A

Mini Project

On

ANDROID APPLICATION: MYNOTES APP.

(Submitted in partial fulfillment of the requirements for the award of Degree)

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE AND ENGINEERING

BY

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CMR TECHNICAL CAMPUS

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2017-2021

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the project entitled "**ANDROID APPLICATION: MYNOTES APP**" being submitted by **Ankit Palahania (177R1A05K2), K.Shravya (177R1A05L4) & Lingala Achyuth Reddy (177R1A05L5)** in partial fulfillment of the requirements for the award of the degree of B.Tech in Computer Science and Engineering of the Jawaharlal Nehru Technological University Hyderabad, during the year 2020-2021. It is certified that they have completed the project satisfactorily.

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ACKNOWLEDGEMENT

Apart from the efforts of us, the success of any project depends largely on the encouragement and guidelines of many others. We take this opportunity to express our gratitude to the people who have been instrumental in the successful completion of this project. We take this opportunity to express my profound gratitude and deep regard to my guide **Mr. B. Ramji,** Assistant Professor for his exemplary guidance, monitoring and constant encouragement throughout the project work. The blessing, help and guidance given by him shall carry us a long way in the journey of life on which we are about to embark.

We also take this opportunity to express a deep sense of gratitude to Project Review Committee (PRC) Coordinators: **Dr. B.Krishna, Mr. B.Ramji** and **Mr. J.Narasimha Rao** for their cordial support, valuable information and guidance, which helped us in completing this task through various stages.

We are also thankful to the Head of the Department **Dr. K.Srujan Raju** for providing excellent infrastructure and a nice atmosphere for completing this project successfully.

We are obliged to our Director **Dr. A.Raji Reddy** for being cooperative throughout the course of this project. We would like to express our sincere gratitude to our Chairman Sri. **Ch. Gopal Reddy** for his encouragement throughout the course of this project

The guidance and support received from all the members of **CMR TECHNICAL CAMPUS** who contributed and who are contributing to this project, was vital for the success of the project. We are grateful for their constant support and help.

Finally, we would like to take this opportunity thank our family for their constant encouragement without which this assignment would not be possible. We sincerely acknowledge and thank all those who gave support directly and indirectly in completion of this project.

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ABSTRACT

Android is an open and free operating system based on Linux, which is mainly used for mobile terminals, such as smartphones and panel computers. The android apps which are present in the phone are of apk format (android package kit) which is compiled with Android Studio. Here we used Android Studio as it is the official integrated development environment for Google's Android operating system, built on JetBrains IntelliJ IDEA software and designed specifically for Android development. Our approach here is to create an android notes app named as “MyNotes” in which a user can create day to day notes and can attach links and photos so that the user can work productively. The app interface is based on dark theme which enhances the user interface and makes the app very minimalist and user interactive. The small size and less complex algorithm enable this app to run seamlessly in any device (low end to high end). Hence, this app focuses in enabling the productivity of the user.

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1. INTRODUCTION

1. INTRODUCTION

1.1 PROJECT SCOPE

The project titled as “MyNotes Android Application” is an Android Application. This android app provides facility for taking down the notes, daily tasks, goals, classwork or any other type of note along with that a user can attach important web links and images. The app is highly secure and maintains privacy of the user. This app enhances the productivity of the user and provides seamless and interactive user interface.

1.2 PROJECT PURPOSE

This app has been developed for the users who are focused on productivity and uses their smartphone to take their daily tasks, commitments, goals, important web links and images or any other type of notes. So, this app is developed for every kind of user base but especially for students so that they can save their important notes in their smartphones. We have enhanced our applications working so that it works well in low end smartphone as well in high end smartphone.

1.3 PROJECT FEATURES

The main features of this project are that the minimal and dark theme interface is very interactive. The size of the app is less than 10 Mb and due to its size and efficient coding approach, the RAM consumption and power consumption is very less so that it van work smoothly and snappy in any type of android smartphone. This app also includes attaching of web links and images which enhances the notes taking capability along with that the color and time feature is added to it so that user can make their notes based on their priorities. The security and privacy of every user is maintained.

2. SYSTEM ANALYSIS

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SYSTEM ANALYSIS

System Analysis is the important phase in the Application development process. The application is studied to the minute details and analyzed. The system analyst plays an important role of an interrogator and dwells deep into the working of the present system. In analysis, a detailed study of these operations performed by the system and their relationships within and outside the system is done. A key question considered here is, “what must be done to solve the problem?” The system is viewed as a whole and the inputs to the system are identified. Once analysis is completed the analyst has a firm understanding of what is to be done.

2.1 PROBLEM DEFINITION

The Notes taking android applications are basically made for the users who use their smartphones to make notes rather than using the pen and paper. A note is basically a piece of text of any important information that the user writes down in the paper but since now most of the users are smartphone users so they prefer doing this in their smartphones only. Most of these applications have some bugs or have privacy issues whereas some apps require continuous network connection to work properly and some apps take huge space in the smartphones ultimately affecting the performance of the smartphone. Hence our approach was to analyze all these and to overcome all problems in our MyNotes app.

2.2 EXISTING SYSTEM

The existing applications are good enough but sometimes they are not supported in all devices and some takes huge storage space due to which sometimes it becomes harder for users to use these apps efficiently. There are many notes app which requires Gmail or other accounts then only the user can use these apps which make the app prohibited for the user base that don’t have any Gmail accounts. Some apps are very basic and don’t have extra features and good user interface while some apps are very complex to use and compromises the user privacy. Hence our app will overcome these issues.

2.2.1 LIMITATIONS OF EXISTING SYSTEM

- There are cases where these apps use unknown sources of the databases to store the information of user's account due to which the privacy is compromised sometimes.
- Some apps consume more ram and power due to their large size and complex algorithms and sometimes need internet connectivity for working properly.
- Generally there are some cases when apps requires Gmail / Facebook / any other platform account to login into the app due to this many users who don't have the accounts on these platform are unable to use these types of apps.
- Internet connection is required for some apps to function properly and there are cases where the app throws unnecessary ads in between the app use.

2.3 PROPOSED SYSTEM

In this project, we are creating an android application named as "MyNotes" which is basically used for taking notes in mobile. In this app a user can take notes in textual format, can pin images for better understanding of notes and can attach some links as well so that the notes will become clean, efficient and easy to use. This app focuses on all types of user base who are more focused on productivity and uses there mobile device more frequently. The minimal look and dark theme of this app along with easy to use user interface enables user to use this app efficiently and effectively. This app uses less complex algorithms due to which this app takes very less space, works faster and RAM usage is also minimized. Here privacy of the users is also maintained as we use room database layer on top of SQLlite database to store the notes of users in database and also there is no need to login in any platform to use this app. So basically it overcomes the issue of existing apps and provides a very minimal and interactive user experience to the users. Hence this app can be used by every user in their daily life to take down their basic commitments, plans, list of items, things to do, daily notes or any other tasks in this app.

2.3.1 ADVANTAGES OF THE PROPOSED SYSTEM

The application is very simple in design and to implement. The system requires very less smartphone resources and the application will work in almost all android

smartphones. It has got following features.

- Minimal and dark theme makes the user interface of the app very refreshing and interactive and works very smoothly especially in amoled display screens.
- User can use this app daily to take down daily tasks, notes, commitments, thing to do, list of items or any other daily tasks without any lag or network connection.
- Suitable to every user who uses their android mobile devices frequently and takes down their notes in their devices. Hence for them this can be good alternative. So the paperless work environment can me created.
- Small in size, hence power and RAM consumption is very less.
- Since no login is required to use this app so no network connectivity is required. And unlike other existing app here we don't use any adware/advertisements.
- The data storage is secure and user privacy is maintained properly as per the Google play store terms and conditions.
- The user can search the respective notes among all the notes very easily using title or subtitle of the notes and the searching process is very fast.
- As per the note creation the notes are sorted accordingly in the home page.

2.4 FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed android application is to be carried out. This is to ensure that the proposed application is not a burden to the company.

