High Level Design

Instagram profile DP downloader & Post Uploader Mobile app.

Document Version Control

Data Issued	Version	Description	Author
6/4/23	0.1	Initial HLD - V1.0	Janvi Bandhara Hinal Parikh

Contents

Abstract

In recents times when everybody is using social apps like instagram, facebook, twitter and so on. There is an urge for everyone to see the images of the instagram ids and we are here to deliver the app that downloads the profile pic of the user by just giving the username. Another feature which is added is that users can post anything using this app just by giving the logging credential.

1. Introduction

1.1 Why this High-Level Document?

The purpose of this High Level Design (HLD) Document is to add the necessary detailed description to represent a suitable model. This document is designed to help in operational requirements and can be used as a reference manual for how the modules interact.
The HLD will:

- Present all the design aspects and define them in detail.
- Describe the user interface being implemented.
- Describe the hardware and software interfaces.
- Describe the performance requirements.
- Include design features and the architecture of the project.
- List and describe the non-functional attributes like:
    - Security
    - Reliability
    - Maintainability
    - Portability
    - Reusability
    - Application compatibility
    - Resource utilization
    - Serviceability

1.2 Scope

The HLD documentation presents the structure of the system, such as database architecture, application architecture(layers), application flow(Navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administration of the system.

2. General Description

2.1 Product Perspective

The instagram dp download and post upload is a mobile app which will help you to download dp of any user and post the photos in your account.

2.2 Problem Statement

Here you have to build an mobile based application from which user can download any profile pic or can upload their posts to Instagram automatically.

The main objective here is –

1. For profile DP downloading Purpose users should have an option to enter the insta username.
2. For Posting purposes, the user should have the option to put the username & password of his/her insta account and the post name(Ex:- 'Your_post.jpg').

2.3 Proposed solution

The solution proposed here is to build a mobile app using python which basically performs the downloading and uploading feature. Afterwards with the help of buildozer will convert it into apk(Android Application Package).

2.4 Tools Used

Python programming language and framework like Kivy, kivyMD for material Design, Buildozer for converting into apk.

2.5 Constraints

Instagram dp download and post uploader app is a user friendly(mobile app), and users should not be able to know any of the working.

