VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI – 590018

A MINI-PROJECT REPORT ON

“NOTE APP”

MOBILE APPLICATION LABORATORY WITH MINI PROJECT

18CSMP68

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CERTIFICATE

This is to certify that the mini-project report entitled “**NOTE APP**” is a bona fide work carried out by **BHARATH M**, **DARSHAN V** and **ISHA C**, students of 6th semester Information Science and Engineering, **Vidyavardhaka College of Engineering, Mysuru** in partial fulfilment for the award of the degree of Bachelor of Engineering in **Information Science & Engineering of the Visvesvaraya Technological University, Belagavi**, during the academic year **2021-2022**. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of mini-project work prescribed for the said degree.

Signature of the Guide	**Signature of the Guide**	**Signature of the HOD**
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1.

2.

ACKNOWLEDGEMENT

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In the end, we are anxious to offer our sincere thanks to our family members and friends for their valuable suggestions and encouragement.

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ABSTRACT

Taking notes is about staying focused, being interactive, and recalling information that otherwise is lost. Typically when we get an idea or we hear one, we tend to look for a piece of paper to jot it down. However, the times are changing. We now live in an era of information overload. And, sadly, it has made it quite easy for us to lose information on a daily basis. As a result, it becomes even easier to forget to check out the information or share it with your team. Or worse, lose the information that you jotted down. This is where our app comes in handy. It will cover all such issues and make the entire process as relevant user friendly as possible. The required data is stored and retrieved using SQLite database.

The app is coded in Java using Android Studio Taking notes is about staying focused, being interactive, and recalling information that otherwise is lost. Typically when we get an idea or we hear one, we tend to look for a piece of paper to jot it down. However, the times are changing. We now live in an era of information overload. And, sadly, it has made it quite easy for us to lose information on a daily basis. As a result, it becomes even easier to forget to check out the information or share it with your team. Or worse, lose the information that you jotted down. This is where our app comes in handy. It will cover all such issues and make the entire process as relevant user friendly as possible. The required data is stored and retrieved using SQLite database. The app is coded in Java using Android Studio.

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CHAPTER-1

INTRODUCTION

1.1 MOTIVATION

NOTE APP is a user-friendly application. It is used to digitize the note taking process through an android app so that anyone can take notes and store it from anywhere efficiently, without any hassle.

1.2 PROPOSED SYSTEM

NOTE APP: Note taking app allow us to store all notes and important information. With the help of this app, the entire process is digitized. Type notes on device just as one would using pen and paper. The application is implemented on android platform which is linked to the SQLite database for access of data.

Our project will make the note taking procedure easier for the users, by having a user-friendly UI for typing, storing and manage the note according to priority. We can also delete the note with just a swipe. There will be a provision for searching a note. We have proposed an exclusive feature which lets the user add a note based on the priority of the note or work to be done.

1.3 RELATED WORK

The existing note taking app has some of the basic functionalities of adding, searching, deleting and modifying an existing note. Our project will make the note taking procedure easier for the users, by having a user-friendly UI for typing, storing and manage the note according to priority. We can also delete the note with just a swipe. When compared to the normal app, this app can set priority of note and also it fetches the date, time and year of the note created.

CHAPTER-2

REQUIREMENT ANALYSIS AND SYSTEM SPECIFICATIONS

2.1 SOFWARE REQUIREMENTS SPECIFICATION DOCUMENT

OS: Android 8 or higher

Memory: 8 GB RAM

Free storage: 2GB

Android Studio

Android Software Development Kit

Java Development Kit

The SDK and AVD Manager

2.2 VALIDATION

In this project, when the user creates note he/she should enter the title and also the description. If any of these fields is kept empty, the app displays enter title if title is kept empty and enter description if description is empty.