Three key considerations involved in the feasibility analysis are

- Economic Feasibility
- Technical Feasibility
- Social Feasibility

2.4.1 ECONOMIC FEASIBILITY

The developing system must be justified by cost and benefit. Criteria to ensure that effort is concentrated on project, which will give best, return at the earliest. One of the factors, which affect the development of a new system, is the cost it would require.

The following are some of the important financial questions asked during preliminary investigation:

- The costs conduct a full application analysis.
- The cost of the hardware and software.
- The benefits in the form of reduced costs or fewer costly errors.

Since this android application is developed as part of project work, there is no manual cost to spend for the proposed system. Also all the resources are already available, it is made with high precision that this app can be published in Google play store as well.

2.4.2 TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any android application developed must not have a high demand on the available technical resources. The developed android application must have a modest requirement, as only minimal or null changes are required for implementing this system.

2.4.3 BEHAVIORAL FEASIBILITY

This includes the following questions:

- Is there sufficient support for the users?
- Will the proposed system cause harm?
- Will the privacy of every user is maintained?

The project would be beneficial because it satisfies the objectives when developed and installed. All behavioral aspects are considered carefully and conclude that the project is behaviorally feasible.

2.5 HARDWARE & SOFTWARE REQUIREMENTS

2.5.1 HARDWARE REQUIREMENTS:

Hardware interfaces specifies the logical characteristics of each interface between the software product and the hardware components of the system. The following are some hardware requirements.

- PROCESSOR: minimum Intel i3-5th gen,Clocked@2.90Ghz.
- SPACE ON HARD DISK: minimum 2GB space.
- RAM: minimum 4GB

2.5.2 SOFTWARE REQUIREMENTS:

Software Requirements specifies the logical characteristics of each interface and software components of the system. The following are some software requirements:

- Operating System : Windows 7/8/10
- Languages : Java, XML
- Front End : XML
- Database : Room Database layer on top of SQLite Database.
- Backend : Java
- IDE : Android Studio
- Icon Design : Adobe XD

3. ARCHITECHTURE

3. ARCHITECTURE

3.1 PROJECT ARCITECTURE

This project architecture describes about how a data will be stored in database and how the user will be interacting with the MyNotes app.

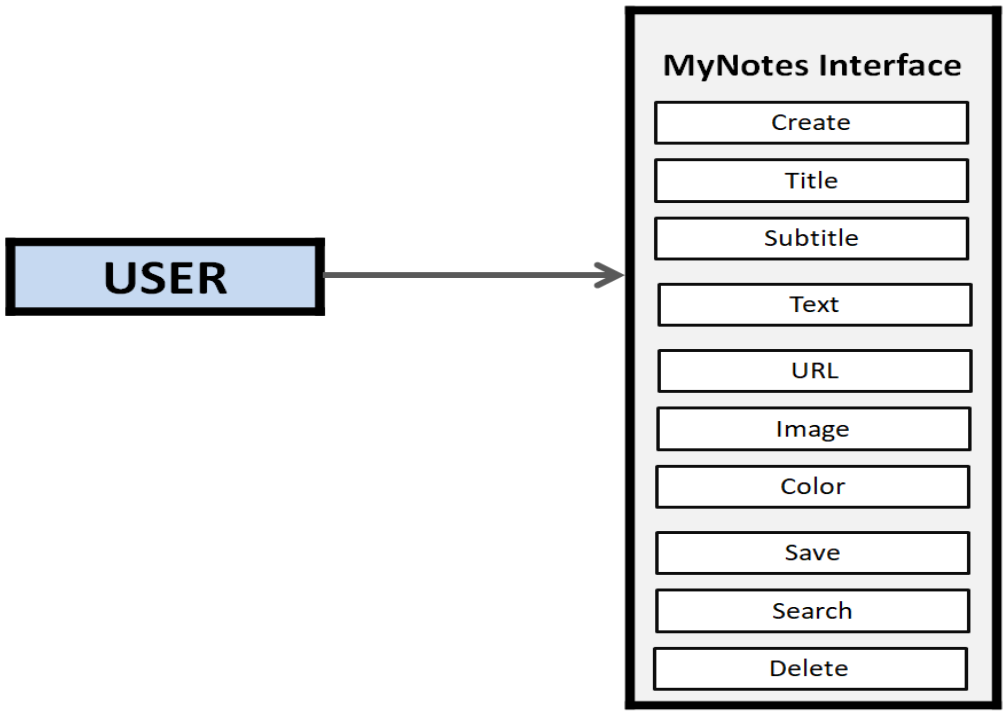


Fig. 3.1 Project Architecture of MyNotes Android Application

3.2 MODULES DESCRIPTION

Modules

- User

3.2.1 USER

- Create Note: This module helps the user to create the note by clicking on the plus button.
- Enter Title: This module helps the user to enter the title of any note.
- Enter Subtitle: This module helps the user to enter the subtitle of any note.
- Timestamp: This module helps the user when the note is created as the time of note creation is saved.
- Enter the Text: This module helps the user to enter any type of text including emoticons in the text area so that the user can take classwork, list of items, daily goals or any other productivity note.
- Attach the URL: This module enables the user to add any URL in the note so that the note's functionality can be enhanced and then the user can use this link for the respective work.
- Attach the Image: This module enables the user to add any image from the device media to the note and before accessing the media the app asks for the permission from the user maintain the full privacy.
- Add Color: This module enables the user to color the note based on the priority of the note like red color for high priority note.
- Save: This module enables the user to save the note.
- Search Note: This module enables the user to search the note at the homepage using the Title or Subtitles name.
- Delete: This module enables the user to delete the note when the note is no longer needed by the user.

3.3 USE CASE DIAGRAM

In the use case diagram we have basically one actor who is the user of the app interacting with user interface of MyNotes android application as shown below:

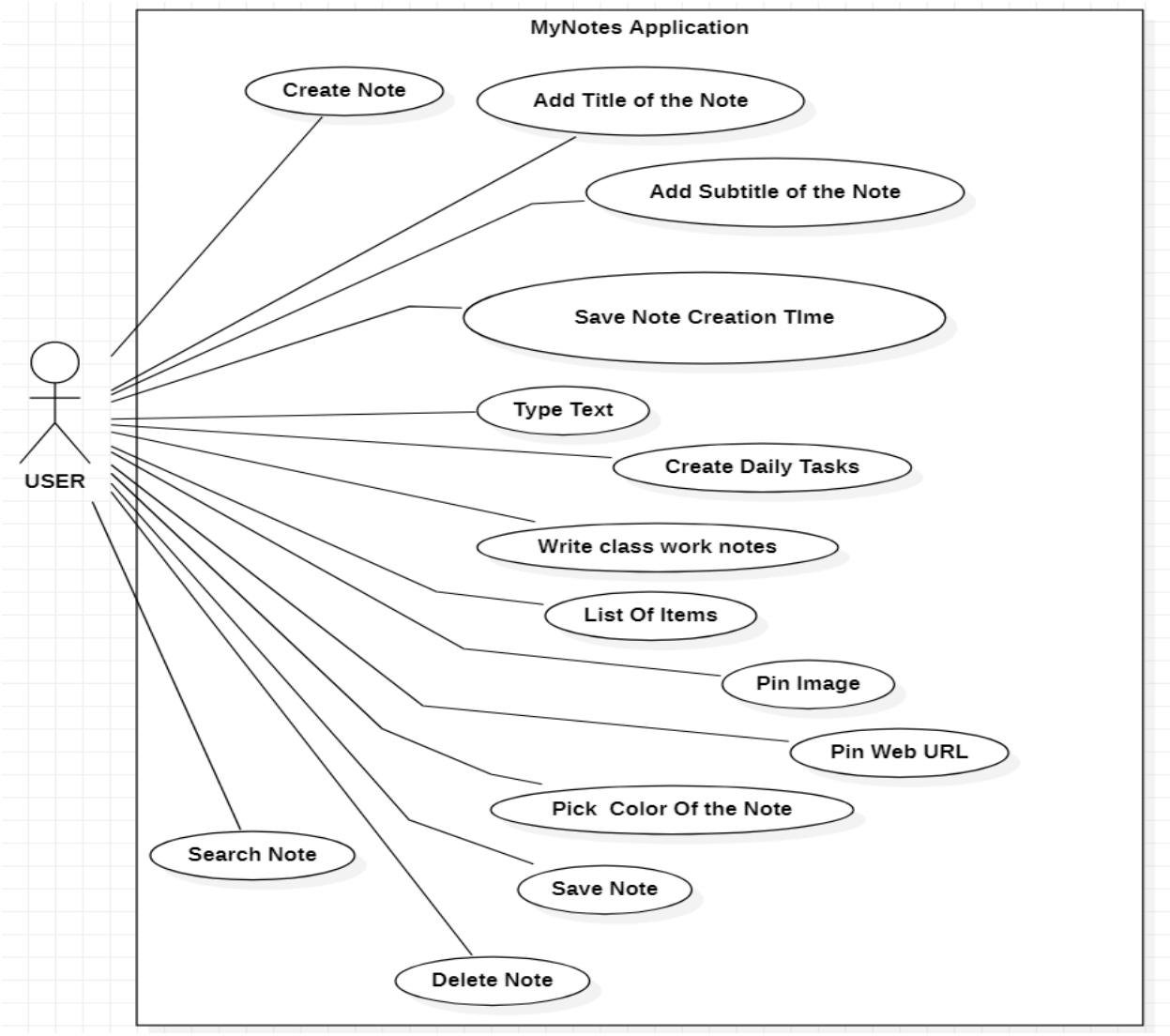


Fig. 3.3 Use Case Diagram for User for MyNotes Android Application

3.4 CLASS DIAGRAM

Class Diagram is a collection of classes, interfaces and objects and the class diagram of MyNotes android application is shown below:

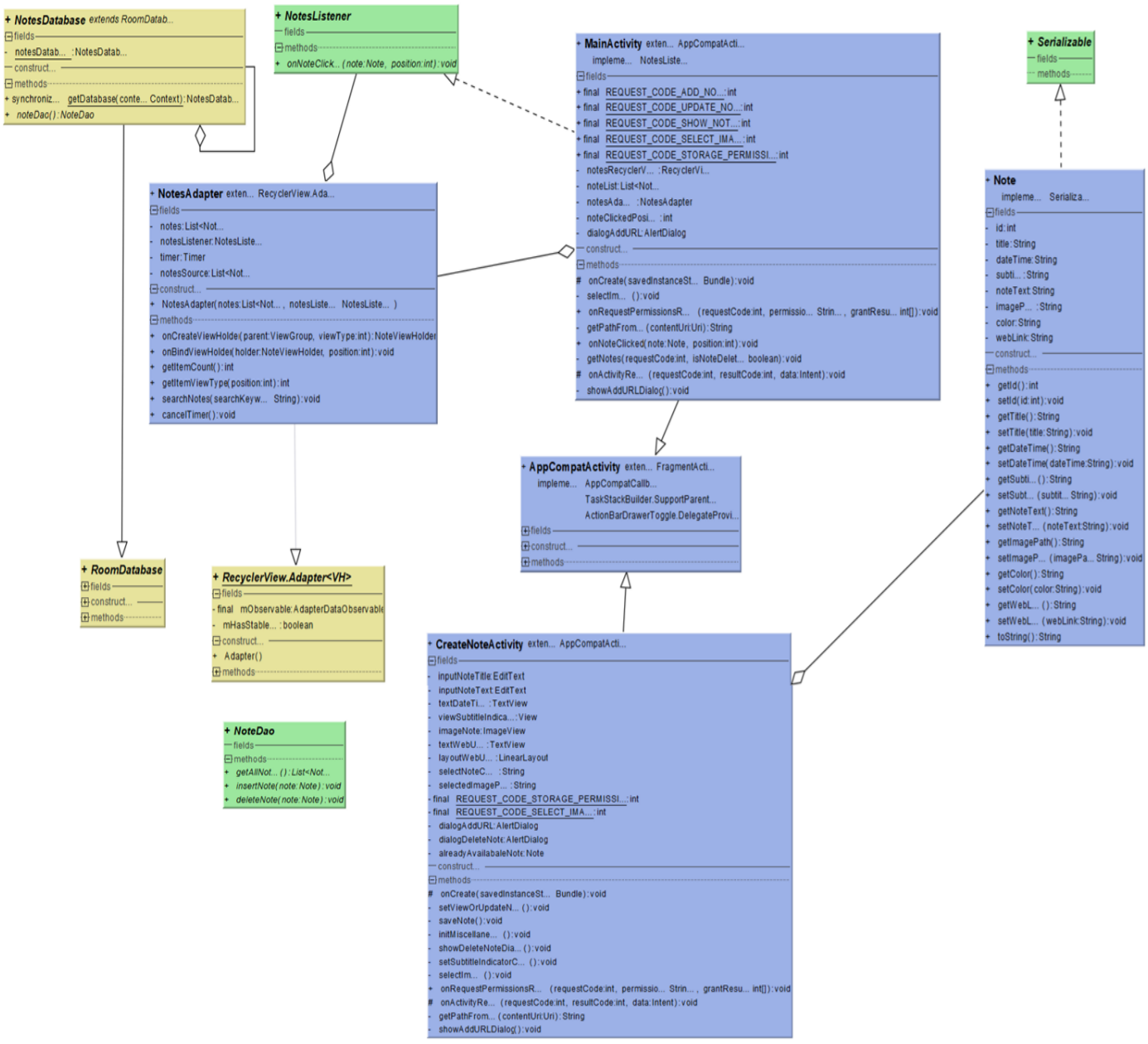


Fig. 3.4 Class Diagram for MyNotes Android Application

3.5 SEQUENCE DIAGRAM

The sequence diagram shows the interaction of the user with the MyNotes android application.

