

Snapshot

Like • Capture • Share



Software Engineering Project



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IT - 1

4th Semester

[Github Project Link](#)

Share photos with Friends

Anywhere • Anytime

The **Snapshot app** is a social networking platform that allows users to upload **photos** with captions and location information which are uploaded to the **cloud**. The uploaded posts can be shared publicly. Users can browse other users' content by viewing their profile page and can **like** and **comment** on others' photos and **follow** them to add their content to their **feed**. Users' and their followers' activities turn into **notifications** which can be viewed in the notifications section.

Problem Statement

In this digital age we are living in, it is important to stay connected. People click their photos at some location (eg: Vacation destination, a famous hotel etc.) and sharing them with their friends or family will **connect** and strengthen their relationship irrespective of the time and their location. A platform with a fast way to **share short moments of someone's life** digitally to other people must exist. Since everyone can be connected via the internet this should be simple platform where **people from every age group can join, connect and communicate**. This platform could also be used for easy **branding** since it's all about photos. The software should be available on the most abundant and easy to own machines i.e. **Smartphones**.

System Requirement Specification

1. Introduction

This document lays out a project plan for the development of “**Snapshot**” open source Social Networking App by **Siddharth Saini**.

The intended readers of this document are current and future developers working on “Snapshot” and the sponsors of the project. The plan will include, a summary of the system functionality, the scope of the project from the perspective of the “Snapshot” team, scheduling and delivery estimates, project risks and how those risks will be mitigated, the process by which I will develop the project, and metrics and measurements that will be recorded throughout the project.

2. Overview

The **Snapshot** app is a social networking platform that allows users to upload **photos** with captions and location information which are uploaded to the **cloud**. The uploaded posts can be shared publicly. Users can browse other users' content by viewing their profile page and can **like** and **comment** on others' photos and **follow** them to add their content to their **feed**. Users' and their followers' activities turn into **notifications** which can be viewed in the notifications section.

2.1 Customers

Everyone. Anyone can use this application ranging from a child to an old-age person.

2.2 Functionality (Goals and Scopes)

The application allows users to:

- Create account using their email and password or login with Google
- Upload photos (directly from gallery or camera) with a caption and location
- Like (double tap) and Comment on their own and other users' posts
- Search other users on the platform
- Follow or Unfollow other users to see their posts on your Posts Feed
- View notifications based on user activity
- Change their personal information on profile page

2.3 Platform

It will be launched as an Android application, works as long as you have an android device with version at least 5.0.1 or above.

2.4 Development Responsibility

I, Siddharth Saini, would be developing the software and I am responsible for the creation of the Database, Front-end designing, Back-end and all the other related activities.

3. **Deliverables**

I'll deliver the following during the course of development:

- Feature specification
- Product design
- Test plan
- Development document
- Source code

4. **Risk**

Management

5.1

Risk

Identification

People are already using Facebook to find friends and connect with them. So, what would be the real cause that would motivate them to join my application.

5.2 Risk Mitigation

Even though most of the users would already be using Facebook, our platform would still offer them many things that is not there on Facebook. For eg.

- They don't meet people who share common interests and passions as much. Our application would enable them to meet people (apart from usual friends) who share common interests and passions on a more frequent basis.
- Users of fb cannot share songs on-the-go which they have sung whereas on our app they can do that on-the-go.
- People can post mysteries/cases and other people can solve it. Moreover, people will get points in case they solve the mysteries or on the basis of popularity of their posts.
- More importantly, people need not register for my application, but instead, they can login using their already existing accounts of Google/Facebook.