CHAPTER-3

3.SYSTEM DESIGN

3.1 DESIGN APPROACH

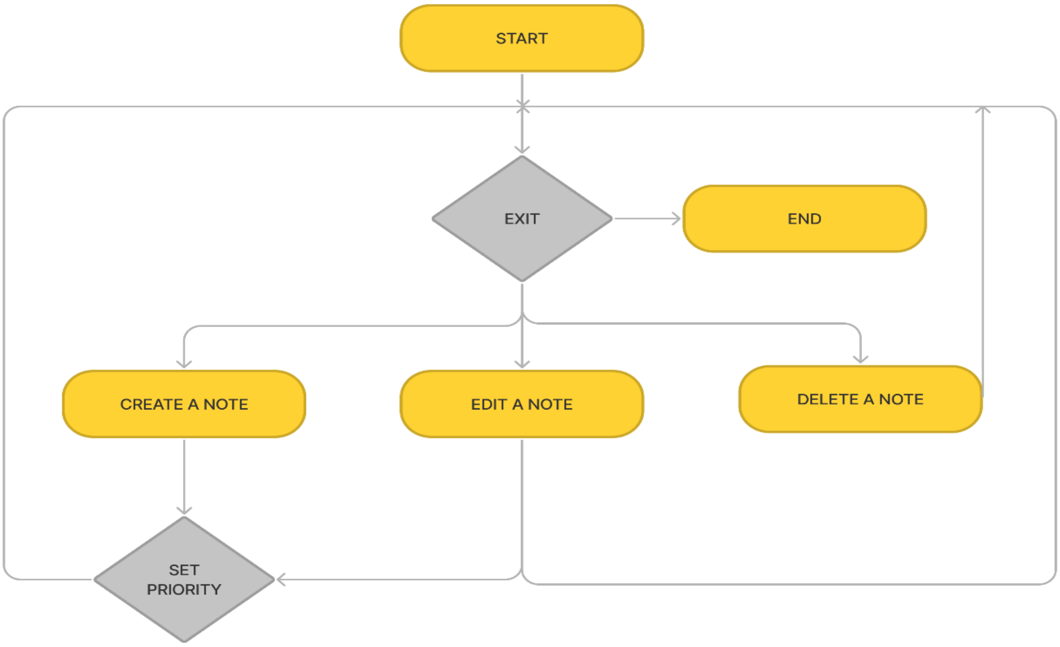
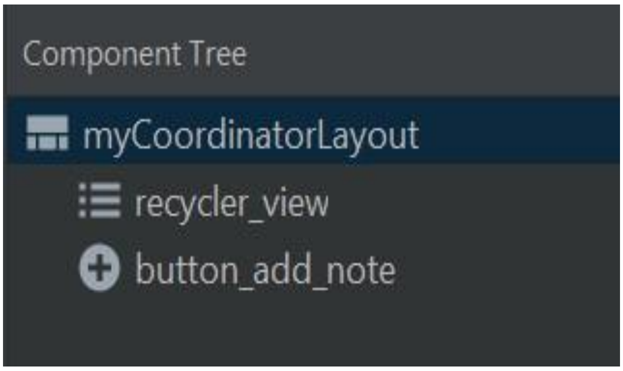


Fig 3.1.1: This is the basic design approach of the developed application

3.2 LAYOUT APPROACH

MAIN SCREEN



Component Tree

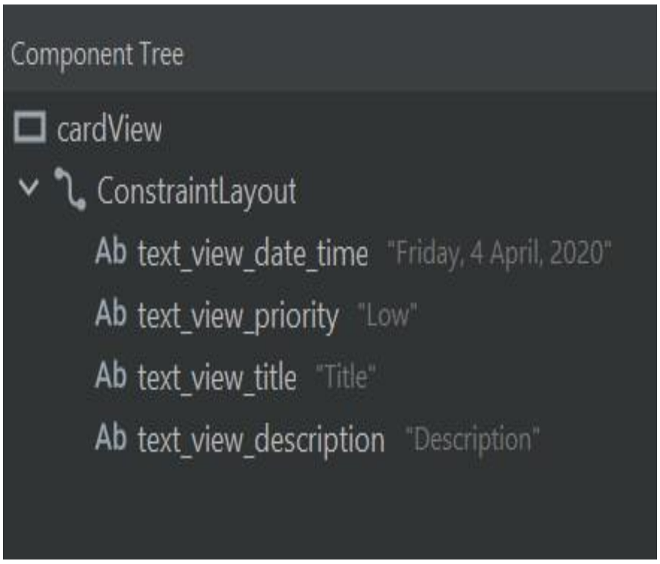
myCoordinatorLayout

recycler_view

button_add_note

Fig 3.2.1: This is the layout of the main screen which displays the note added and also displays the button to add new note

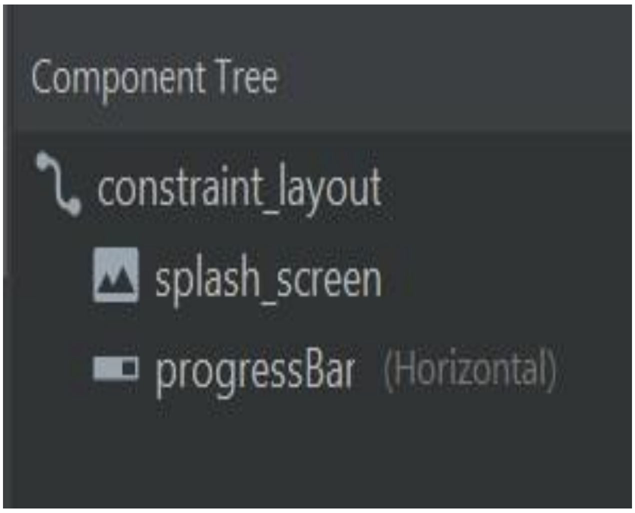
NOTE



```
Component Tree
cardView
ConstraintLayout
    Ab text_view_date_time "Friday, 4 April, 2020"
    Ab text_view_priority "Low"
    Ab text_view_title "Title"
    Ab text_view_description "Description"
```

Fig 3.2.2: This is the layout which displays the content of the note added, which can further be edited and saved.