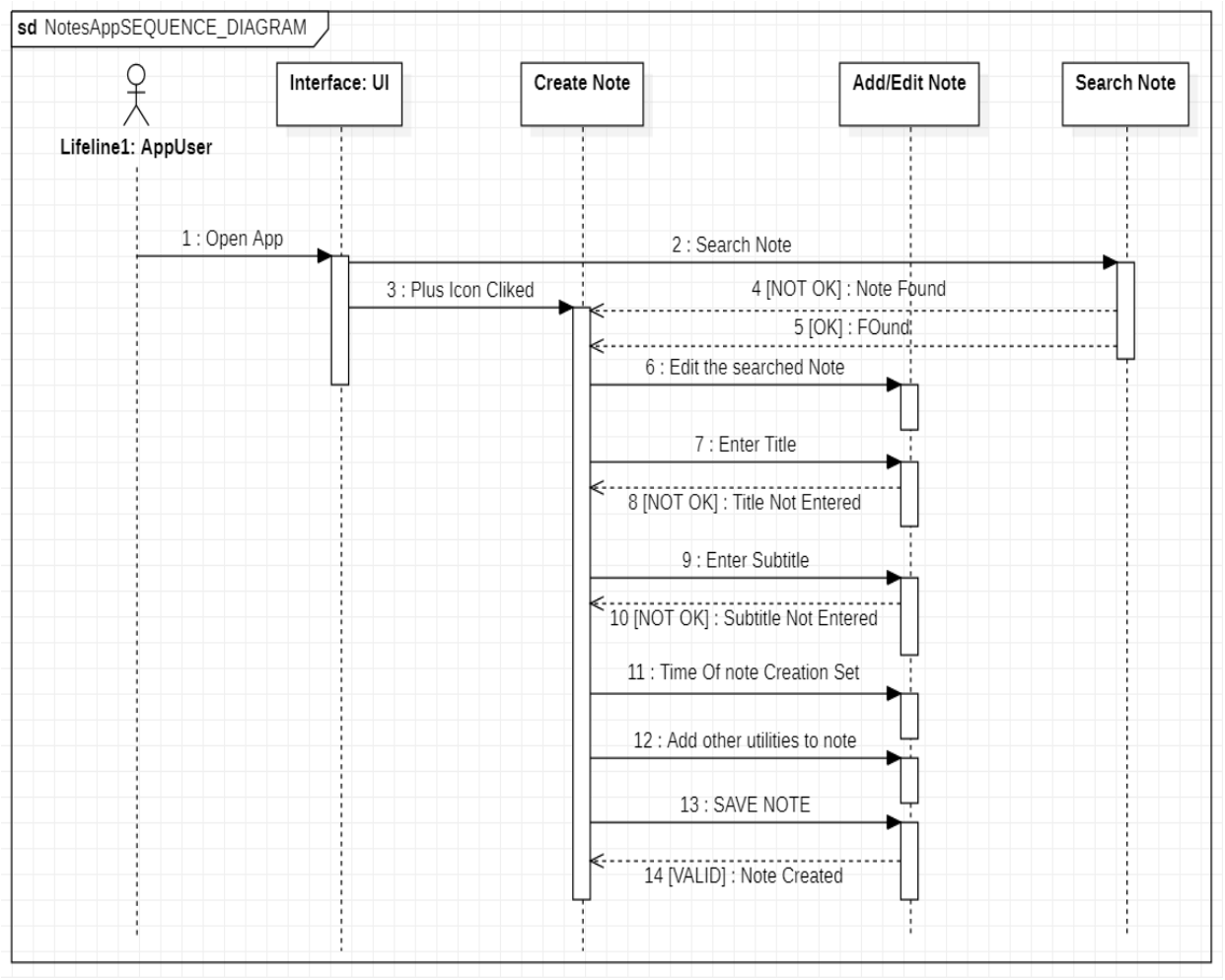


Fig.3.5 Sequence Diagram for MyNotes Android Application

3.6 ACTIVITY DIAGRAM

It describes about flow of activity states. Here how the user will be interacting with the MyNotes application is shown:

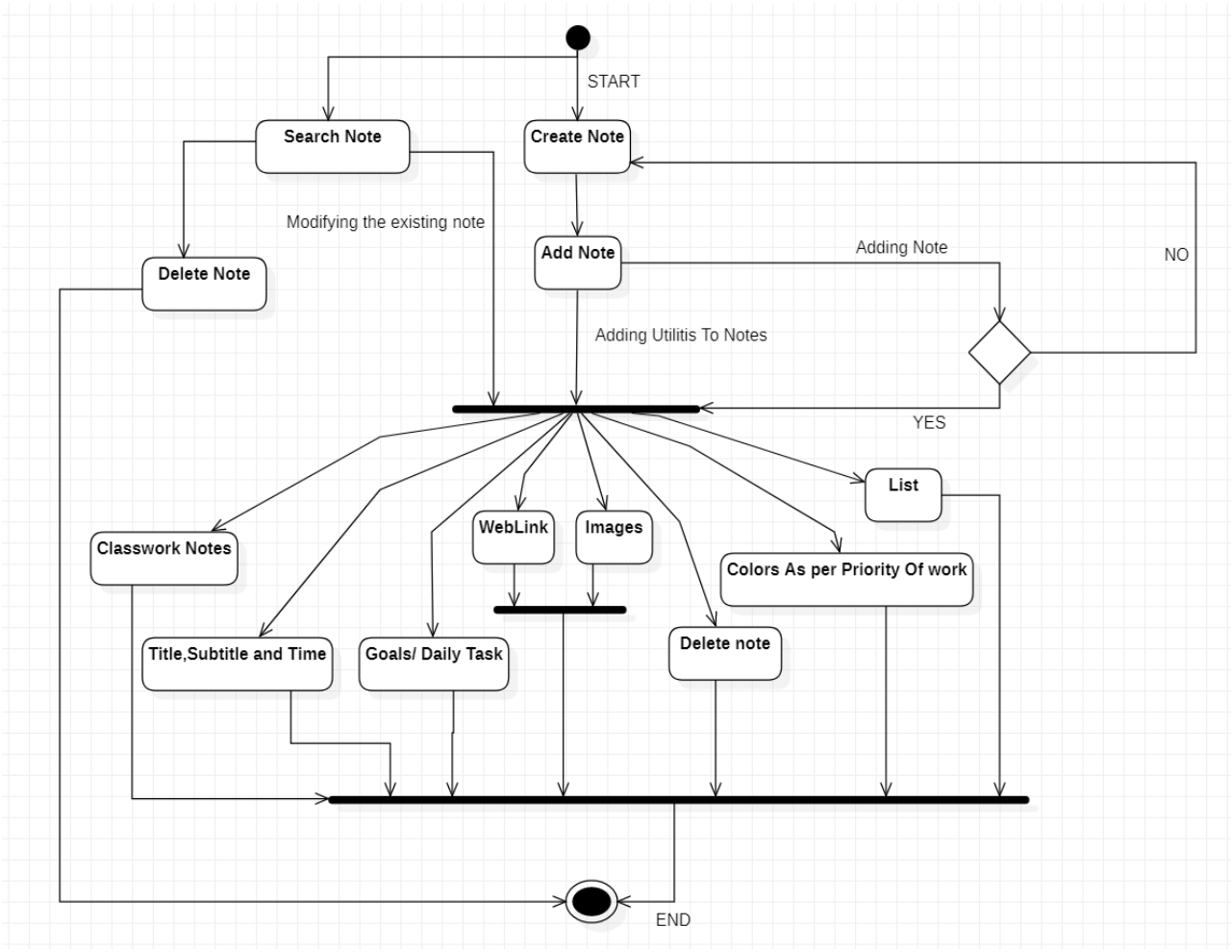


Fig. 3.6 Activity Diagram for MyNotes Android Application

4. IMPLEMENTATION

4. IMPLEMENTATION

4.1 SAMPLE CODE

MainActivity.java:

```
package com.example.cleannotes.activities;
import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;
import androidx.recyclerview.widget.RecyclerView;
import androidx.recyclerview.widget.StaggeredGridLayoutManager;

import android.Manifest;
import android.annotation.SuppressLint;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.database.Cursor;
import android.graphics.drawable.ColorDrawable;
import android.net.Uri;
import android.os.AsyncTask;
import android.os.Bundle;
//import android.util.Log;
import android.provider.MediaStore;
import android.text.Editable;
import android.text.TextWatcher;
import android.util.Patterns;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.Toast;

import com.example.cleannotes.R;

import com.example.cleannotes.adapters.NotesAdapter;
import com.example.cleannotes.database.NotesDatabase;
import com.example.cleannotes.entities.Note;
import com.example.cleannotes.listeners.NotesListener;

import java.util.ArrayList;
import java.util.List;

public class MainActivity extends AppCompatActivity implements NotesListener
{
      public static final int REQUEST_CODE_ADD_NOTE=1;  //USED TO ADD A NOTE
      public static final int REQUEST_CODE_UPDATE_NOTE=2; //USED TO UPDATE THE NOTE
      public static final int REQUEST_CODE_SHOW_NOTES =3; //USED TO DISPLAY ALL NOTES
      public static final int REQUEST_CODE_SELECT_IMAGE =4;
      public static final int REQUEST_CODE_STORAGE_PERMISSION=5;

      private RecyclerView notesRecyclerView;
      private List<Note> noteList;
      private NotesAdapter notesAdapter;

      private int noteClickedPosition = -1;

      private AlertDialog dialogAddURL;

   @Override
   protected void onCreate(@Nullable Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
```

```
ImageView imageAddNoteMain = findViewById(R.id.imageAddNoteMain);
imageAddNoteMain.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        startActivityForResult(
                new Intent(getApplicationContext(), CreateNoteActivity.class), REQUEST_CODE_ADD_NOTE
        );
    }
});

notesRecyclerView = findViewById(R.id.notesRecyclerView);
notesRecyclerView.setLayoutManager(
        new StaggeredGridLayoutManager(2,StaggeredGridLayoutManager.VERTICAL)
);

noteList = new ArrayList<>();
notesAdapter = new NotesAdapter(noteList, this);
notesRecyclerView.setAdapter(notesAdapter);

getNotes(REQUEST_CODE_SHOW_NOTES, false);


EditText inputSearch = findViewById(R.id.inputSearch);
inputSearch.addTextChangedListener(new TextWatcher() {
    @Override
    public void beforeTextChanged(CharSequence s, int start, int count, int after) {

    }

    @Override
    public void onTextChanged(CharSequence s, int start, int before, int count) {
        notesAdapter.cancelTimer();
    }

    @Override
    public void afterTextChanged(Editable s) {
        if(noteList.size()!=0)
        {
            notesAdapter.searchNotes(s.toString());
        }
    }
});


findViewById(R.id.imageAddNote).setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        startActivityForResult(
                new Intent(getApplicationContext(), CreateNoteActivity.class), REQUEST_CODE_ADD_NOTE
        );
    }
});

findViewById(R.id.imageAddImage).setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if(ContextCompat.checkSelfPermission(
                getApplicationContext() , Manifest.permission.READ_EXTERNAL_STORAGE
        )  != PackageManager.PERMISSION_GRANTED)
        {
            ActivityCompat.requestPermissions(
                    MainActivity.this,
                    new String[] {Manifest.permission.READ_EXTERNAL_STORAGE},
                    REQUEST_CODE_STORAGE_PERMISSION
            );
        }
        else
        {
            selectImage();
        }
    }
```

```
    });


    findViewById(R.id.imageAddWebLink).setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            showAddURLDialog();
        }
    });


}


private void selectImage()
{
    Intent intent=new Intent(Intent.ACTION_PICK, MediaStore.Images.Media.EXTERNAL_CONTENT_URI);
    if(intent.resolveActivity(getPackageManager())!=null)
    {
        startActivityForResult(intent,REQUEST_CODE_SELECT_IMAGE);
    }
}

@Override
public void onRequestPermissionsResult(int requestCode, @NonNull String[] permissions, @NonNull int[] grantResults) {
    super.onRequestPermissionsResult(requestCode, permissions, grantResults);
    if(requestCode == REQUEST_CODE_STORAGE_PERMISSION && grantResults.length > 0)
    {
        if(grantResults[0] == PackageManager.PERMISSION_GRANTED)
        {
            selectImage();
        }
        else
        {
            Toast.makeText(this,"Permission Denied",Toast.LENGTH_SHORT).show();
        }
    }
}

private String getPathFromUri(Uri contentUri)
{
    String filePath;
    Cursor cursor=getContentResolver()
            .query(contentUri,null,null,null,null);
    if(cursor == null)
    {
        filePath = contentUri.getPath();
    }
    else
    {
        cursor.moveToFirst();
        int index= cursor.getColumnIndex("_data");
        filePath = cursor.getString(index);
        cursor.close();
    }
    return  filePath;
}



@Override
public void onNoteClicked(Note note, int position)
{
        noteClickedPosition = position;
        Intent intent= new Intent(getApplicationContext(), CreateNoteActivity.class);
        intent.putExtra("isViewOrUpdate",true);
        intent.putExtra("note",note);
        startActivityForResult(intent,REQUEST_CODE_UPDATE_NOTE);
}
```

```
private void getNotes(final int requestCode, final boolean isNoteDeleted)
{
   @SuppressLint("StaticFieldLeak")
   class GetNotesTask extends AsyncTask<Void, Void, List<Note>>
   {

      @Override
      protected List<Note> doInBackground(Void... voids) {
         return NotesDatabase.getDatabase(getApplicationContext()).noteDao().getAllNotes();
      }

      @Override
      protected void onPostExecute(List<Note> notes) {
         super.onPostExecute(notes);

         if(requestCode == REQUEST_CODE_SHOW_NOTES)
         {
            noteList.addAll(notes);
            notesAdapter.notifyDataSetChanged();
         }
         else if(requestCode == REQUEST_CODE_ADD_NOTE)
         {
            noteList.add(0,notes.get(0));
            notesAdapter.notifyItemInserted(0);
            notesRecyclerView.smoothScrollToPosition(0);
         }
         else if(requestCode == REQUEST_CODE_UPDATE_NOTE)
         {
            noteList.remove(noteClickedPosition);


            if(isNoteDeleted)
            {
               notesAdapter.notifyItemRemoved(noteClickedPosition);
            }
            else
            {
               noteList.add(noteClickedPosition,notes.get(noteClickedPosition));
               notesAdapter.notifyItemChanged(noteClickedPosition);
            }
         }

      }

   }

   new GetNotesTask().execute();
}

@Override
protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
   super.onActivityResult(requestCode, resultCode, data);
   if(requestCode == REQUEST_CODE_ADD_NOTE && resultCode == RESULT_OK)
   {
      getNotes(REQUEST_CODE_ADD_NOTE, false);
   }
   else if(requestCode == REQUEST_CODE_UPDATE_NOTE && resultCode == RESULT_OK)
   {
      if(data != null)
      {
         getNotes(REQUEST_CODE_UPDATE_NOTE,data.getBooleanExtra("isNoteDeleted",false));
      }
   }
   else if(requestCode == REQUEST_CODE_SELECT_IMAGE && resultCode == RESULT_OK)
   {
      if(data != null)
      {
         Uri selectedImageUri = data.getData();
         if(selectedImageUri !=null)
         {
            try {
```

```
                String selectedImagePath = getPathFromUri(selectedImageUri);
                Intent intent = new Intent(getApplicationContext(), CreateNoteActivity.class);
                intent.putExtra("isFromQuickActions",true);
                intent.putExtra("quickActionType","image");
                intent.putExtra("imagePath",selectedImagePath);
                startActivityForResult(intent,REQUEST_CODE_ADD_NOTE);
            }
            catch ( Exception exception)
            {
                Toast.makeText(this,exception.getMessage(),Toast.LENGTH_SHORT).show();
            }
        }
    }

    }
}

private void showAddURLDialog()
{
    if(dialogAddURL == null)
    {
        AlertDialog.Builder builder=new AlertDialog.Builder(MainActivity.this);
        View view = LayoutInflater.from(this).inflate(
                R.layout.layout_add_url,
                (ViewGroup) findViewById(R.id.layoutAddUrlContainer)
        );

        builder.setView(view);

        dialogAddURL = builder.create();
        if(dialogAddURL.getWindow() != null)
        {
            dialogAddURL.getWindow().setBackgroundDrawable(new ColorDrawable(0));
        }

        final EditText inputURL = view.findViewById(R.id.inputURL);
        inputURL.requestFocus();

        view.findViewById(R.id.textAdd).setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if(inputURL.getText().toString().trim().isEmpty())
                {
                    Toast.makeText(MainActivity.this,"Enter URL",Toast.LENGTH_SHORT).show();
                }
                else if(!Patterns.WEB_URL.matcher(inputURL.getText().toString()).matches())
                {
                    Toast.makeText(MainActivity.this,"Enter valid URL",Toast.LENGTH_SHORT).show();
                }
                else
                {

                    dialogAddURL.dismiss();
                    Intent intent = new Intent(getApplicationContext(), CreateNoteActivity.class);
                    intent.putExtra("isFromQuickActions",true);
                    intent.putExtra("quickActionType","URL");
                    intent.putExtra("URL",inputURL.getText().toString());
                    startActivityForResult(intent,REQUEST_CODE_ADD_NOTE);
                }
            }
        });

        view.findViewById(R.id.textCancel).setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                dialogAddURL.dismiss();
            }
        });
    }
    dialogAddURL.show();
}
}
```

