2023

OPEN ENDED LAB PROJECT REPORT

PROJECT TITLE: <u>EDUCATIONAL APP (E-Book)</u>

GROUP MEMBERS:

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PROBLEM DESCRIPTION:

We were assigned with the task of implementing a JAVA based app on Android Studio. The requirement consisted of a fire-base implementation supported with something that could associate **educational purposes.**

So, the designed app basically drives the user through the first page which contains the existing PDF files to be read. In addition, the design also comprises of a feature which can add further PDF files from the device's storage.

DISTINGUISHING FEATURES OF THE APP:

- At the main window, the app shows options to upload new PDF document stored in the device's main memory.
- The app also pops up an option for reading out the PDF documents from existing files.
- The user is provided the facility to work as an administrator as well .Thus, the user can add any file if he\she wants.
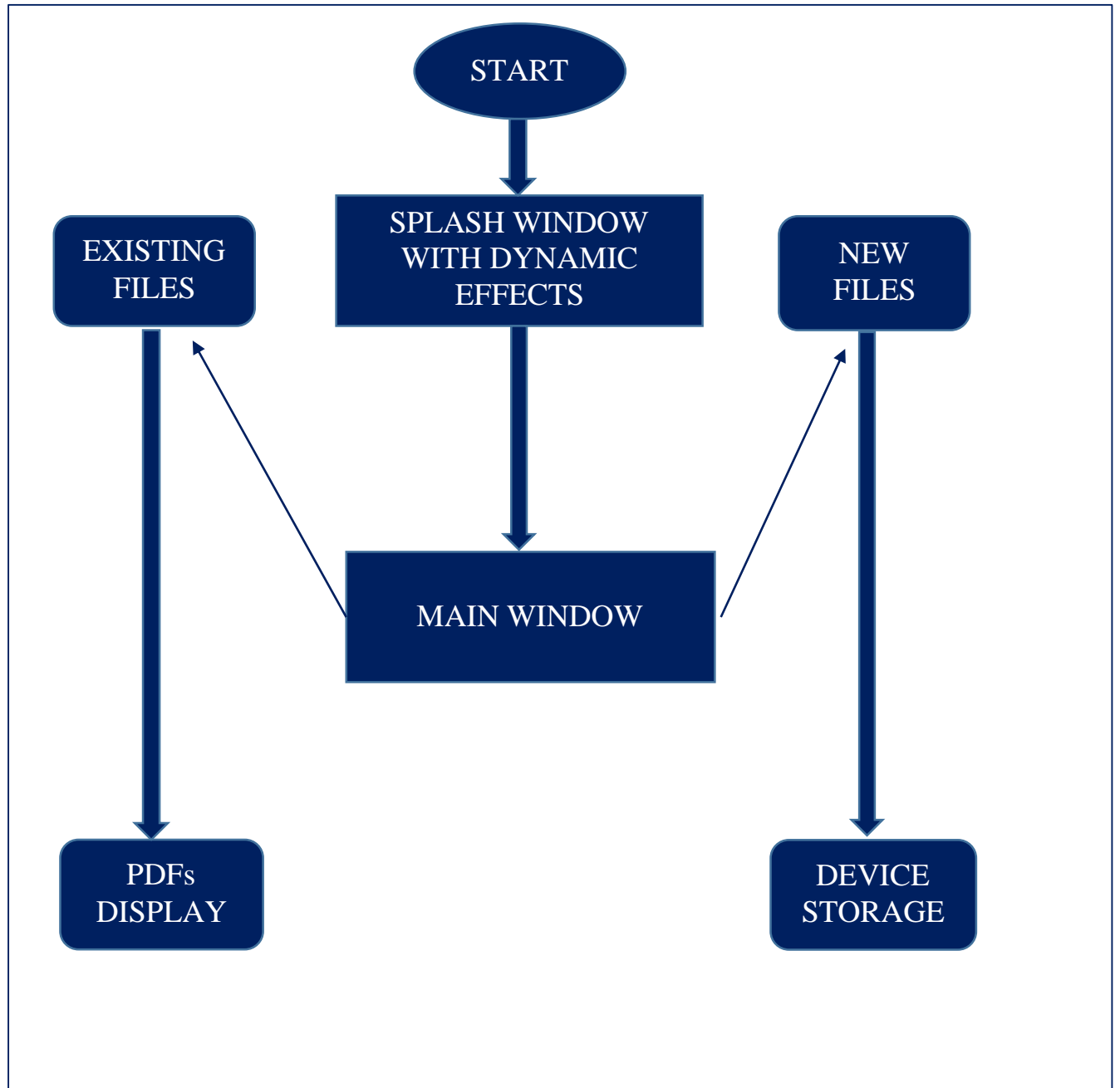
MODULES:

- The app is integrated with a firebase for storage purposes.
- The Java code contains various functions for liking and disliking the files, commenting on the file, adding the file and for the initial user experience.

FUTURE EXPANSIONS:

- The app can easily be integrated with more visuals and AI voice over tools.
- The app, when programmed further, can also contain mp4 format.
- The app can also have multiple segments for multiple account holders for privacy concerns.
- The app can also be expanded by means of adding the feature of scanning the current pictures and then it can also merge those all pictures into a newly created PDF.