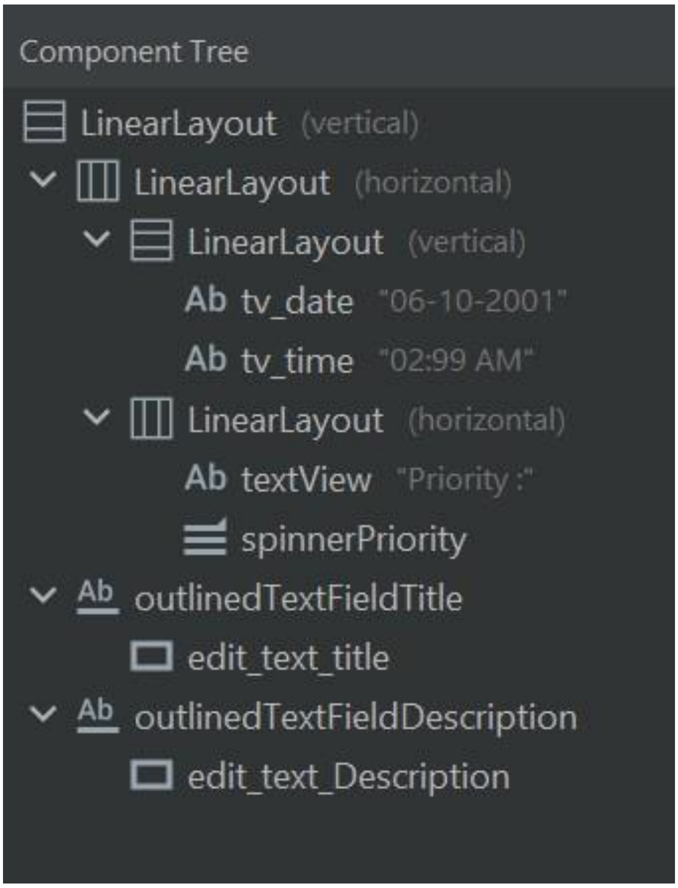
SPLASH SCREEN



```
Component Tree
constraint_layout
    splash_screen
    progressBar (Horizontal)
```

Fig 3.2.3: This the layout of the first loading screen when user opens the application

ADD NOTE



```
Component Tree
LinearLayout (vertical)
  LinearLayout (horizontal)
    LinearLayout (vertical)
      Ab tv_date "06-10-2001"
      Ab tv_time "02:99 AM"
    LinearLayout (horizontal)
      Ab textView "Priority :"
      spinnerPriority
  Ab outlinedTextFieldTitle
    edit_text_title
  Ab outlinedTextFieldDescription
    edit_text_Description
```

Fig 3.2.4: This the layout where the user can add new note and set title, description, priority or modify an existing note

CHAPTER-4

IMPLEMENTATION

4.1 INTRODUCTION TO PROGRAMMING LANGUAGES, IDEs, TOOLS AND TECHNOLOGIES

ANDROID STUDIO

Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA. On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps.

ANDROID SOFTWARE DEVELOPMENT KIT

The Android SDK (software development kit) is a set of development tools used to develop applications for the Android platform. It's a set of software tools and programs used by developers to create applications for specific platforms. The Android SDK includes the following: Required libraries, Debugger.

JAVA DEVELOPMENT KIT

Java is one of the most popular coding languages out there, and Java Development Kit (or JDK) is its official development package. Currently, Java Development Kit is also one of the most popular development environments in which to code Java. The Java Development Kit offers a wide range of practical tools like javac. You also have java and jdb which works as the debugger of the system.

THE SDK AND AVD MANAGER

The sdk manager is a command line tool that allows you to view, install, update, and uninstall packages for the Android SDK. The avd manager is a command line tool that allows you to create and manage Android Virtual Devices (AVDs) from the command line. An AVD lets you define the characteristics of an Android handset, Wear OS watch, or Android TV device that you want to simulate in the Android Emulator.