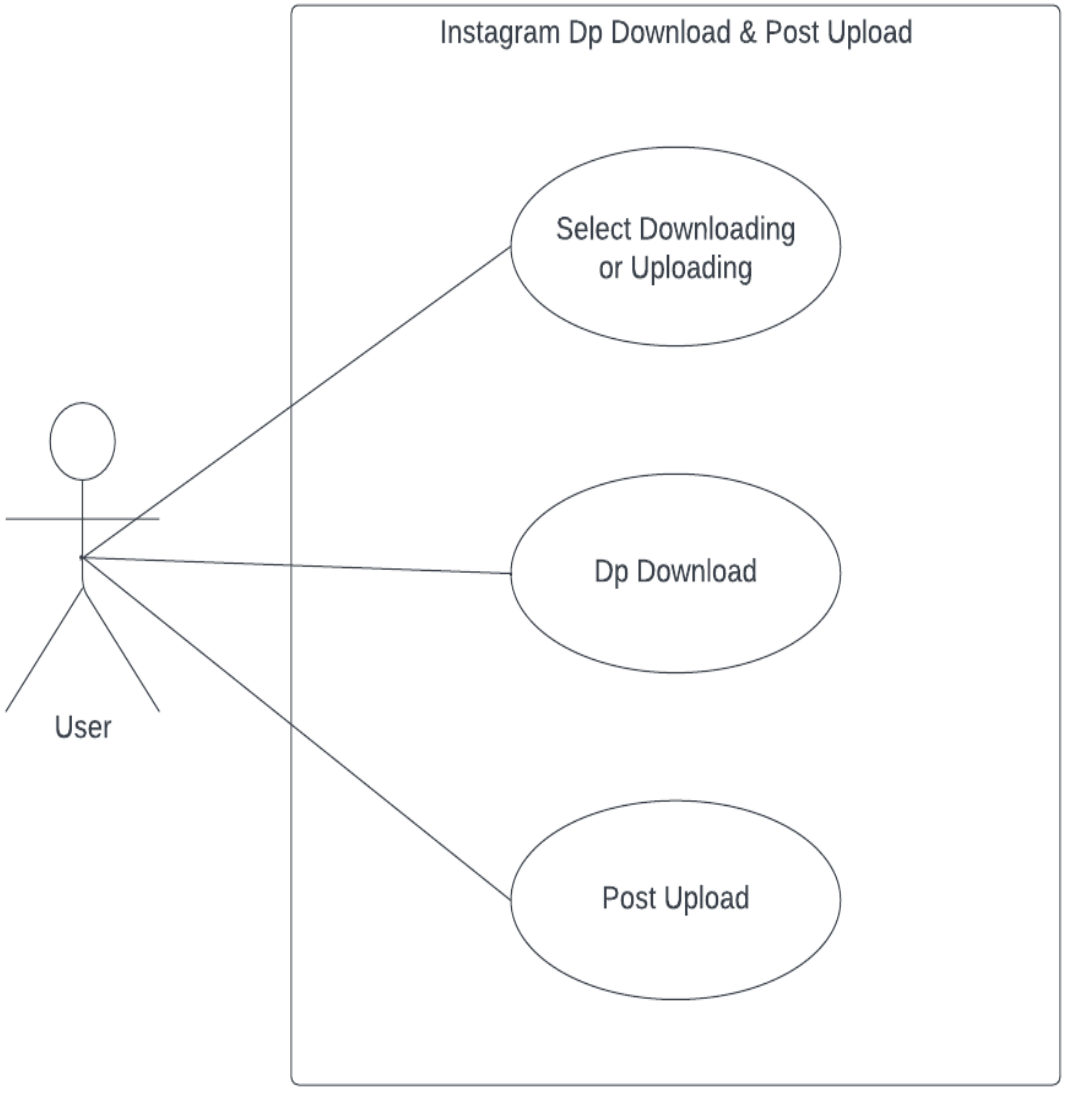
2.6 Assumptions

The main objective is to implement the use cases as previously mentioned (2.2 problem statement) for downloading the dp and uploading posts.

