

**Visvesvaraya Technological University, Belagavi – 590010**



**MOBILE APPLICATION DEVELOPMENT  
MINI PROJECT REPORT  
ON  
MANGALORE TRAVEL GUIDE APPLICATION**

*Submitted by*

Joyline Rencita Dsouza  
Manasa S Bharadwaj

4SO20CS073  
4SO20CS081

*Under the guidance of*

**Dr Shrisha H.S.**  
(Associate Professor, CSE Department)



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
ST JOSEPH ENGINEERING COLLEGE  
Vamanjoor, Mangaluru -575028, Karnataka 2022-2023  
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**CERTIFICATE**

*This is to certify that the Mini project entitled “Mangalore Travel Guide Application” is a bonafide work carried out by*

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*4SO20CS073*

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*Students of sixth semester B.E. Computer Science & Engineering, and submitted as a part of the course Mobile Application Development with Mini Project (18CSMP68), during the academic year 2022-2023.*

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**Dr Shrisha H.S.**

**Project Guide**

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**Dr Sridevi Saralaya**

**Head of Department**

**Name of the Examiners**

**Signature with Date**

1. -----

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## **ABSTRACT**

The Mangalore Travel Guide Application provides a means of discovering tourist spots, dining and stay areas in and around the city of Mangaluru. The application is divided into four fragments namely, Overview, Dining, Stay and Attractions that are further displayed in the menu bar. Each of these fragments consists of a list of six popular places that belong to the specified category in the menu bar. Upon choosing an item from the list, the application redirects the user onto another page referred to as the ‘Highlights’ page that consists of details about the selected destination. The highlights section consists of images of the respective travel destinations specified in each category which are stored in an ArrayList on the application. The details such as visiting hours, peak hours, entry fee, events and attractions pertaining to the place are displayed, thus serving as a travel guide application for the city.

## **ACKNOWLEDGEMENT**

We dedicate this page to acknowledge and thank those responsible for shaping of the project. Without their guidance and help, the experience while constructing the dissertation would not have been so smooth and efficient.

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## CHAPTER 1 - INTRODUCTION

Mangalore is popularly known as the ‘Port City of India’. It is the most commercially developed coastal city in the state of Karnataka with its own language, culture, cuisine and history. These factors make the city a major travel destination.

The ‘Mangalore Travel Guide’ application consists of the necessary information that every traveller needs to plan an efficient itinerary to the city of Mangaluru. Travellers often look for places of attraction, places to dine and places to stay in order to ensure a comfortable vacation for themselves and their families.

The application is divided into four categories namely, Overview, Dining, Stay and Tourism. This is implemented using the Fragment class. A Fragment represents a reusable portion of an application’s UI that defines and manages its own layout, has its own lifecycle, and can handle its own input events. Each of the fragments consists of six popular travel destinations pertaining to the category it is placed under. These lists are comprised of images, names and the basic information about each of the destinations. The images are stored in an ArrayList and a menu is implemented to navigate from one fragment to another.

Upon clicking any of the items, the user is redirected to a page known as the ‘Highlights’ page that provides basic information that travellers find helpful. The information includes essential details such as the visiting hour and the peak hours, the entry fee and other basic information that a tourist might find useful.

## CHAPTER 2 -ABOUT ANDROID STUDIO

Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on Jet Brains IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS, and Linux-based operating systems or as a subscription-based service in 2020. It is a replacement for the Eclipse.

Android Development Tools (E-ADT) as the primary IDE for native Android application development.

Android Studio was announced on May 16, 2013, at the Google I/O conference. It was in the early access preview stage from version 0.1 in May 2013, then entered the beta stage starting from version 0.8 which released in June 2014. The first stable build was released in December 2014, starting from version 1.0. On May 7, 2019, Kotlin replaced Java as Google's preferred language for Android app development. Java is still supported, as is C++.

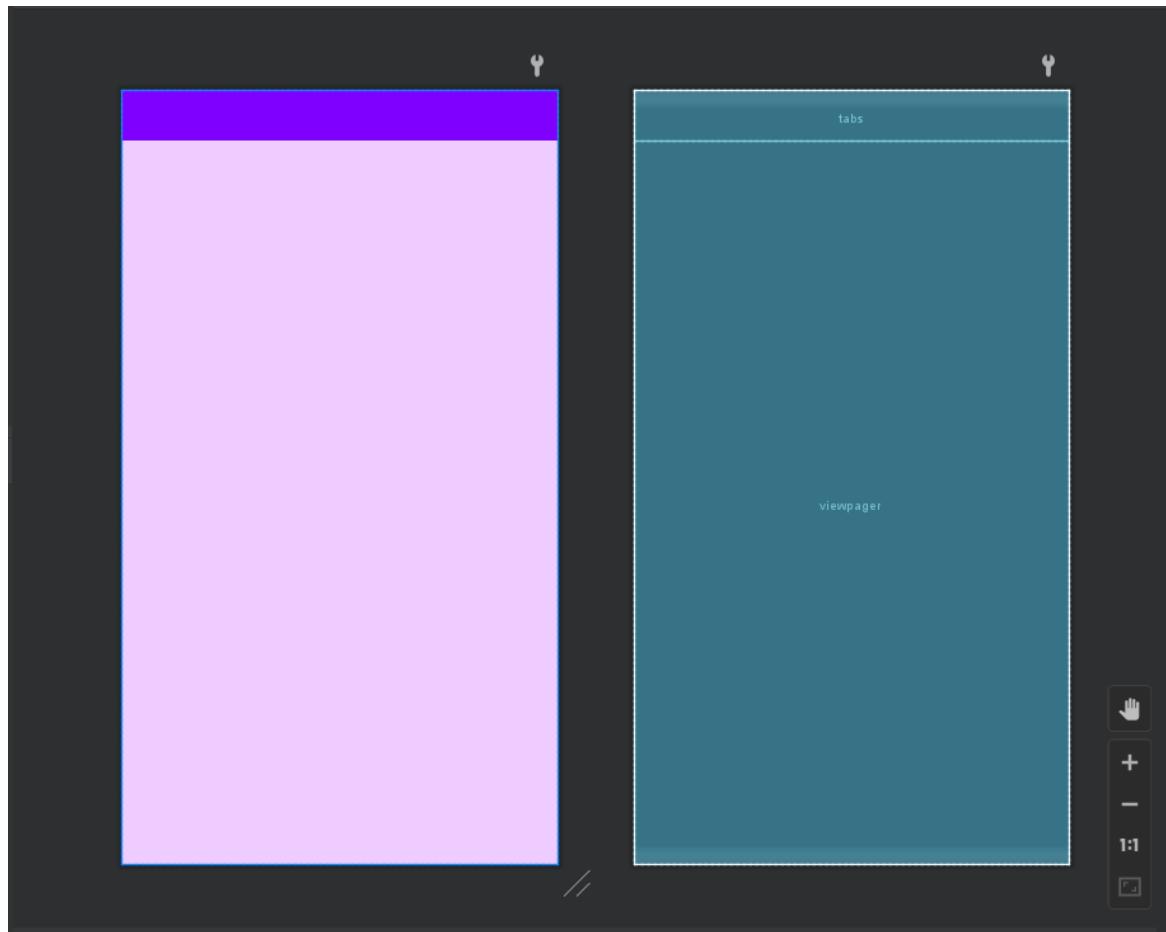
The following features are provided in the current stable version:

- o Gradle-based build support
- o Android-specific refactoring and quick fixes
- o Template-based wizards to create common Android designs and components
- o A rich layout editor that allows users to drag-and-drop UI components, option to preview layouts on multiple screen configurations.
- o Support for building Android Wear apps
- o Android Virtual Device (Emulator) to run and debug apps in the Android studio.

