #Oscars2023   #ElonMusk

_john.michael

lieana_fernandes

Screen 2 — Trending

10:00

Share Sphere

Trending

| # | #TATAIPL2023 | Sports |
| | 845k Post | |

| # | #ChatGPT | Business |
| | 1450k Post | |

| # | #Oscars2023 | Entertainment |
| | 865k Post | |

| # | #ElonMusk | Business |
| | 725k Post | |

| # | #AmbaniWedding | Entertainment |
| | 450k Post | |

Trending Media

Practical No: 8
TESTING

Test Cases for Registration Form:

TEST CASE ID	DESCRIPTION	EXPECTED RESULT	ACTUAL RESULT	REMARK
TC-01	Username: Priyank Email:priyank@gmail.com Password: priyank@1024	Account Created	Account Created	Pass
TC – 02	Username: Nishit Email: nishit@gmail.com Password: nishit@1001	Email-Id Already Exist	Account not created	Pass
TC – 03	Username: Prince Email: prince@gmail.com Password: prince@1201	The username should be a minimum of 3 characters	Account Not Created	Pass
TC – 04	Username: Pakshal Email: pakshal@gmail.com Password: pakshal@1045	Account Created	Account Created	Pass
TC – 05	Username: Rahul Email: rahul@gmail.com Password: rahul@1205	Username Already Exist	Account not created	Pass

Test Cases for Login Form:

TEST CASE ID	DESCRIPTION	EXPECTED RESULT	ACTUAL RESULT	REMARK
TC – 01	Username: Priyank Password:priyan k@1234	Grant Login	Login Granted	Pass
TC – 02	Username: Nishit Password:nishit@1 221	Deny Login	Deny Login	Pass
TC – 03	Username: Rahul Password: rahul@1234	Deny Login Enter Password	Deny Login Enter Passwor d	Pass
TC – 04	Username: Prince Password:prin ce@1245	Deny Login Invalid Credentials	Deny Login Invalid Credenti als	Pass
TC – 05	Username: Pakshal Password: pakshal@1054	Grant Login	Login Granted	Pass