4.1 SAMPLE CODE-2

Activity_Main.xml:

```
   <?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:background="@color/colorPrimary"
   tools:context=".activities.MainActivity">


  <TextView
     android:id="@+id/textMyNotes"
     android:layout_width="match_parent"
     android:layout_height="wrap_content"
     android:layout_marginStart="@dimen/_12sdp"
     android:layout_marginTop="@dimen/_20sdp"
     android:layout_marginEnd="@dimen/_12sdp"
     android:fontFamily="@font/ubuntu_bold"
     android:includeFontPadding="false"
     android:text="@string/my_notes"
     android:textColor="@color/colorWhite"
     android:textSize="@dimen/_22ssp"
     app:layout_constraintTop_toTopOf="parent"

     />

   <LinearLayout
      android:id="@+id/layoutSearch"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_marginStart="@dimen/_8sdp"
      android:layout_marginTop="@dimen/_15sdp"
      android:layout_marginEnd="@dimen/_8sdp"
      android:background="@drawable/background_search"
      android:gravity="center_vertical"
      android:orientation="horizontal"
      android:paddingStart="@dimen/_10sdp"
      android:paddingEnd="@dimen/_10sdp"
      app:layout_constraintTop_toBottomOf="@+id/textMyNotes">
   <ImageView
      android:layout_width="@dimen/_20sdp"
      android:layout_height="@dimen/_20sdp"
      android:contentDescription="@string/app_name"
      android:src="@drawable/ic_search"
      android:tint="@color/colorSearchIcon"/>

   <EditText
      android:id="@+id/inputSearch"
      android:layout_width="match_parent"
      android:layout_height="@dimen/_35sdp"
      android:layout_marginStart="@dimen/_12sdp"
      android:background="@null"
      android:fontFamily="@font/ubuntu_regular"
      android:hint="Search notes"

      android:imeOptions="actionDone"
      android:importantForAutofill="no"
      android:inputType="text"
      android:textColor="@color/colorWhite"
      android:textColorHint="@color/colorTextHint"
      android:textSize="@dimen/_13ssp"
      />

   </LinearLayout>


   <androidx.recyclerview.widget.RecyclerView
```

```
        android:id="@+id/notesRecyclerView"
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:layout_marginStart="@dimen/_20sdp"
        android:layout_marginEnd="@dimen/_2sdp"
        android:clipToPadding="false"
        android:paddingStart="0dp"
        android:paddingEnd="@dimen/_12sdp"
        android:paddingBottom="@dimen/_12sdp"
        app:layout_constraintBottom_toTopOf="@id/layoutQuickActions"
        app:layout_constraintTop_toBottomOf="@id/layoutSearch"
        />

    <LinearLayout
        android:id="@+id/layoutQuickActions"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="@color/colorQuickActionBackground"
        android:gravity="center_vertical"
        android:orientation="horizontal"
        android:padding="@dimen/_15sdp"
        app:layout_constraintBottom_toBottomOf="parent">

        <ImageView
            android:id="@+id/imageAddNote"
            android:layout_width="@dimen/_23sdp"
            android:layout_height="@dimen/_23sdp"
            android:contentDescription="@string/app_name"
            android:src="@drawable/ic_add_outline"
            android:tint="@color/colorIcons"
            />
        <ImageView
            android:id="@+id/imageAddImage"
            android:layout_width="@dimen/_23sdp"
            android:layout_height="@dimen/_23sdp"
            android:layout_marginStart="@dimen/_15sdp"
            android:contentDescription="@string/app_name"
            android:src="@drawable/ic_image"
            android:tint="@color/colorIcons"
            />
        <ImageView
            android:id="@+id/imageAddWebLink"
            android:layout_width="@dimen/_23sdp"
            android:layout_height="@dimen/_23sdp"
            android:layout_marginStart="@dimen/_15sdp"
            android:contentDescription="@string/app_name"
            android:src="@drawable/ic_web_link"
            android:tint="@color/colorIcons"
            />

    </LinearLayout>
    <ImageView
        android:id="@+id/imageAddNoteMain"
        android:layout_width="@dimen/_40sdp"
        android:layout_height="@dimen/_40sdp"
        android:layout_marginEnd="@dimen/_30sdp"
        android:background="@drawable/background_add_button"
        android:contentDescription="@string/app_name"
        android:padding="@dimen/_5sdp"
        android:src="@drawable/ic_add"
        android:tint="@color/colorPrimary"
        app:layout_constraintBottom_toTopOf="@+id/layoutQuickActions"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="@id/layoutQuickActions"
        />


</androidx.constraintlayout.widget.ConstraintLayout>
```

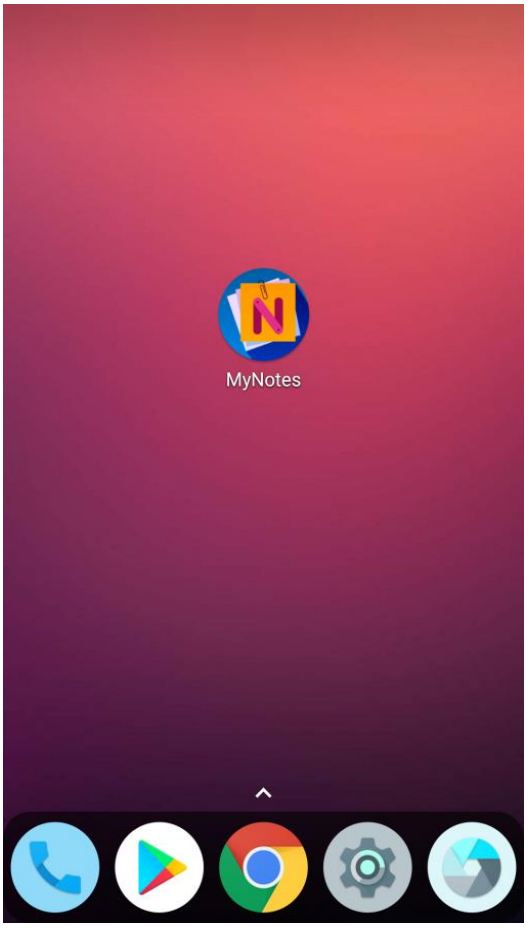
5. SCREENSHOTS

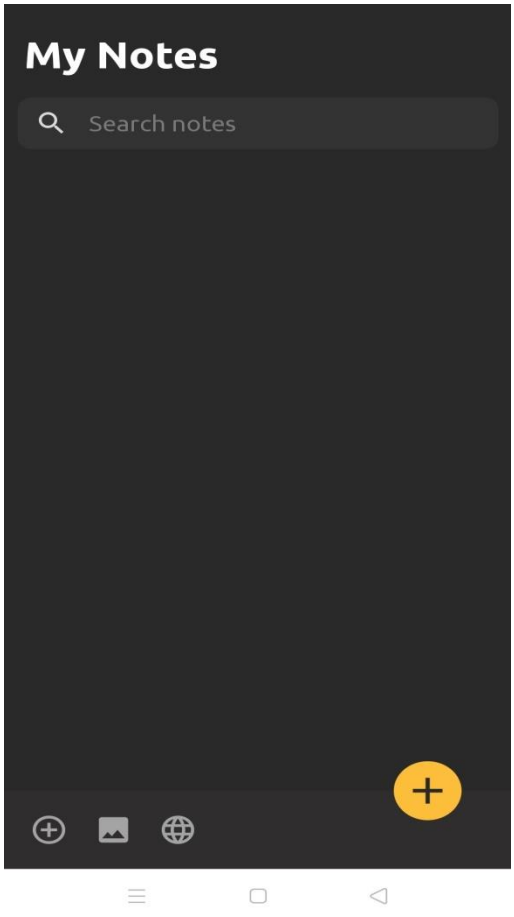
5. SCREEN SHOTS

5.1 HOME PAGE & APP ICON

The MyNotes Application Icon is developed using Adobe XD software:

This is first page where user lands after clicking on the app icon is:

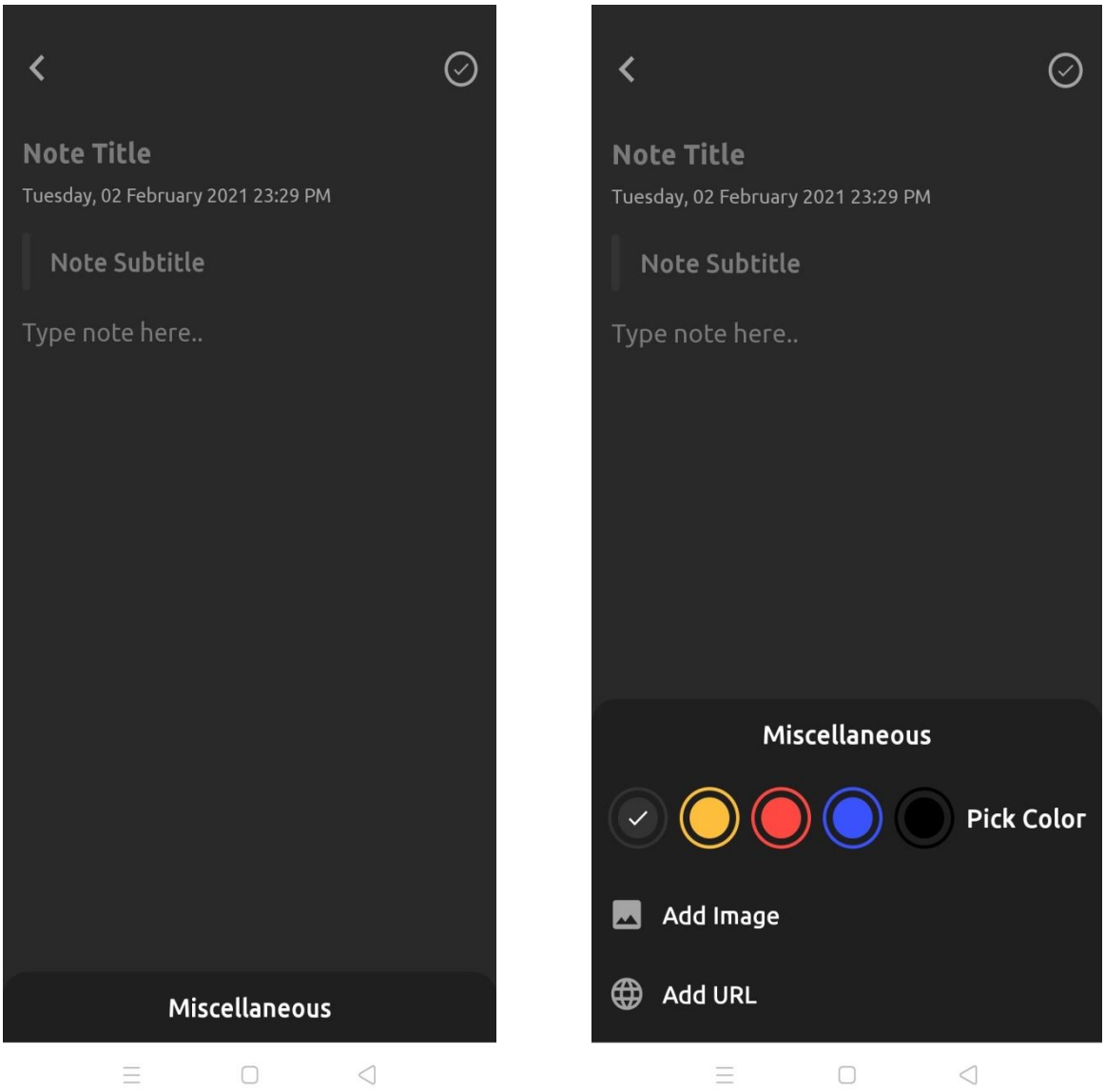




5.1. Screenshot: Icon and Home page of MyNotes Android App

5.2 NOTE DETAILS PAGE (Part-1)

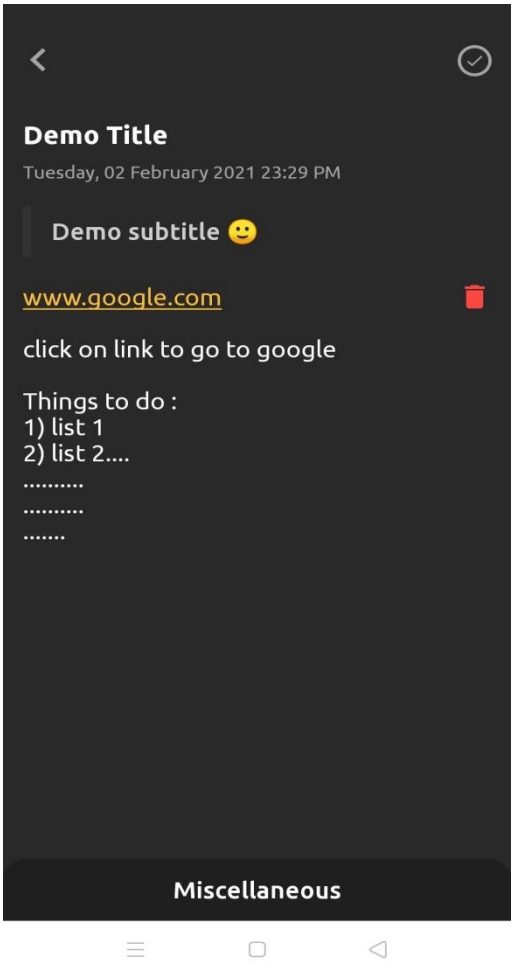
The screenshot displays the Note Details Page when the user clicks on '+' plus button.

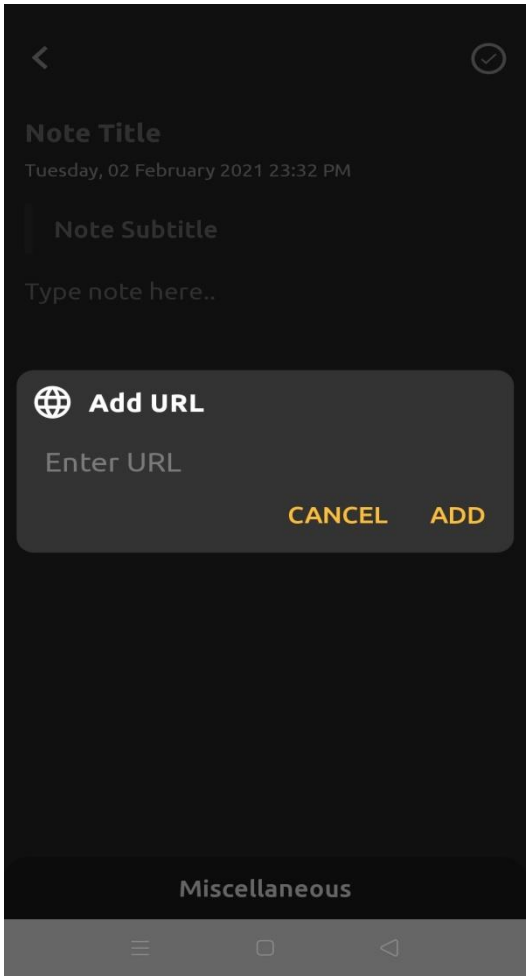


5.2. Screenshot: Note Details of MyNotes Android Application

5.3 NOTE DETAILS PAGE (Part-2)

In this screenshot the user is entering all the details of the Note and the URL.