## CHAPTER 3 - DESIGN AND IMPLEMENTATION

### 3.1 XML Layout Design

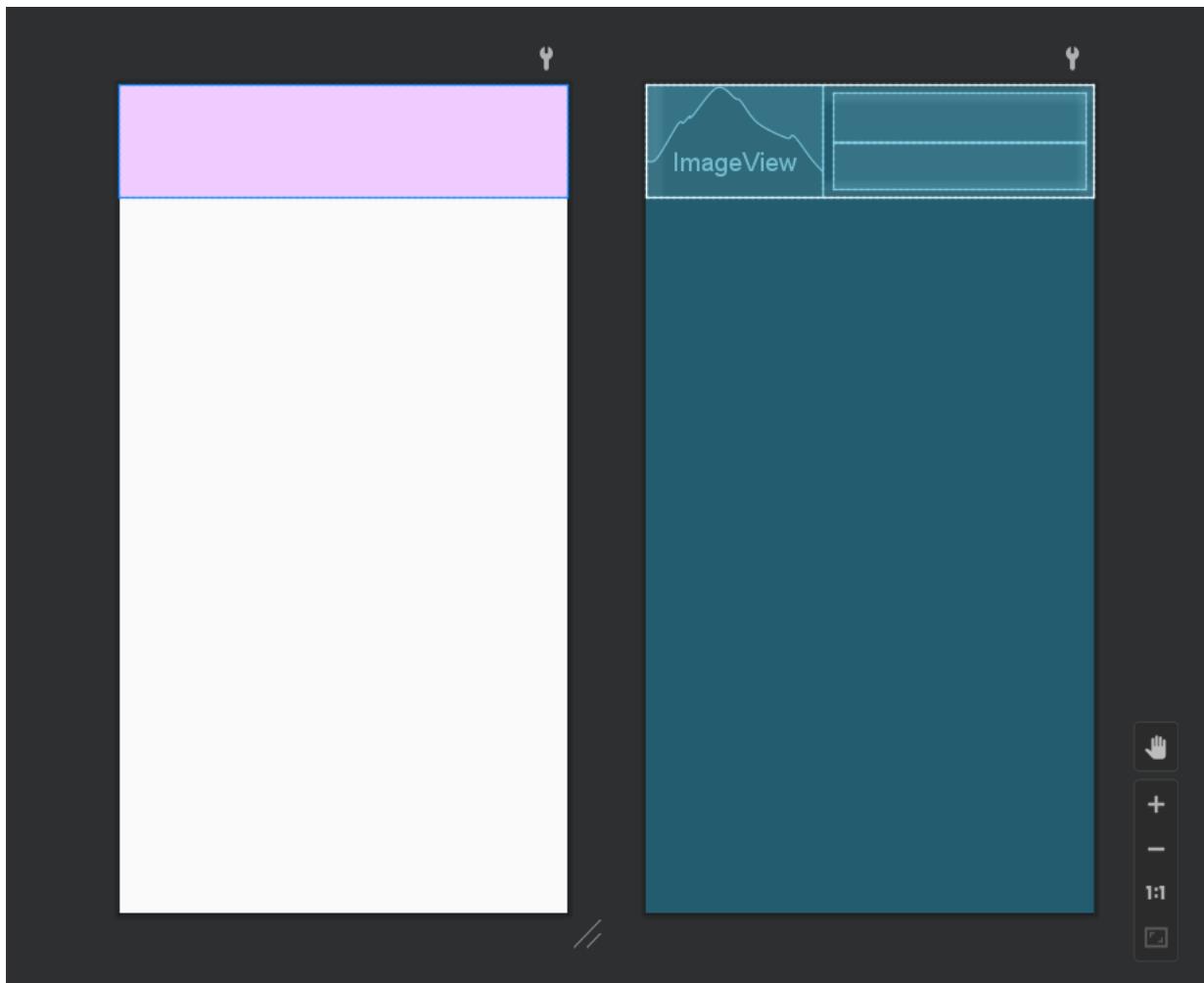
#### 3.1.1 Home Page Layout



**Fig 3.1.1:** Home Page Layout

Fig 3.1.1 shows us the design of the home page layout created in android studio.