SQLITE-DATABASE

SQLite is a open source SQL database that stores data to a text file on a device. Android comes in with built in SQLite database implementation. SQLite supports all the relational database features. In order to access this database, you don't need to establish any kind of connections for it like JDBC,ODBC etc. The main package is android.database.sqlite that contains the classes to manage your own databases In order to create a database you just need to call this method open Or Create Database with your database name and mode as a parameter. It returns an instance of SQLite database which you have to receive in your own object.

4.2 LAYOUT IMPLEMENTATION

ADD NOTE

```
public class AddEditNoteActivity extends AppCompatActivity {

    public static final String EXTRA_ID = "com.example.achitectureexample.EXTRA_ID";
    public static final String EXTRA_TITLE = "com.example.achitectureexample.EXTRA_TITLE";
    public static final String EXTRA_DESCRIPTION =
"com.example.achitectureexample.EXTRA_DESCRIPTION";
    public static final String EXTRA_PRIORITY =
"com.example.achitectureexample.EXTRA_PRIORITY";
    public static final String EXTRA_PRIORITY_NUMBER =
"com.example.achitectureexample.EXTRA_PRIORITY_NUMBER";
    public static final String EXTRA_DATE = "com.example.achitectureexample.EXTRA_DATE";
    public static final String EXTRA_TIME = "com.example.achitectureexample.EXTRA_TIME";

    private TextView tvDate, tvTime;
    private TextInputEditText editTextTitle;
    private TextInputEditText editTextDescription;
    private Spinner spinnerPriority;
    //private String currentDate;

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

        Calendar calendar = Calendar.getInstance();
        //currentDate = DateFormat.getDateInstance(DateFormat.MEDIUM).format(calendar.getTime());
        SimpleDateFormat dateFormat = new SimpleDateFormat("dd MMMM yyyy");
        SimpleDateFormat timeFormat = new SimpleDateFormat("hh:mm a");
        String date = dateFormat.format(calendar.getTime());
        String ntime = timeFormat.format(calendar.getTime());
        String time = ntime.replace("am", "AM").replace("pm", "PM");

        editTextTitle = findViewById(R.id.edit_text_title);
        editTextDescription = findViewById(R.id.edit_text_Description);
        spinnerPriority = findViewById(R.id.spinnerPriority);
        tvDate = findViewById(R.id.tv_date);
        tvTime = findViewById(R.id.tv_time);

        getSupportActionBar().setHomeAsUpIndicator(R.drawable.ic_close);

        Intent intent = getIntent();
        if (intent.hasExtra(EXTRA_ID)) {
            setTitle("Edit Note");
            editTextTitle.setText(intent.getStringExtra(EXTRA_TITLE));
            editTextDescription.setText(intent.getStringExtra(EXTRA_DESCRIPTION));
            tvDate.setText(intent.getStringExtra(EXTRA_DATE));
            tvTime.setText(intent.getStringExtra(EXTRA_TIME));
            //ArrayAdapter<CharSequence> adapter =
ArrayAdapter.createFromResource(this,R.array.priorityList,R.layout.style_spinner);
            String[] array = {"High", "Medium", "Low"};
            ArrayAdapter<String> adapter = new ArrayAdapter<String>(this, R.layout.style_spinner, array);
            spinnerPriority.setAdapter(adapter);
            //spinnerPriority.setSelection(intent.getIntExtra(EXTRA_PRIORITY_NUMBER,1));
        } else {
            setTitle("Add Note");
            tvDate.setText(date);
            tvTime.setText(time);
            //ArrayAdapter<CharSequence> adapter =
ArrayAdapter.createFromResource(this,R.array.priorityList,R.layout.style_spinner);
            String[] array = {"High", "Medium", "Low"};
            ArrayAdapter<String> adapter = new ArrayAdapter<String>(this, R.layout.style_spinner, array);
            spinnerPriority.setAdapter(adapter);
            //spinnerPriority.setSelection(intent.getIntExtra(EXTRA_PRIORITY_NUMBER,1));
        }
    }
```