3. Design Details

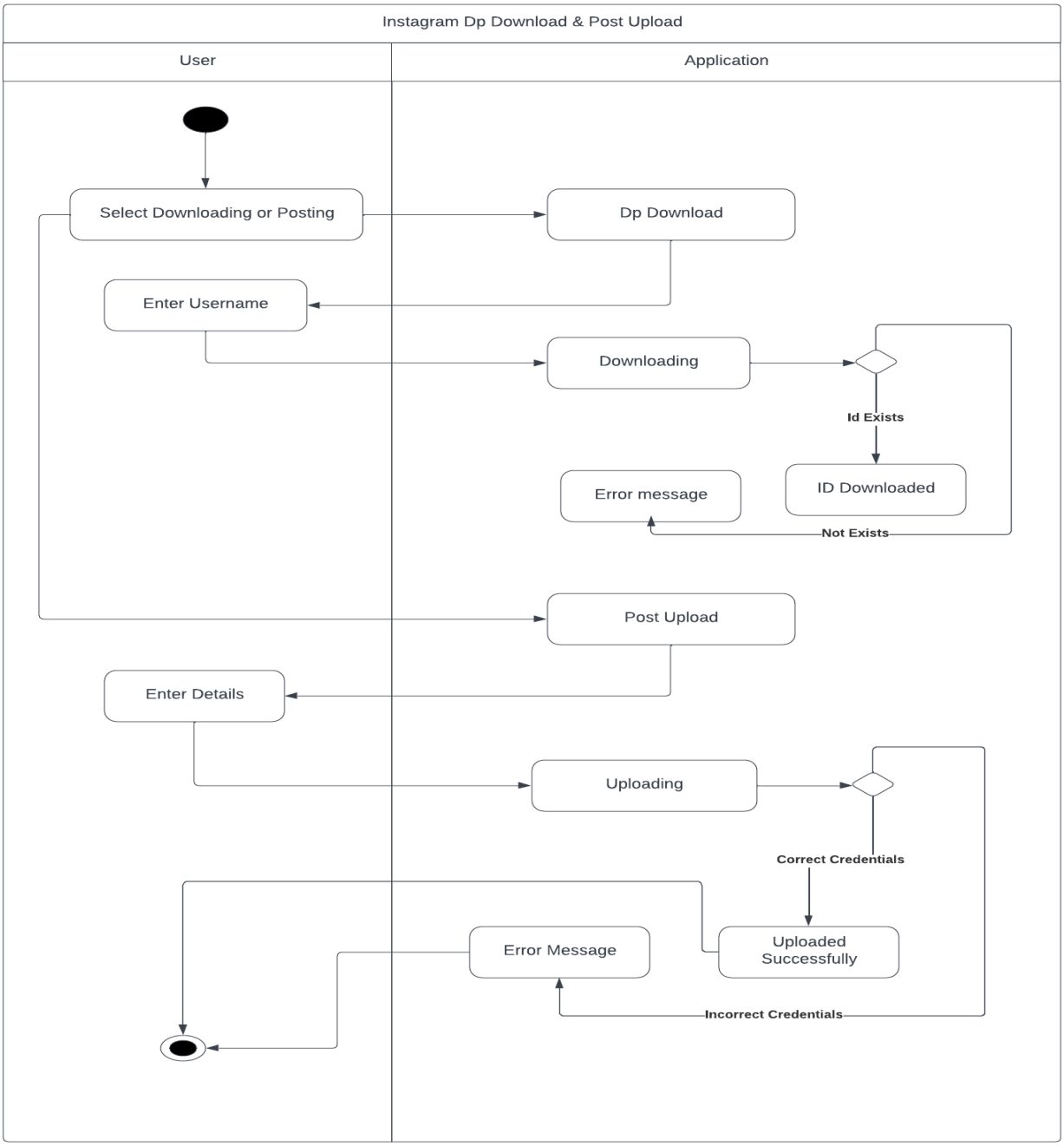
3.1 Use case Diagram

A use case diagram is a graphical depiction of a user's possible interactions with a system.



3.2 Activity Diagram

Activity diagrams are graphical representations of workflows of stepwise activities and actions.



3.3 Event Log

The system should be able to log every event so that the user will be able to know what processes are running internally.

Initial Step-by-Step Description:

1) The system identifies at what step logging is required.
2) The system should be able to log each and every system flow.
3) Developers can choose logging methods.
4) System should not hang even after using so many logging. Logging just because we can easily debug issues, so logging is mandatory to do.

3.4 Error Handling

Errors should be encountered, an explanation will be displayed as what went wrong? An error will be defined as anything that falls outside the normal and intended usage.

4. Performance

Instagram dp download and post uploader app is used for only two purposes i.e downloading and uploading. It will not mislead the security policy of instagram.

4.1 Reusability

The code written and the components used should have the ability to be reused with no problems.

4.2 Application Compatibility

The different components of this app will be using kivy Framework as an GUI. Each component will have its own task to perform, and it is the job of the python to ensure proper transfer of information.

4.3 Resource Utilization

When any task is performed, it will likely use all the processing power available until that function is finished.

4.4 KPIs (Key performance Indicators)

1. Key indicators displayed the summary of the whole app.
2. Using the instagram api, login can be done and the post gets uploaded.
3. Using some of the python library dp can be downloaded.

5. Conclusion

The designed App will be able to download the dp of any user whether the user is blocked or not and posts can also be uploaded to their personal account.

6. Reference

➔ https://www.youtube.com/watch?v=RYF73CKGV6c&list=PLhTjy8cBISEpobkPwLm71p5YNBzPH9m9V
➔ https://kivy.org/doc/stable/
➔ https://kivymd.readthedocs.io/en/1.1.1/