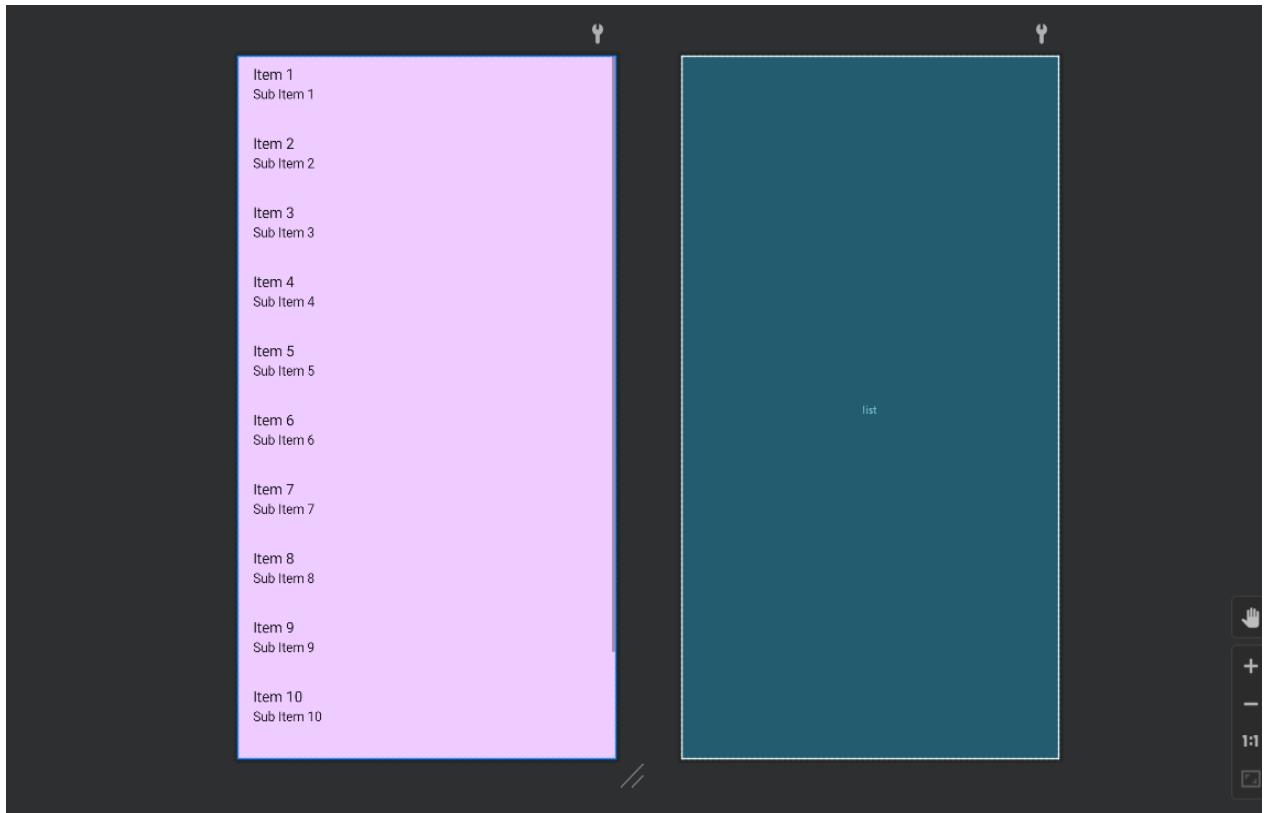
### 3.1.2 Item Page Layout



**Fig 3.1.2 :** Item Page Layout

Fig 3.1.2 shows us the item page layout which is created in android studio

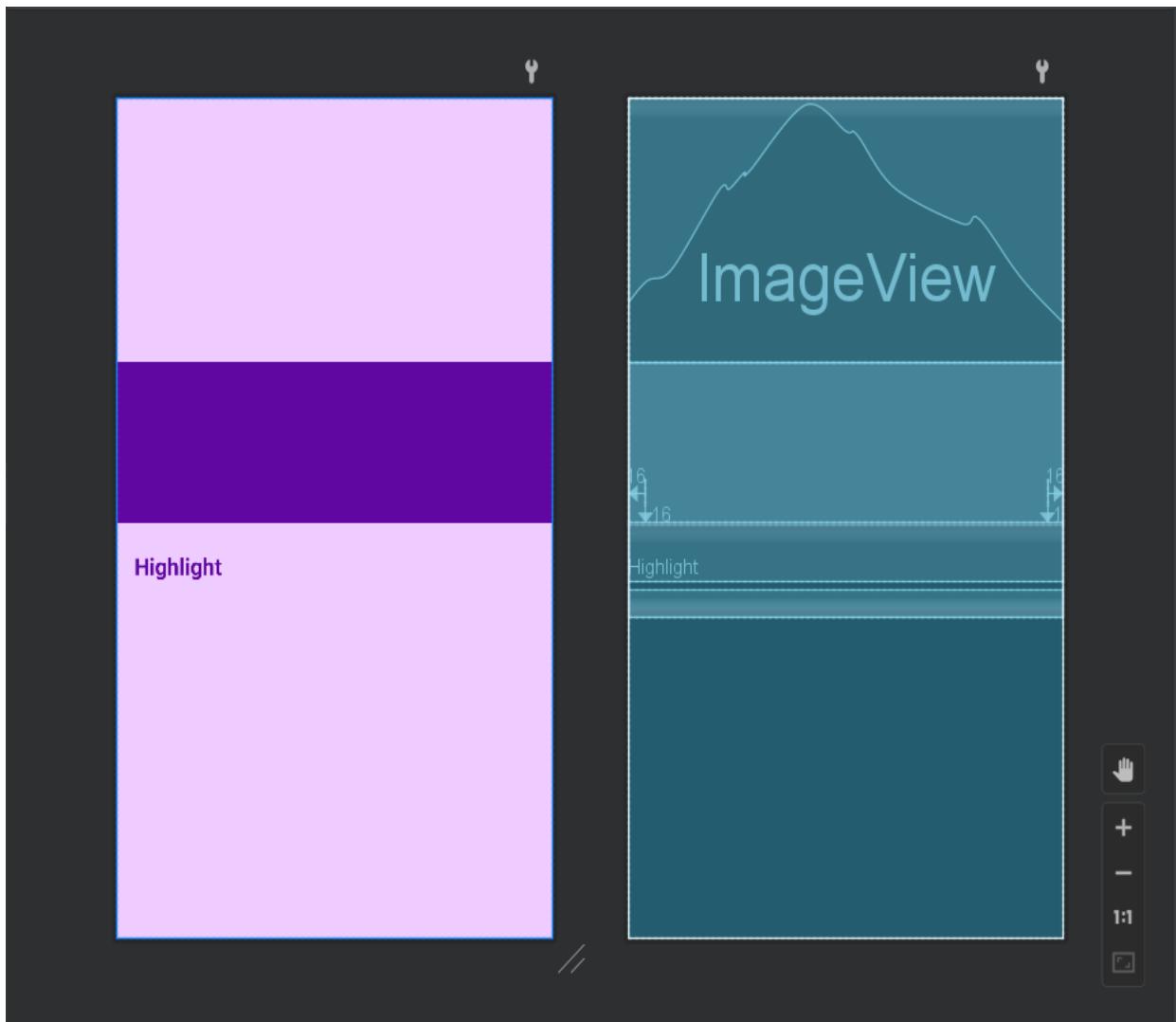
### 3.1.3 Item List Page Layout



**Fig 3.1.3:** Item List Page Layout

Fig 3.1.3 shows us the layout item list page which is created in android studio

### 3.1.4 Detailed Item Page Layout



**Fig 3.1.4:** Detailed Item Page Layout

Fig 3.1.4 shows us the detailed item page layout which is created in android studio