6. Scheduling and Estimates

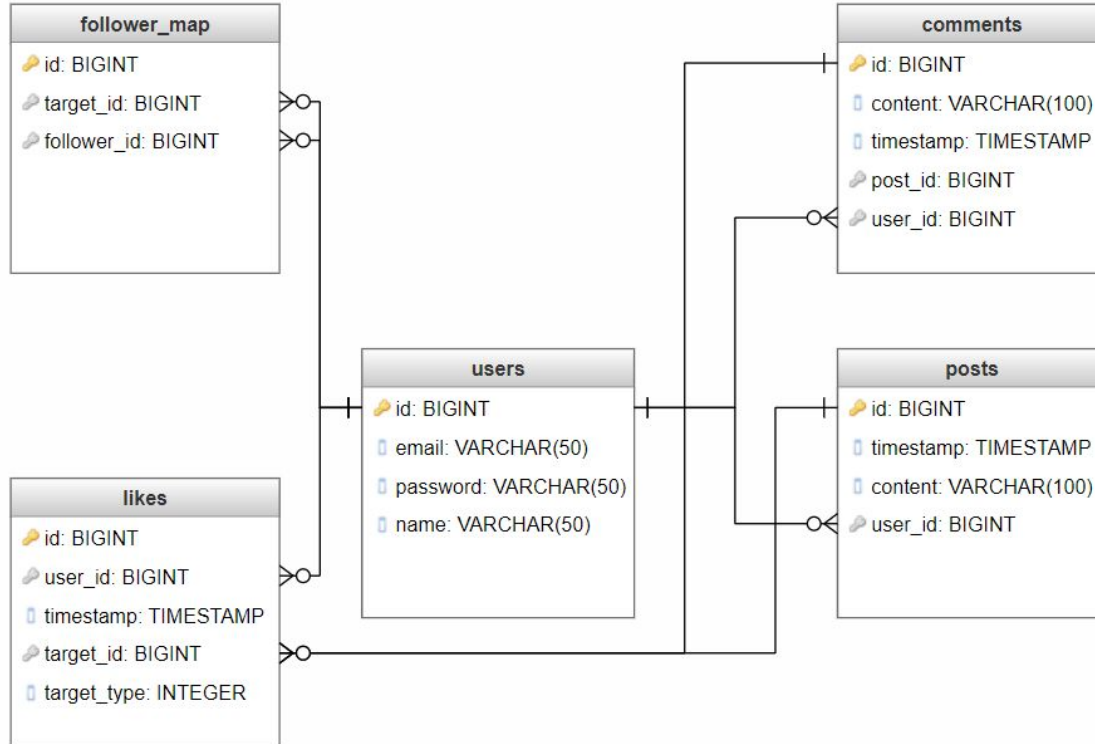
Milestone	Description	Release Date
M1	Login + Signup Functionality including Social Authentication (Google Login)	18 January
M2	User creation using Signup data in Cloud storage (Firestore)	10 February
M3	Front-end UI development of Userfeed, Search, Upload, Notifications and Profile Pages	28 February
M4	Back-end development, connecting all app pages to Firebase using Cloud Functions	25 March
M5	Post upload functionality added	10 April
M6	Bugs removal and final release	1 May

7. Technical Process

Following would be the languages / tools I would use to develop my application:

- Front-end and Back-end Android Development: **Flutter SDK, Dart**
- Cloud Storage (Database): **Firebase**
- Cloud Functions: **JavaScript, Firestore**