SAVE NOTE

```
    private void saveNote() {

        String title = editTextTitle.getText().toString();
        String description = editTextDescription.getText().toString();
        String priority = spinnerPriority.getSelectedItem().toString();
        String date = tvDate.getText().toString();
        String time = tvTime.getText().toString();
        if (title.trim().isEmpty() || description.trim().isEmpty()) {
            Toast.makeText(this, "Please insert a title and description", Toast.LENGTH_SHORT).show();
            return;
        }

        Intent data = new Intent();
        data.putExtra(EXTRA_TITLE, title);
        data.putExtra(EXTRA_DESCRIPTION, description);
        data.putExtra(EXTRA_PRIORITY, priority);
        data.putExtra(EXTRA_PRIORITY_NUMBER, spinnerPriority.getSelectedItem().toString());
        data.putExtra(EXTRA_DATE, date);
        data.putExtra(EXTRA_TIME, time);

        int priorityNumber = 0;

        if (priority.equals("High")) {
            priorityNumber = 3;
        } else if (priority.equals("Medium")) {
            priorityNumber = 2;
        } else if (priority.equals("Low")) {
            priorityNumber = 1;
        }
        data.putExtra(EXTRA_PRIORITY_NUMBER, priorityNumber);

        int id = getIntent().getIntExtra(EXTRA_ID, -1);
        if (id != -1) {
            data.putExtra(EXTRA_ID, id);
        }

        setResult(RESULT_OK, data);
        finish();
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater menuInflater = getMenuInflater();
        menuInflater.inflate(R.menu.add_note_menu, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        switch (item.getItemId()) {
            case R.id.save_note:
                saveNote();
                return true;
            default:
                return super.onOptionsItemSelected(item);
        }}}
```

DELETE NOTE

```
public class SwipeToDeleteCallback extends ItemTouchHelper.Callback {

    Context mContext;
    private Paint mClearPaint;
    private ColorDrawable mBackground;
    private int backgroundColor;
    private Drawable deleteDrawable;
    private Drawable deleteDrawable2;
    private int intrinsicWidth;
    private int intrinsicHeight;
    private int intrinsicWidth2;
    private int intrinsicHeight2;


    public SwipeToDeleteCallback(Context context) {
        mContext = context;
        mBackground = new ColorDrawable();
        backgroundColor = Color.parseColor("#b80f0a");
        mClearPaint = new Paint();
        mClearPaint.setXfermode(new PorterDuffXfermode(PorterDuff.Mode.CLEAR));
        deleteDrawable = ContextCompat.getDrawable(mContext, R.drawable.ic_delete);
        deleteDrawable2 = ContextCompat.getDrawable(mContext, R.drawable.ic_delete);
        intrinsicWidth = deleteDrawable.getIntrinsicWidth();
        intrinsicHeight = deleteDrawable.getIntrinsicHeight();
        intrinsicWidth2 = deleteDrawable2.getIntrinsicWidth();
        intrinsicHeight2 = deleteDrawable2.getIntrinsicHeight();



    }



    @Override
    public int getMovementFlags(@NonNull RecyclerView recyclerView, @NonNull
RecyclerView.ViewHolder viewHolder) {
        return makeMovementFlags(0, ItemTouchHelper.LEFT );
    }

    @Override
    public boolean onMove(@NonNull RecyclerView recyclerView, @NonNull RecyclerView.ViewHolder
viewHolder, @NonNull RecyclerView.ViewHolder viewHolder1) {
        return false;
    }

    @Override
    public void onChildDraw(@NonNull Canvas c, @NonNull RecyclerView recyclerView, @NonNull
RecyclerView.ViewHolder viewHolder, float dX, float dY, int actionState, boolean isCurrentlyActive) {
        super.onChildDraw(c, recyclerView, viewHolder, dX, dY, actionState, isCurrentlyActive);

        View itemView = viewHolder.itemView;
        int itemHeight = itemView.getHeight();

        boolean isCancelled = dX == 0 && !isCurrentlyActive;

        if (isCancelled) {
            clearCanvas(c, itemView.getRight() + dX, (float) itemView.getTop(), (float) itemView.getRight(),
(float) itemView.getBottom());
            super.onChildDraw(c, recyclerView, viewHolder, dX, dY, actionState, isCurrentlyActive);
            return;
        }

        mBackground.setColor(backgroundColor);
        mBackground.setBounds(itemView.getLeft(), itemView.getTop(), itemView.getRight(),
itemView.getBottom());
        mBackground.draw(c);

        int deleteIconTop = itemView.getTop() + (itemHeight - intrinsicHeight) / 2;
        int deleteIconMargin = (itemHeight - intrinsicHeight) / 2;
        int deleteIconLeft = itemView.getRight() - deleteIconMargin - intrinsicWidth;
        int deleteIconRight = itemView.getRight() - deleteIconMargin;
        int deleteIconBottom = deleteIconTop + intrinsicHeight;




        int deleteIconLeft2 = itemView.getLeft() + deleteIconMargin;
        int deleteIconRight2 = itemView.getLeft() + deleteIconMargin+intrinsicWidth ;




        deleteDrawable.setBounds(deleteIconLeft, deleteIconTop, deleteIconRight, deleteIconBottom);
        deleteDrawable.draw(c);
//        deleteDrawable2.setBounds(deleteIconLeft2, deleteIconTop, deleteIconRight2, deleteIconBottom);
//        deleteDrawable2.draw(c);

        super.onChildDraw(c, recyclerView, viewHolder, dX, dY, actionState, isCurrentlyActive);


    }

    private void clearCanvas(Canvas c, Float left, Float top, Float right, Float bottom) {
        c.drawRect(left, top, right, bottom, mClearPaint);

    }

    @Override
    public float getSwipeThreshold(@NonNull RecyclerView.ViewHolder viewHolder) {
        return 0.7f;
    }
}
```