### 3.2 PALETTE AND ATTRIBUTES

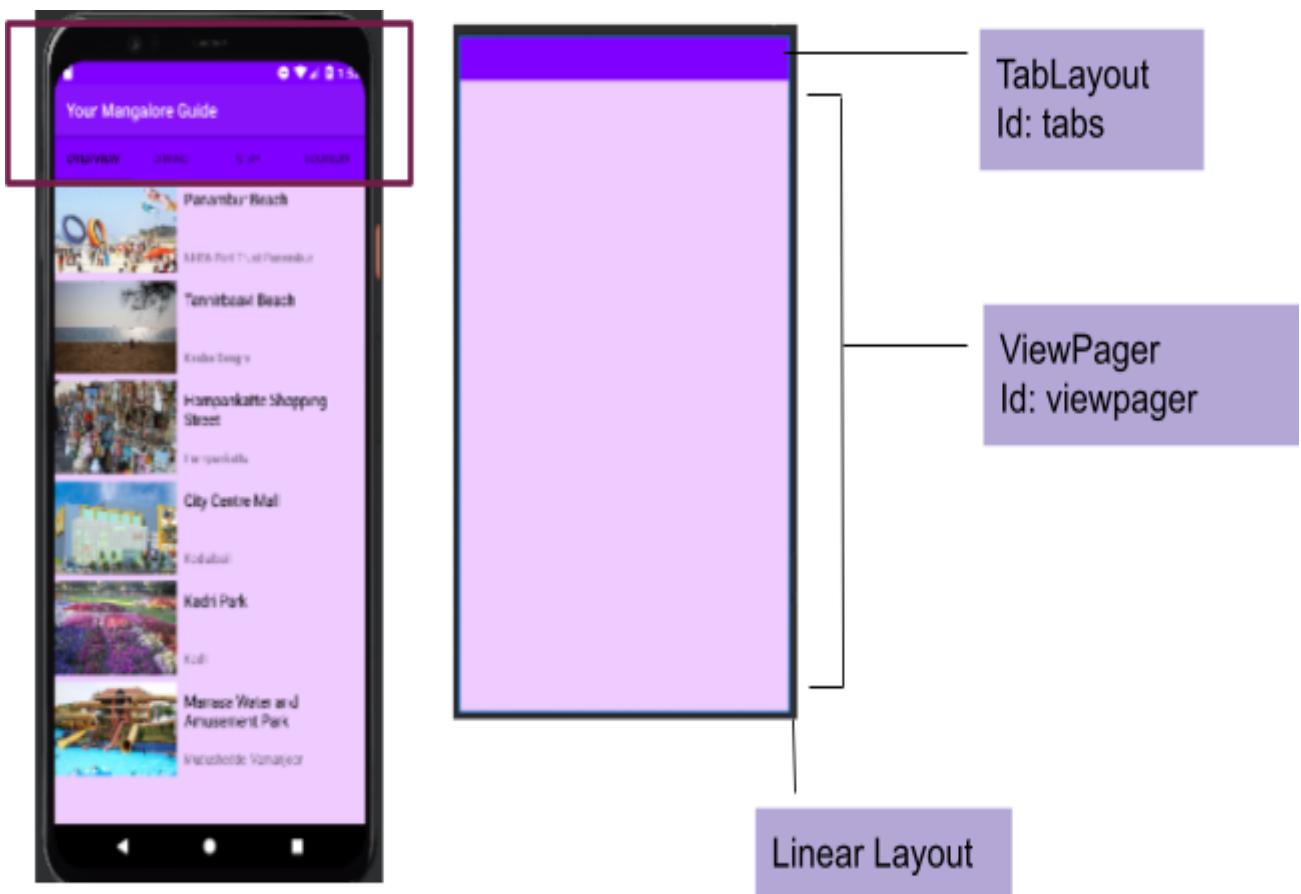


Fig. 3.2.1 ActivityMain XML

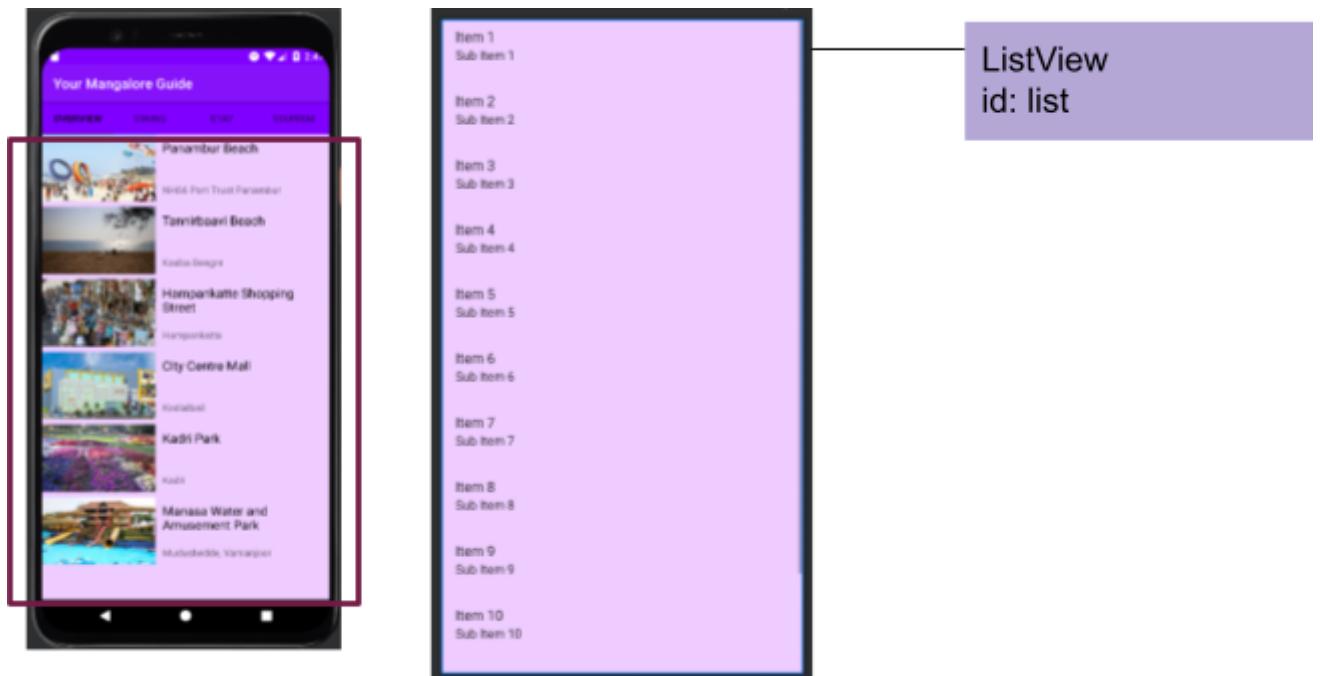


Fig 3.2.2 ItemListView XML

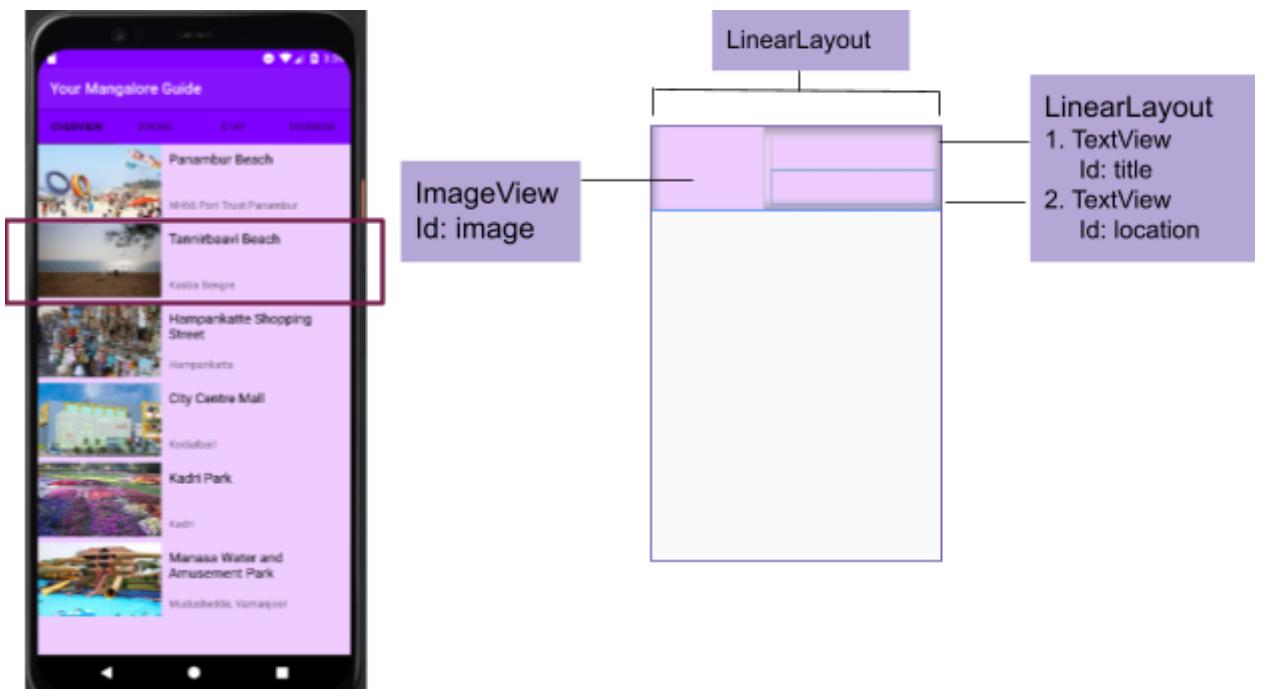
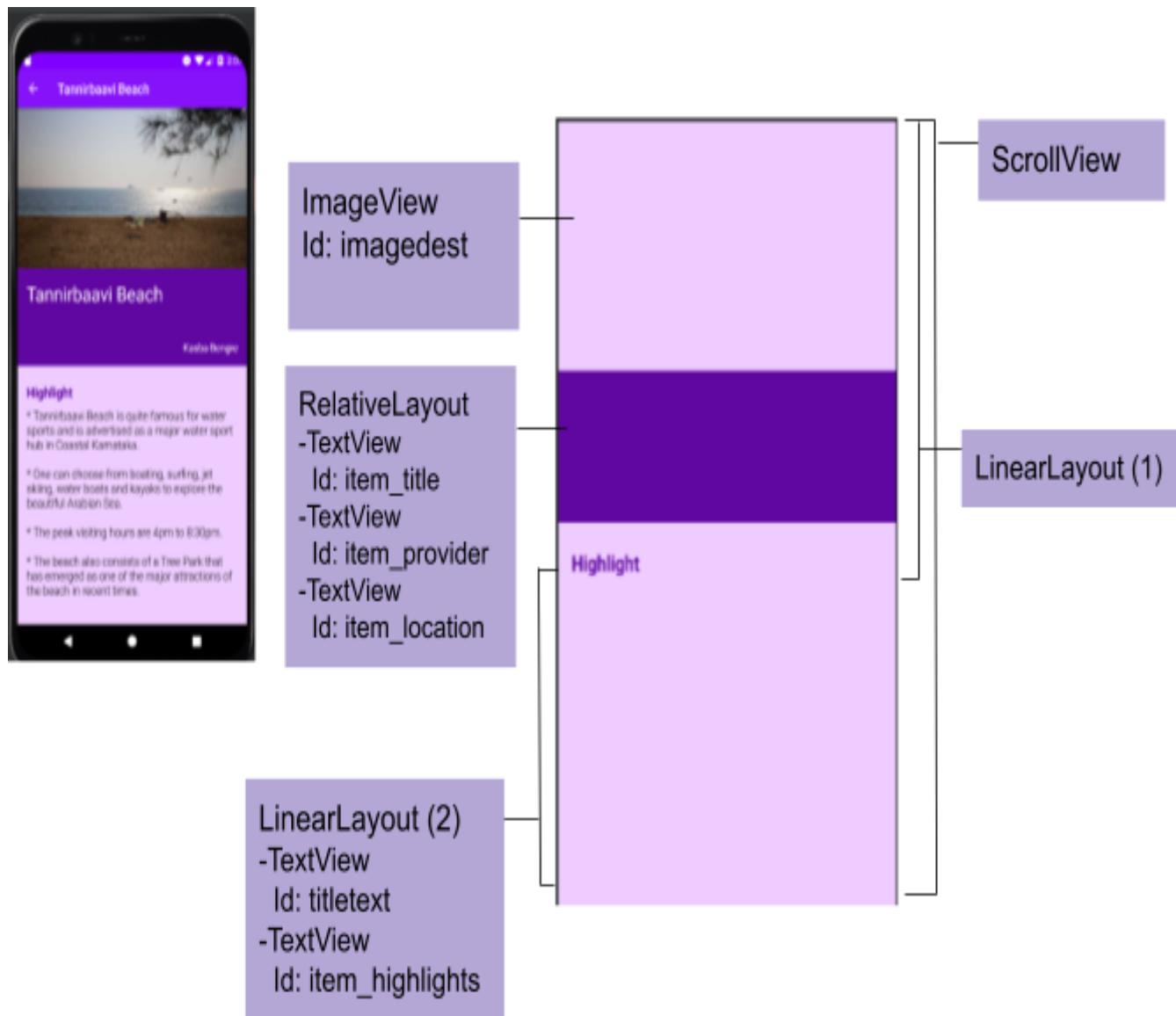