Entity Relationship Diagram



Data Dictionary

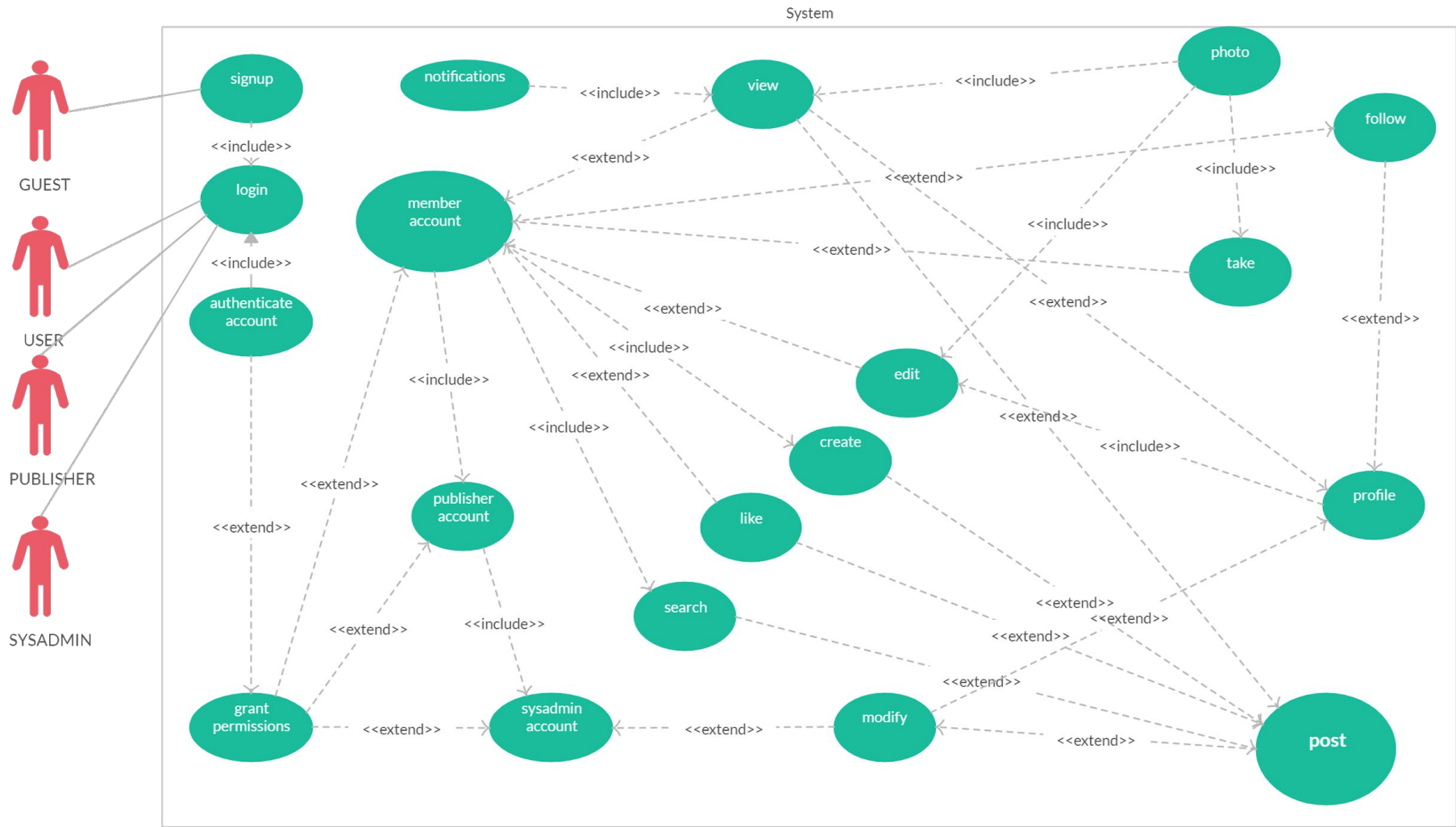
User's Details

Field Name	Data Type	Field Size	Description	Example
User ID	String	21	Unique ID to each user	wbMV83yqiyfbCGLHSzV0m
Username	String	3(min) - 21(max)	Unique nickname of each user	siddharth
Display Name	String	21	Name of the user	Siddharth Saini
Email	String	auto	E-Mail of the user	siddharth@gmail.com
Android Notification token	String	auto	Unique Android ID to communicate with the database	cJq2w86tLWA:APA91bETfpgBC6PXzT0OpRePs5jS ZN28FRSeyOjUwv2znd7pggSPiAPC41qTZmP9xMU RxES_v_FdUmK1elyXLf3P4OpeeKZc1Di9THeX7f5x xEm3s_mNETmQC_gZXQIVkFAPCCWTEVFz
Bio	String	100	User's bio	Hey there! I'm using Snapshot.
Followers	Map	auto	List of followers	[[wbMV83yqiyfbCGLHSzV0, siddharth},{...},{...}]
Following	Map	auto	List of users following	[[wbMV83yqiyfbCGLHSzV0, siddharth},{...},{...}]