CHAPTER-5

TESTING

5.1 TYPES OF TESTING

5.1.1 UNIT TESTING

Unit testing involves the testing of each unit or individual component of the software application. It is the first level of functional testing. The aim behind unit testing is to validate unit components with its performance. The purpose of unit testing is to test the correctness of isolated code. A unit component is an individual function or code of the application. White box testing approach used for unit testing and usually done by developers.

5.1.2 INTEGRATION TESTING

Integration testing is the second level of the software testing process comes after unit testing. In this testing, units or individual components of the software are tested in a group. The focus of the integration testing level is to expose defects at the time of interaction between integrated components or units. Unit testing uses modules for testing purpose, and these modules are combined and tested in integration testing. The goal of integration testing is to check the correctness of communication among all the modules.

5.2 TEST CASES AND ITS RESULTS

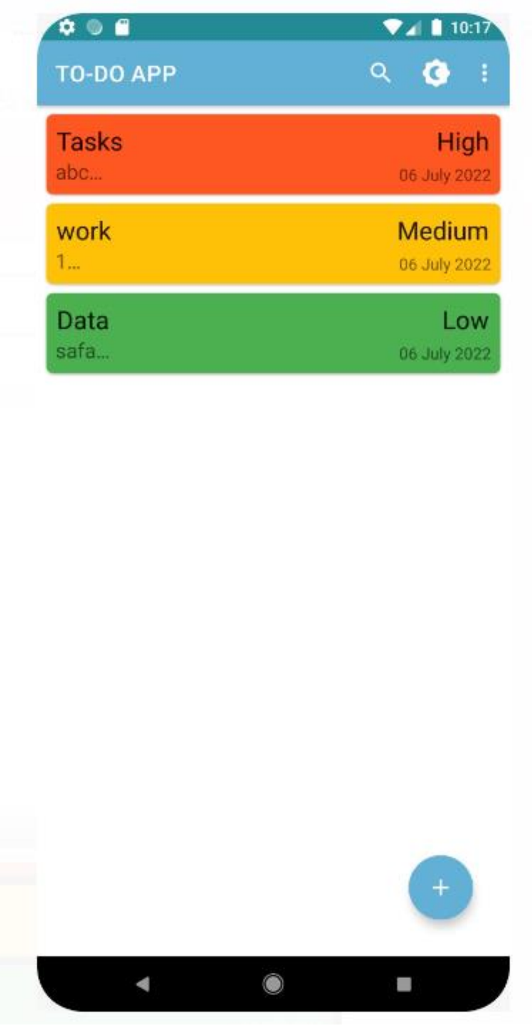
TEST ID	TEST CASE NAME	INPUT	EXPECTED OUTPUT	ACTUAL OUTPUT	RESULT
1	Add Note	Enter title, description and set priority	Note created	Note created	Pass
2	Delete note	Swipe to delete note	Note deleted	Note deleted	pass
3	Add Note	Enter title and no description	Enter description	Enter description	pass

4	Edit Note	Edit title, description and set priority	Note updated	Note updated	Pass
5	Search Note	Enter title	Note searched	Note searched	Pass
6	New note button	Add note button clicked	New note screen	New note screen	Pass
7	Add Note	Enter description and no title	Enter title	Enter title	Pass
8	Dark Mode	Toggle dark mode switch	Screen dark mode	Screen dark mode	Pass
9	Save note	Click Save note button	Note saved	Note saved	Pass