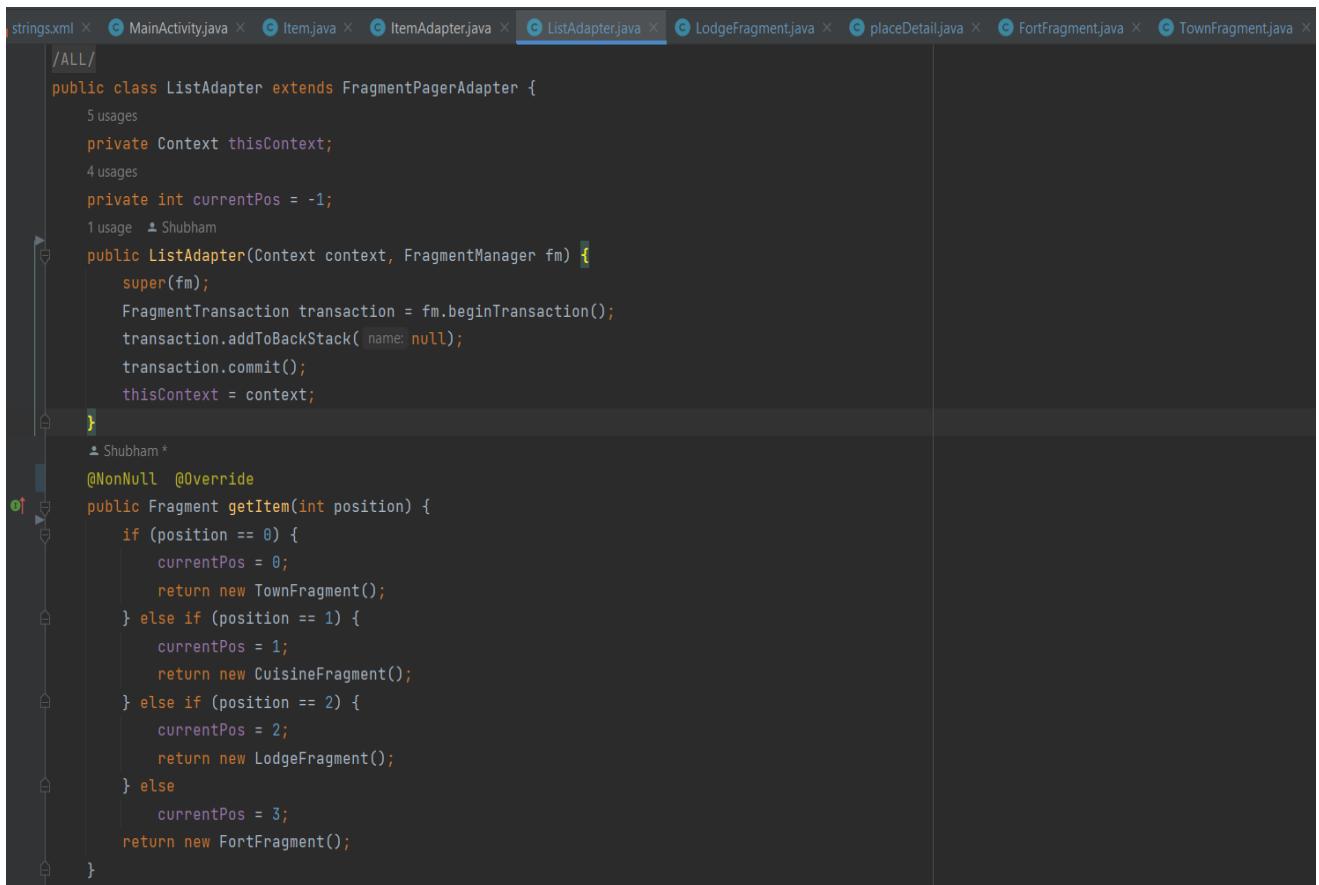
Fig 3.2.3 IndividualListItem XML



**Fig 3.2.4 ItemDetail XML**

### 3.3 Description of Implementation

#### 3.3.1 Code to implement the working of four fragments

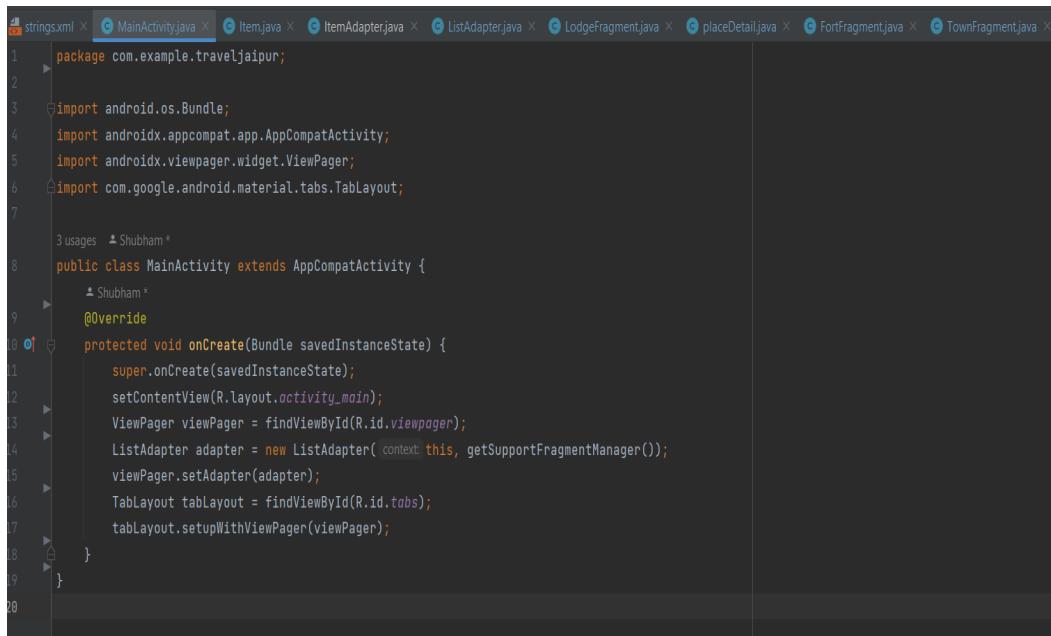


```
strings.xml x MainActivity.java x Item.java x ItemAdapter.java x ListAdapter.java x LodgeFragment.java x placeDetail.java x FortFragment.java x TownFragment.java x
/ALL/
public class ListAdapter extends FragmentPagerAdapter {
    5 usages
    private Context thisContext;
    4 usages
    private int currentPos = -1;
    1 usage  ↳ Shubham
    public ListAdapter(Context context, FragmentManager fm) {
        super(fm);
        FragmentTransaction transaction = fm.beginTransaction();
        transaction.addToBackStack( name: null );
        transaction.commit();
        thisContext = context;
    }
    ↳ Shubham *
    @NotNull @Override
    public Fragment getItem(int position) {
        if (position == 0) {
            currentPos = 0;
            return new TownFragment();
        } else if (position == 1) {
            currentPos = 1;
            return new CuisineFragment();
        } else if (position == 2) {
            currentPos = 2;
            return new LodgeFragment();
        } else
            currentPos = 3;
        return new FortFragment();
    }
}
```

**Fig 3.1:** Implementation of code fragments

Fig 3.1 is the code which is used to implement the working of the four fragments that are widely used in our application