Post Details

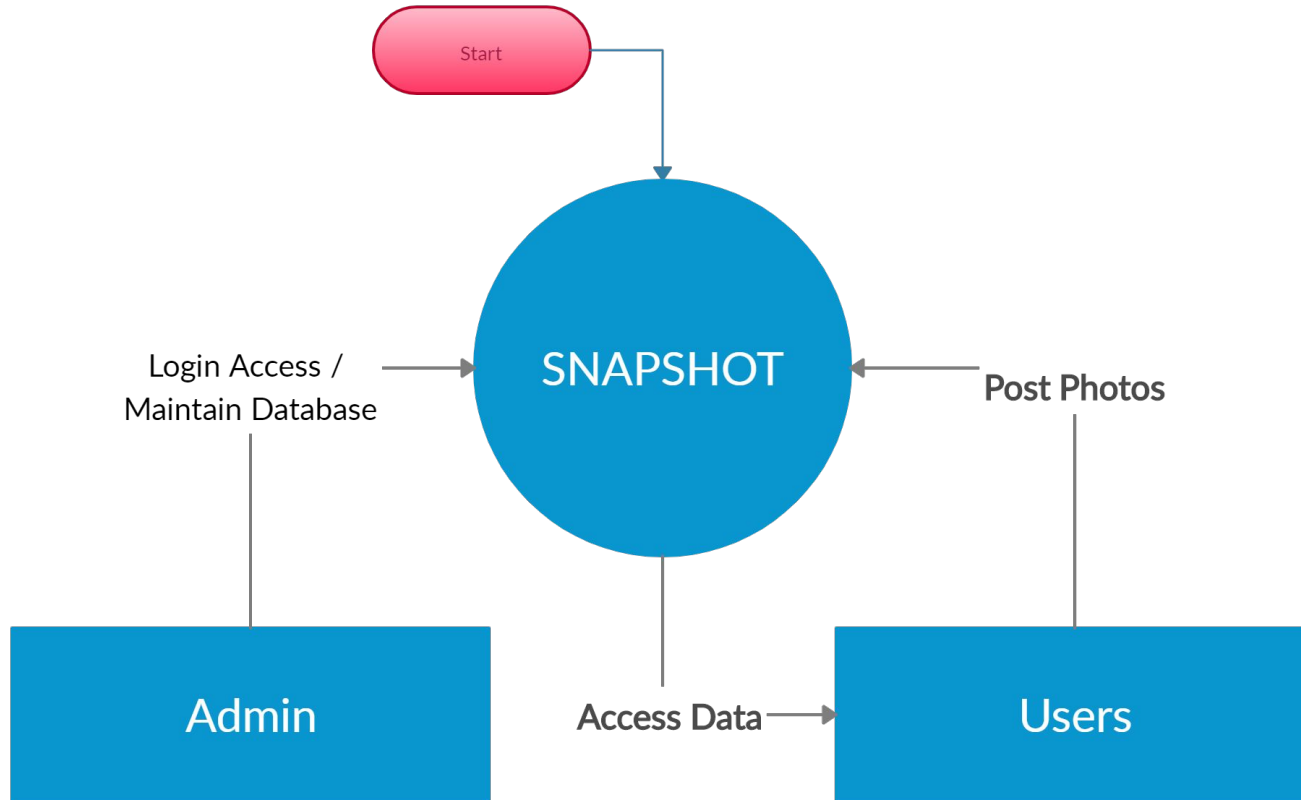
Field Name	Data Type	Field Size	Description	Example
Post ID	String	20	Unique ID to each post	D3lcMx8BDT1fA8ISTQMA
Username	String	3(min) - 21(max)	Unique nickname of each user	siddharth
OwnerID	String	20	Post owner's ID	wbMV83yqiyfbCGLHSzV0m
Email	String	auto	E-Mail of the user	siddharth@gmail.com
Location	String	50	User's location	Dwarka, New Delhi
Likes	Map	auto	Post likes	[[{wbMV83yqiyfbCGLHSzV0, siddharth},{...},{...}]]
Comment	Map	auto	Post comments	[[{wbMV83yqiyfbCGLHSzV0, siddharth},{...},{...}]]
TimeStamp	timestamp	auto	Upload timestamp	May 9, 2020 at 12:19:34 AM UTC+5:30