CHAPTER-6

SNAPSHOTS

ACTIVITY_MAIN



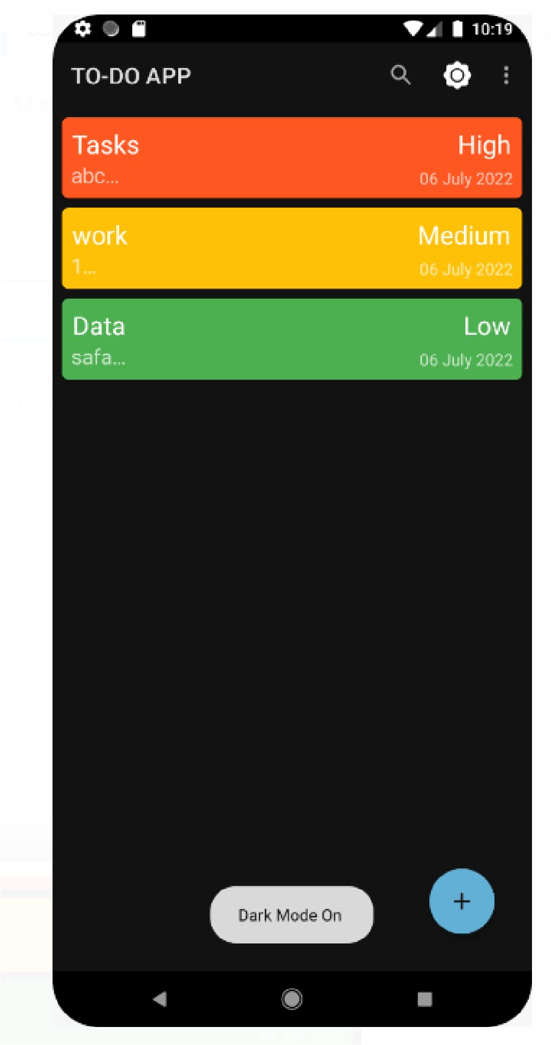
Tasks High
abc... 06 July 2022

work Medium
1... 06 July 2022

Data Low
safa... 06 July 2022

Fig 6.1.1: This the display page which the user can see when he/she visits the app. It displays the note added previously.

ACTIVITY_MAIN DARK MODE



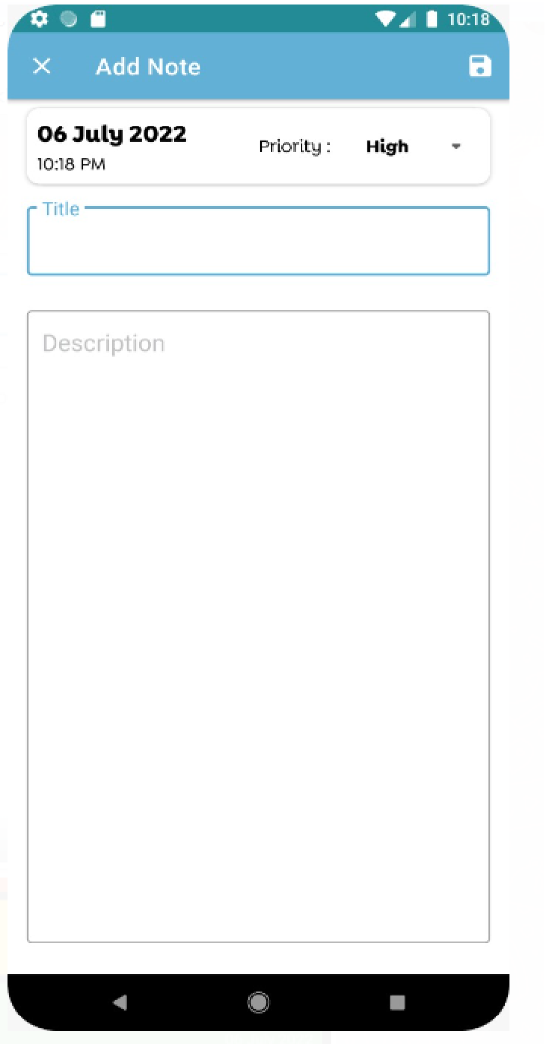
Tasks High
abc... 06 July 2022

work Medium
1... 06 July 2022

Data Low
safa... 06 July 2022

Fig 6.1.2: According to the users preference he/she can change screen into light or dark mode