### 3.3.2 Code to set the viewer page



```

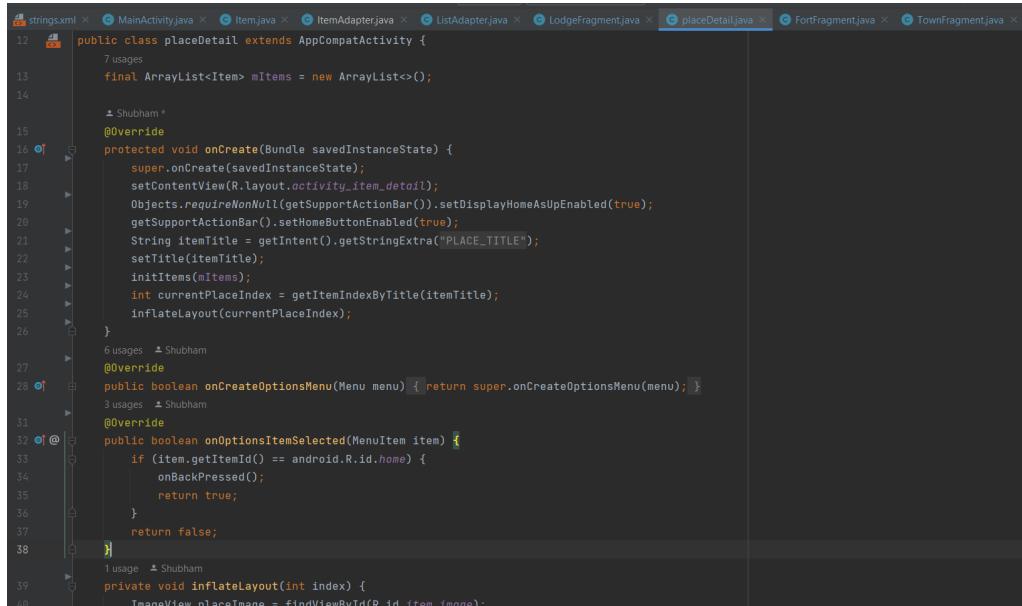
1 package com.example.traveljaipur;
2
3 import android.os.Bundle;
4 import androidx.appcompat.app.AppCompatActivity;
5 import androidx.viewpager.widget.ViewPager;
6 import com.google.android.material.tabs.TabLayout;
7
8 import Shubham.*;
9
10 public class MainActivity extends AppCompatActivity {
11     Shubham.*;
12     @Override
13     protected void onCreate(Bundle savedInstanceState) {
14         super.onCreate(savedInstanceState);
15         setContentView(R.layout.activity_main);
16         ViewPager viewPager = findViewById(R.id.viewpager);
17         ListAdapter adapter = new ListAdapter(context: this, getSupportFragmentManager());
18         viewPager.setAdapter(adapter);
19         TabLayout tabLayout = findViewById(R.id.tabs);
20         tabLayout.setupWithViewPager(viewPager);
21     }
22 }

```

**Fig 3.2:** Implementation of Viewer Page

Fig 3.2 is the code which is used to implement the working of the viewer page of the application

### 3.3.3 Code for Menu and Array Creation



```

12 public class placeDetail extends AppCompatActivity {
13     Shubham.*;
14     final ArrayList<Item> mItems = new ArrayList<>();
15
16     @Override
17     protected void onCreate(Bundle savedInstanceState) {
18         super.onCreate(savedInstanceState);
19         setContentView(R.layout.activity_item_detail);
20         Objects.requireNonNull(getSupportActionBar()).setDisplayHomeAsUpEnabled(true);
21         getSupportActionBar().setHomeButtonEnabled(true);
22         String itemTitle = getIntent().getStringExtra("PLACE_TITLE");
23         setTitle(itemTitle);
24         initItems(mItems);
25         int currentPlaceIndex = getItemIndexByTitle(itemTitle);
26         inflateLayout(currentPlaceIndex);
27     }
28     @Override
29     public boolean onCreateOptionsMenu(Menu menu) { return super.onCreateOptionsMenu(menu); }
30     @Override
31     public boolean onOptionsItemSelected(MenuItem item) {
32         if (item.getItemId() == android.R.id.home) {
33             onBackPressed();
34             return true;
35         }
36         return false;
37     }
38     private void inflateLayout(int index) {
39         TmaneView placeImage = findViewById(R.id.item_image);
40     }

```

**Fig 3.3.3:** Implementation of Menu and Array

Fig 3.3 is the code which is used to implement array and menu of the application.

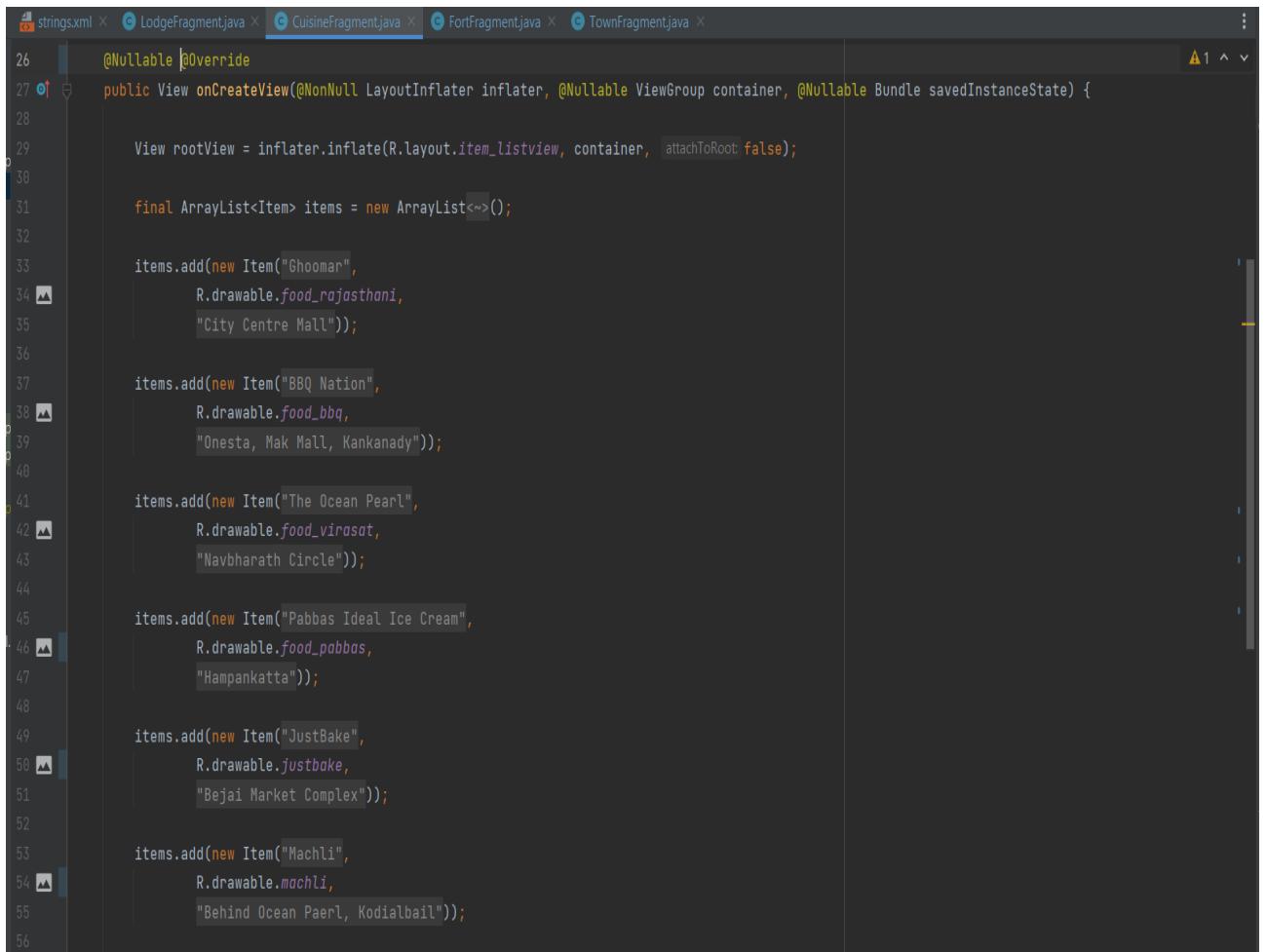
### 3.3.4 Code for Implementation of Overview Page

```
strings.xml X LodgeFragment.java X CuisineFragment.java X FortFragment.java X TownFragment.java X
32 public View onCreateView(@NotNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
33     //First, create a rootView and inflate layout from item_listview
34     View rootView = inflater.inflate(R.layout.item_listview, container, false);
35
36     //Create a ArrayList of Item
37     final ArrayList<Item> items = new ArrayList<>();
38
39     //Add list data
40     items.add(new Item("Panambur Beach",
41         R.drawable.pl_panamburbeach,
42         "NH66 Port Trust Panambur"));
43
44     items.add(new Item("Tannirbaavi Beach",
45         R.drawable.tann,
46         "Kasba Bengre"));
47
48     items.add(new Item("Hampankatte Shopping Street",
49         R.drawable.market,
50         "Hampankatta"));
51
52     items.add(new Item("City Centre Mall",
53         R.drawable.cc,
54         "Kodialbail"));
55
56     items.add(new Item("Kadri Park",
57         R.drawable.parkkk,
58         "Kadri"));
59
60     items.add(new Item("Manasa Water and Amusement Park",
61         R.drawable.manasa_waterpark,
62         "Mudushedde, Vamanjoor"));
```

**Fig 3.3.4:** Implementation of Menu and Array

Fig 3.3.4 is the code which is used to implement array and menu of the application