Use Case Diagram

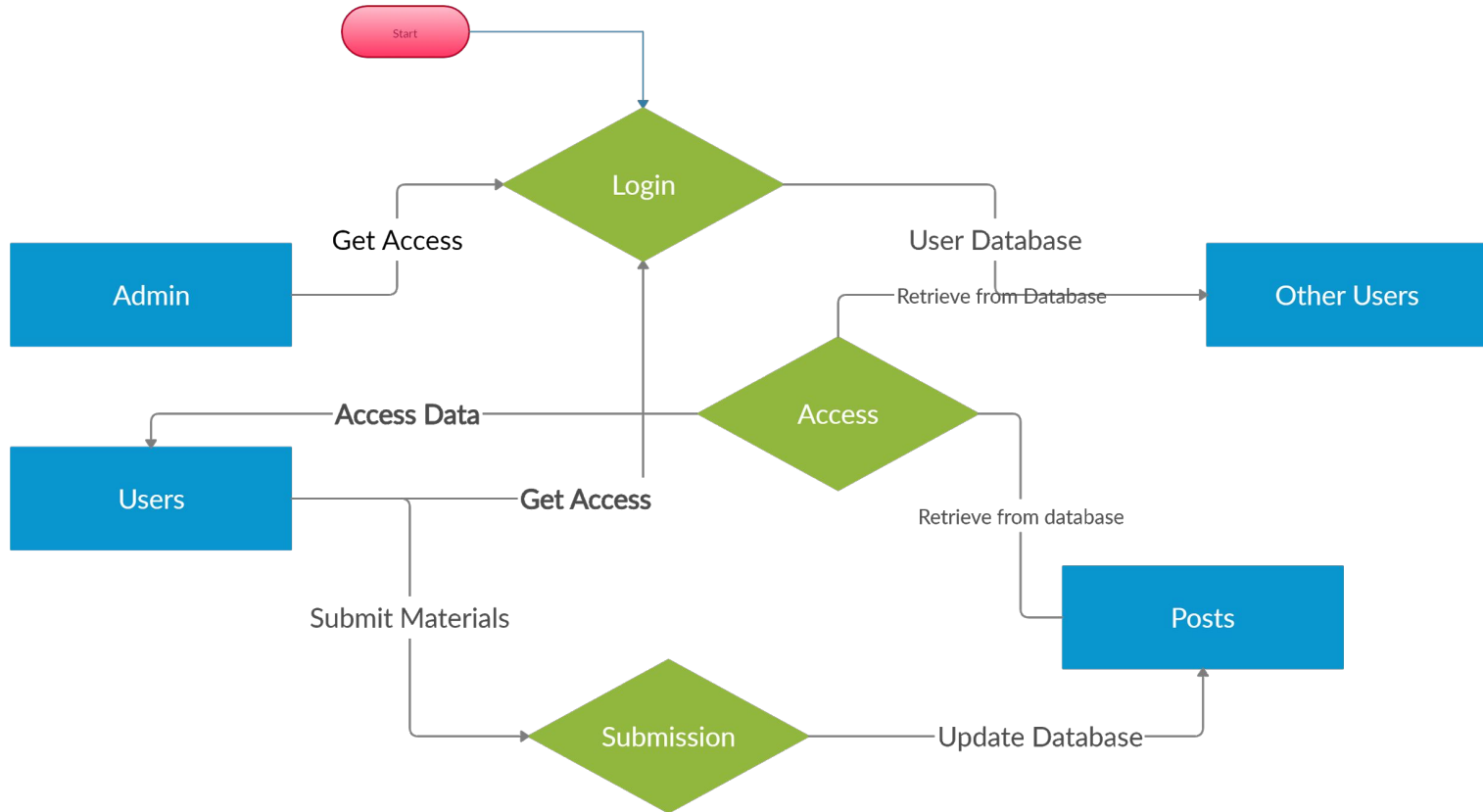


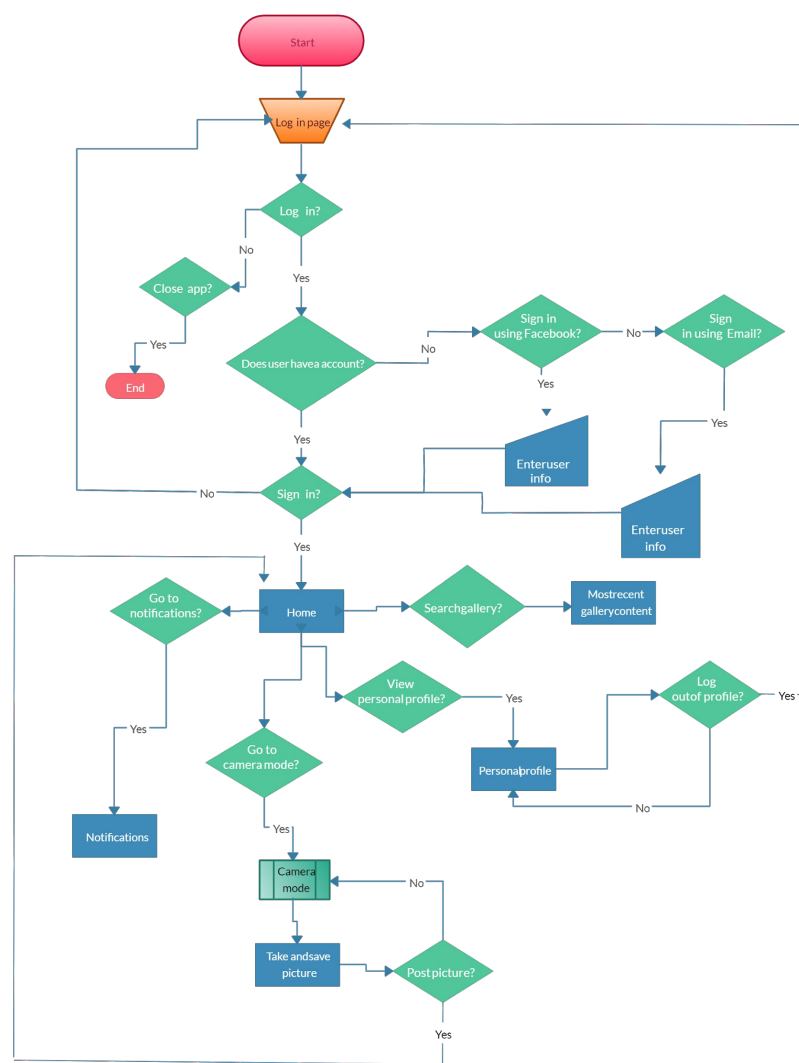
Data Flow Diagram

Context Level



Level: 1





Level: 2