NOTE_ACTIVITY



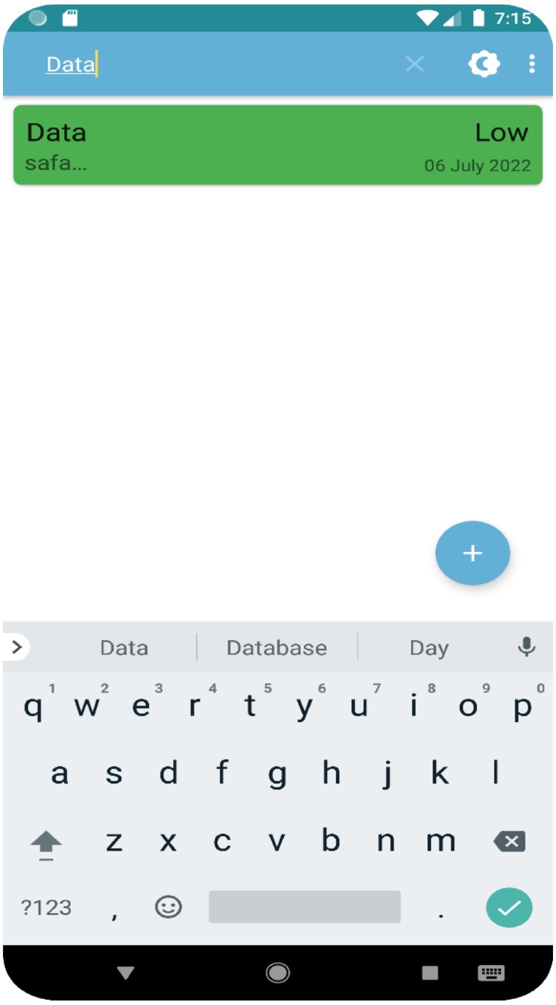
06 July 2022
10:18 PM
Priority : High

Fig 6.1.3: In this screen the user can set the priority, give a title and add the description

SPLASH SCREEN

Fig 6.1.4: This is the front page that appears to the user when first open also called Splash Screen

SEARCH SCREEN

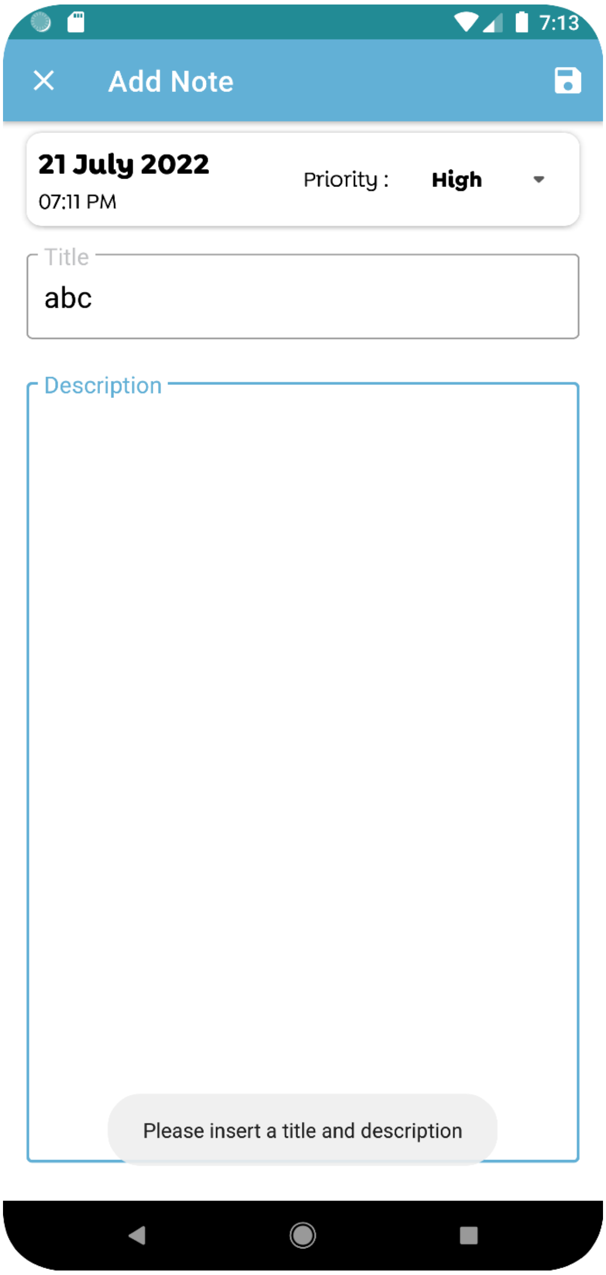


Data

Data Low
safa... 06 July 2022

Fig 6.1.5: This is the search bar where the title of the note is used to search the note

NO DESCRIPTION OR TITLE ERROR SCREEN



21 July 2022
07:11 PM

Title: abc

Please insert a title and description

Fig 6.1.6: This screen displays toast message when no title or description is entered and note is tried to save

CHAPTER-7

FUTURE WORK

In the future, we may extend this project by adding extra features to our android app like,

- Adding image to the notes.
- Sharing the notes to all possible apps.

CHAPTER-8

CONCLUSION

Existing system involves manual intervention in the process of note taking, and high chances of loosing the note. Taking notes using pen and paper. Difficulty in availability of notes or paper at the moment, with noted papers going missing many a times. Recent advances have made it comparatively less tedious by taking notes digitally, yet tedious task to search for a particular note, hence the Note App is developed with the solution to all such problem. Note App is an android application for taking notes, in both light mode and dark mode. The user can create notes with ease. He /She can sort notes based on their priority. User can share the notes to others.

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