### 3.3.5 Code for Implementation of Dining Page



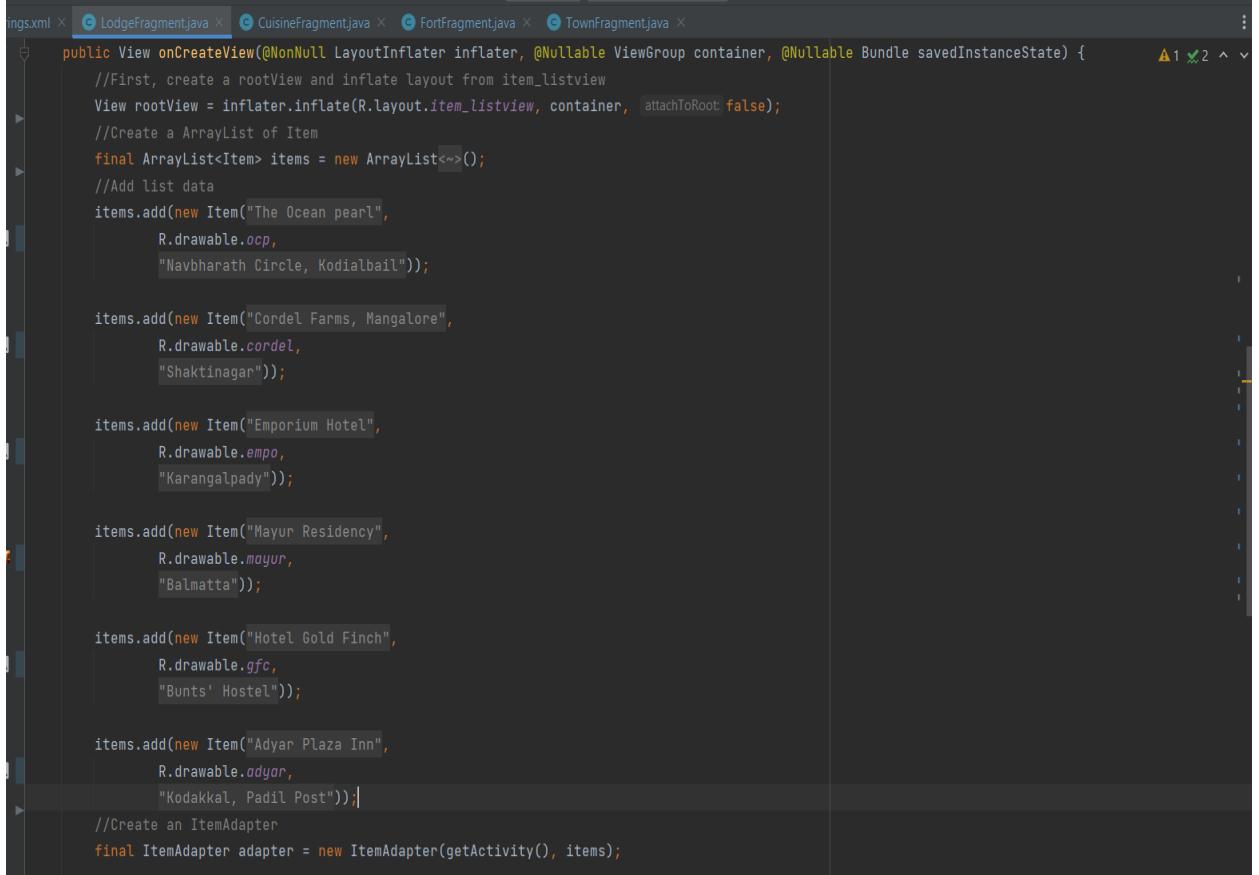
The screenshot shows the Android Studio interface with the 'CuisineFragment.java' tab selected. The code displays the implementation of the onCreateView method, which inflates a list view and adds several items representing fine-dine restaurants. Each item includes a name, a drawable resource, and a location.

```
26  @Override
27  public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
28
29      View rootView = inflater.inflate(R.layout.item_listview, container, false);
30
31      final ArrayList<Item> items = new ArrayList<>();
32
33      items.add(new Item("Ghooman",
34          R.drawable.food_rajasthani,
35          "City Centre Mall"));
36
37      items.add(new Item("BBQ Nation",
38          R.drawable.food_bbq,
39          "Onesta, Mak Mall, Kankanady"));
40
41      items.add(new Item("The Ocean Pearl",
42          R.drawable.food_virasat,
43          "Navbharath Circle"));
44
45      items.add(new Item("Pabbas Ideal Ice Cream",
46          R.drawable.food_pabbas,
47          "Hampankatta"));
48
49      items.add(new Item("JustBake",
50          R.drawable.justbake,
51          "Bejai Market Complex"));
52
53      items.add(new Item("Machli",
54          R.drawable.machli,
55          "Behind Ocean Pearl, Kodialbail"));
```

**Fig 3.3.5** Inclusion of fine-dine restaurants

Fig 3.3.5 is the code that embeds the name, image and location of the fine-dine hotels.

### 3.3.6 Code for implementation of Stay page



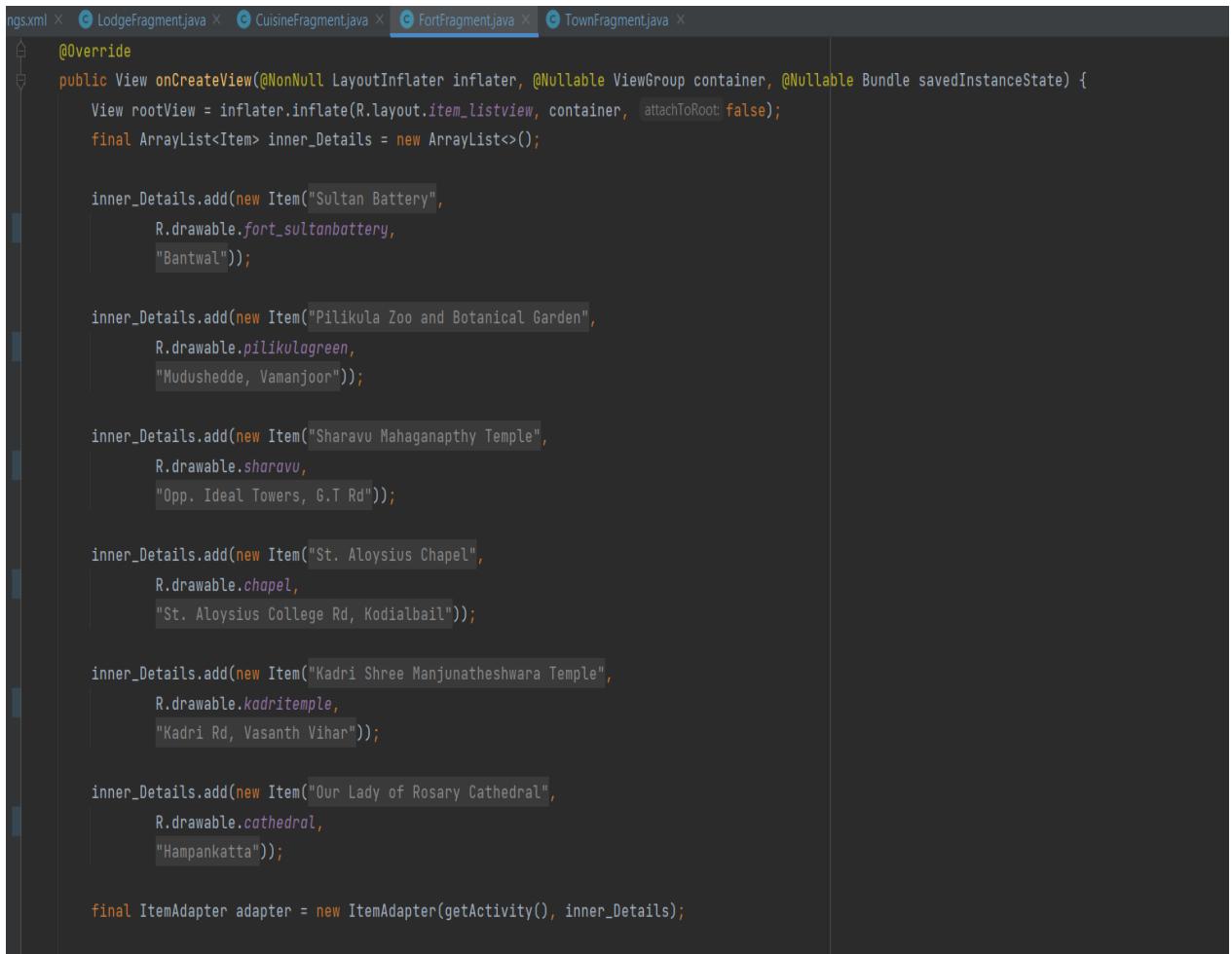
The screenshot shows the Android Studio code editor with the file `LodgeFragment.java` open. The code implements the `onCreateView` method to inflate a list view and populate it with hotel items. The code uses a RecyclerView adapter to handle the list items.

```
public View onCreateView(@NotNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
    //First, create a rootView and inflate layout from item_listview
    View rootView = inflater.inflate(R.layout.item_listview, container, false);
    //Create a ArrayList of Item
    final ArrayList<Item> items = new ArrayList<>();
    //Add list data
    items.add(new Item("The Ocean pearl",
        R.drawable.ocp,
        "Navbharath Circle, Kodialbail"));
    items.add(new Item("Cordel Farms, Mangalore",
        R.drawable.cordel,
        "Shaktinagar"));
    items.add(new Item("Emporium Hotel",
        R.drawable.empo,
        "Karangalpady"));
    items.add(new Item("Mayur Residency",
        R.drawable.mayur,
        "Balmatta"));
    items.add(new Item("Hotel Gold Finch",
        R.drawable.gfc,
        "Bunts' Hostel"));
    items.add(new Item("Adyar Plaza Inn",
        R.drawable.adyar,
        "Kodakkal, Padil Post"));
    //Create an ItemAdapter
    final ItemAdapter adapter = new ItemAdapter(getActivity(), items);
```