FLOW OF PROGRAM:

```
                      ┌─────────┐
                      │  START  │
                      └─────────┘
                           │
                           ▼
┌──────────────┐    ┌──────────────────┐    ┌──────────┐
│  EXISTING    │    │  SPLASH WINDOW   │    │   NEW    │
│   FILES      │    │  WITH DYNAMIC    │    │  FILES   │
│              │    │     EFFECTS      │    │          │
└──────────────┘    └──────────────────┘    └──────────┘
       │        ↖           │          ↗          │
       │          ╲         ▼        ╱            │
       │        ┌──────────────────────┐          │
       │        │    MAIN WINDOW       │          │
       │        └──────────────────────┘          │
       ▼                                          ▼
┌──────────────┐                          ┌──────────────┐
│    PDFs      │                          │   DEVICE     │
│   DISPLAY    │                          │  STORAGE     │
└──────────────┘                          └──────────────┘
```
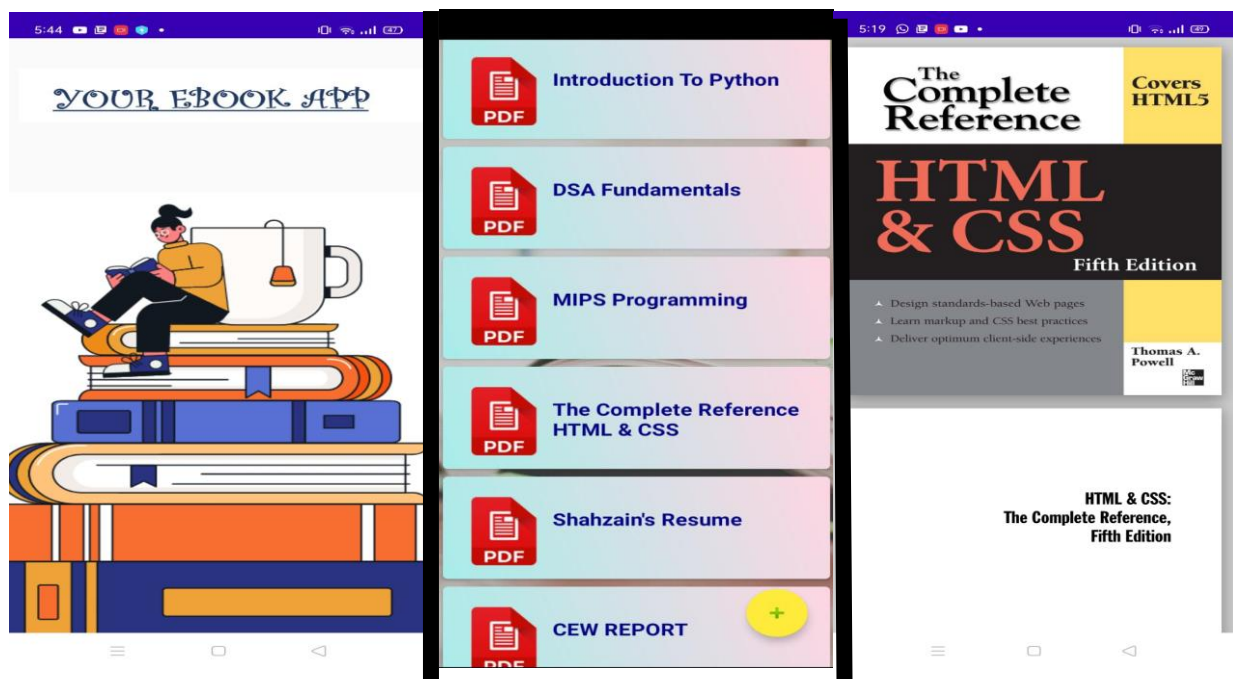
MOST CHALLENGING PART WHILE WORKING ON THE PROJECT:

Overall working experience on this project was really good. No doubt implementation of firebase gave us a little tough time but we went through it by working hard and continuous try.
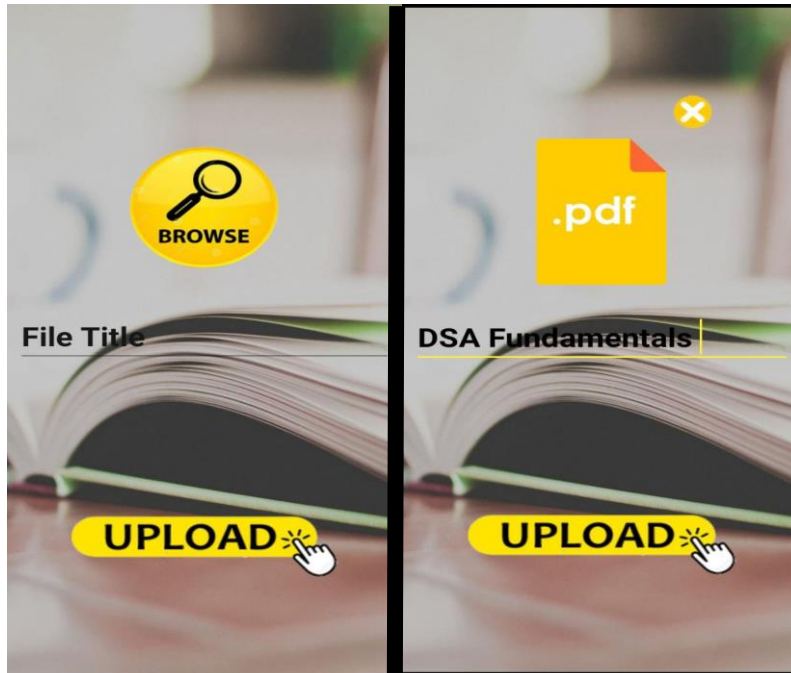
ANY NEW THING LEARN WHILE WORKING ON THIS PROJECT:

The project helped us to get more familiar with java and Android Studio. We have learnt to handle different errors and bugs that were arise while working on this project. Moreover our concepts regarding java basics and firebase becomes better.

SAMPLE TEST RUNS:

1 Showing Splash Screen and the existing files list

2Uploading files options