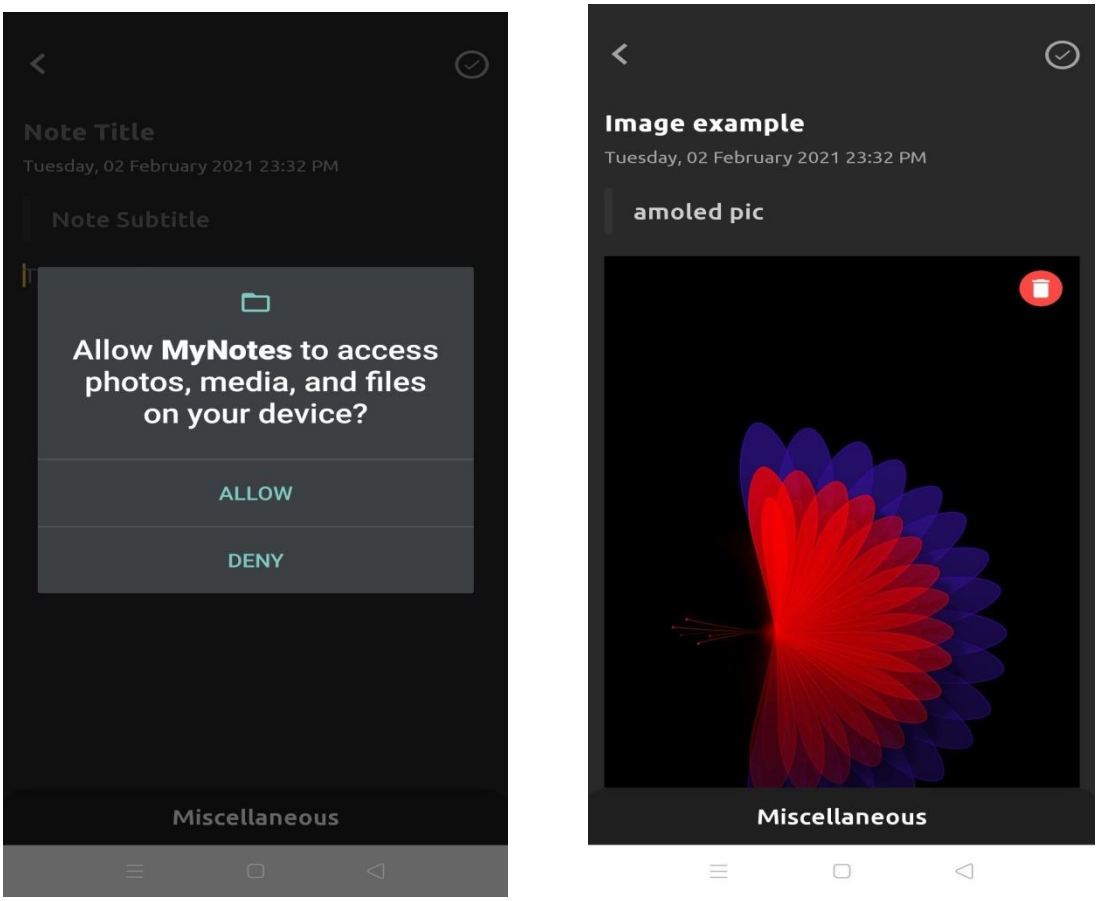




5.3. Screenshot: Title, Subtitle, text and URL of MyNotes Android Application

5.4 NOTE DETAILS PAGE (Part-3)

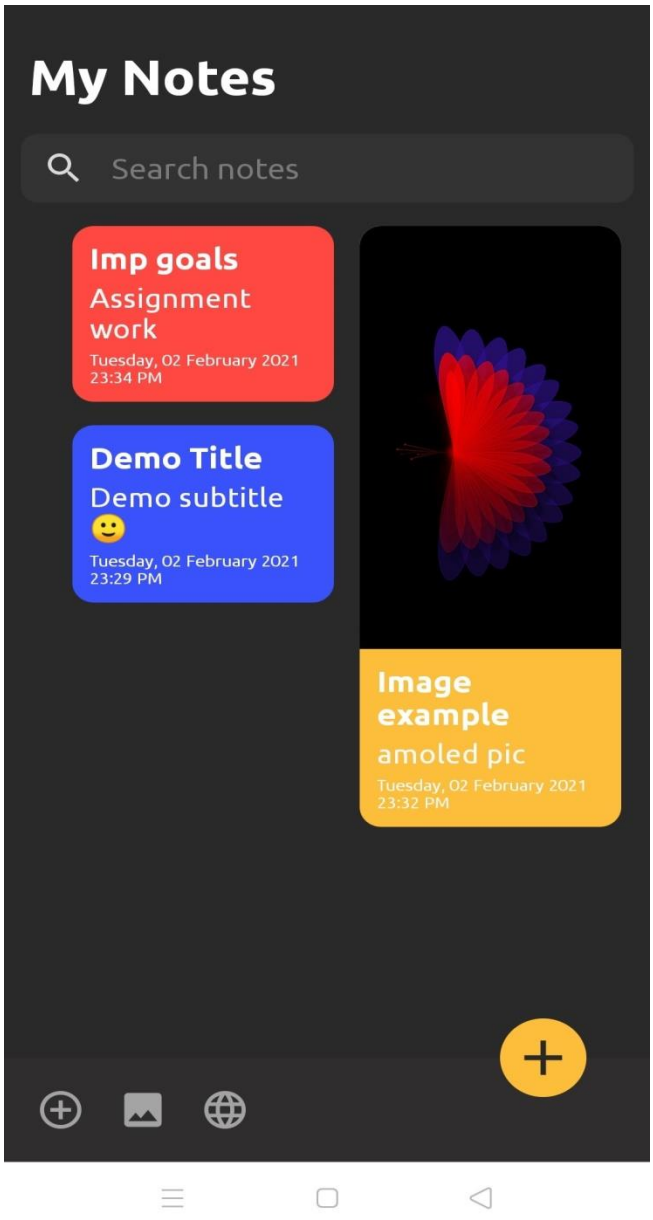
In this screenshot the user is entering all the details of the Note and the image, and it asks for the user permission to access the user's media.



5.4. Screenshot: Adding image, asking user Permission for access in MyNotes Android Application.

5.5 UPDATED HOME PAGE & SEARCH NOTE

In this screenshot we can see the updated app homepage.



5.5. Screenshot: Updated Home Page of MyNotes Android Application

6. TESTING

6. TESTING

6.1 INTRODUCTION TO TESTING

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, subassemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

6.2 TYPES OF TESTING

6.2.1 UNIT TESTING

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

6.2.2 INTEGRATION TESTING

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

6.2.3 FUNCTIONAL TESTING

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

Valid Input, Invalid Input, Functions and Output.

Systems/Procedures: interfacing systems or procedures must be invoked.

Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identify Business process flows; data fields, predefined processes.

6.3 TEST CASES

6.3.1 OPENING THE APP IN ANDROID VERSION: 6.0 Marshmallow & 7.0 Noughat AND SAVING THE TEXT IN MyNotes APP.

Test case ID	Test case name	Purpose	Test Case	Output
1	User 1 (Xiomi Mi A1)	Opening the app and creating the text Note.	Opening the app and creating the text Note.	User1 has successfully opened the app and saved the text note.
2	User 2 (Lenovo zuk)	Opening the app and creating the text Note	Opening the app and creating the text Note.	User2 has successfully opened the app and saved the text note.

6.3.2 OPENING THE APP IN ANDROID VERSION: 8.0 Oreo & 9.0 Pie AND SAVING THE URL, IMAGE AND COLOR IN MyNotes APP.

Test case ID	Test case name	Purpose	Input	Output
1	User 1 (Moto G5)	To add the URL and image and color to the note	The user selects the URL or copy/paste the URL and selects the Image and color.	User 1 successfully saved the note.
2	User 2 (One Plus 6)	To add the URL and image and color to the note	The user selects the URL or copy/paste the URL and selects the Image and color.	User 2 successfully saved the note.
3	User 3 (Oppo A3s)	To add the URL and image and color to the note	The user selects the URL or copy/paste the URL and selects the Image and color.	User 3 successfully saved the note.

6.3.3 OPENING THE APP IN ANDROID VERSION: 10.0 Oreo & 11.0 Pie AND EDITING AND DELETING THE NOTES IN MyNotes APP.

Test case ID	Test case name	Purpose	Input	Output
1	User 1 (Realme 2 Pro)	To edit the note and save/delete the note. Search the particular note.	User deletes the note and while editing gives further details for note.	Successfully edited and deleted the note. Searched the note successfully.
2	User 2 (One Plus 8 Pro)	To edit the note and save/delete the note. Search the particular note.	User deletes the note and while editing gives further details for note.	Successfully edited and deleted the note. Searched the note successfully.

7. CONCLUSION

7. CONCLUSION & FUTURE ENHANCEMENTS

7.1 PROJECT CONCLUSION

In this project, we offer an android app for writing down any type of notes, tasks, things to do, daily goals, classwork notes or list of items along with images and URL links in the mobile device. This app is very minimal and interactive and hence makes it accessible and easier to use to any kind of user base. We have tried to make the size of the app very less (Approx. 10Mb) so that it will not take much space in any mobile and RAM and power consumption is very less. It works on low end android smartphone as well as in high end smartphone. This app can be very useful for the students who prefer to take down daily tasks to do or prefer writing the notes on mobile. Our app is designed for the every kind of user who uses their mobile devices frequently to note down any important things or notes. Hence, this app works very efficiently with very interactive user interface and privacy and security of every user is maintained here.

7.2 FUTURE ENHANCEMENTS

In future we can add the features like calendar so that a user can set their goals according to the calendar, we can add reminder so that when the note task is not done it reminds the user about the task. We are further planning to add the share option so that the user can share the work with other users.

8. BIBILOGRAPHY

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8.1 References

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