**Fig. 3.3.6** Inclusion of Lodges/Hotels to stay at

Fig. 3.3.6 is the code to implement the inclusion and display of lodges/hotels for stay.

### 3.3.7 Code for implementation of Tourism page



```
ngs.xml × LodgeFragment.java × CuisineFragment.java × FortFragment.java × TownFragment.java ×
@Override
public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
    View rootView = inflater.inflate(R.layout.item_listview, container, false);
    final ArrayList<Item> inner_Details = new ArrayList<>();

    inner_Details.add(new Item("Sultan Battery",
        R.drawable.fort_sultانبattery,
        "Bantwal"));

    inner_Details.add(new Item("Pilikula Zoo and Botanical Garden",
        R.drawable.pilikulagreen,
        "Mudushedde, Vamanjoor"));

    inner_Details.add(new Item("Sharavu Mahaganapthy Temple",
        R.drawable.sharavu,
        "Opp. Ideal Towers, G.T Rd"));

    inner_Details.add(new Item("St. Aloysius Chapel",
        R.drawable.chapel,
        "St. Aloysius College Rd, Kodialbail"));

    inner_Details.add(new Item("Kadri Shree Manjunatheshwara Temple",
        R.drawable.kadritemple,
        "Kadri Rd, Vasanth Vihar"));

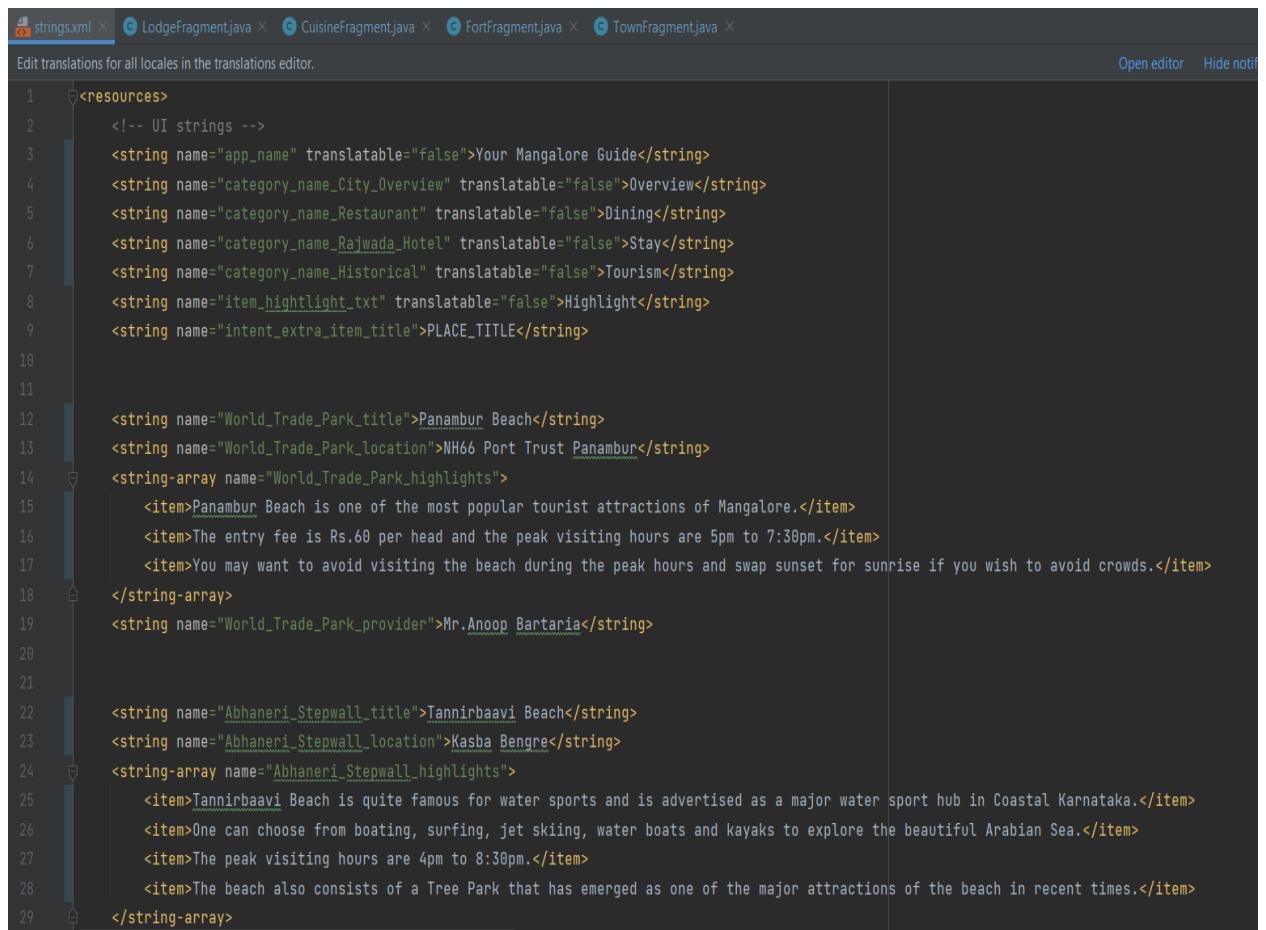
    inner_Details.add(new Item("Our Lady of Rosary Cathedral",
        R.drawable.cathedral,
        "Hampankatta"));

    final ItemAdapter adapter = new ItemAdapter(getActivity(), inner_Details);
}
```

**Fig. 3.3.7** Inclusion of major tourist attractions

Fig. 3.3.7 is the code to implement the inclusion of major tourist attractions to visit.

### 3.3.8 XML page inclusive of all string elements



The screenshot shows the Android Studio interface with the 'strings.xml' file open in the editor. The code defines various UI strings and arrays for different travel locations:

```
<resources>
    <!-- UI strings -->
    <string name="app_name" translatable="false">Your Mangalore Guide</string>
    <string name="category_name_City_Overview" translatable="false">Overview</string>
    <string name="category_name_Restaurant" translatable="false">Dining</string>
    <string name="category_name_Rajwada_Hotel" translatable="false">Stay</string>
    <string name="category_name_Historical" translatable="false">Tourism</string>
    <string name="item_highlight_txt" translatable="false">Highlight</string>
    <string name="intent_extra_item_title">PLACE_TITLE</string>

    <string name="World_Trade_Park_title">Panambur Beach</string>
    <string name="World_Trade_Park_location">NH66 Port Trust Panambur</string>
    <string-array name="World_Trade_Park_highlights">
        <item>Panambur Beach is one of the most popular tourist attractions of Mangalore.</item>
        <item>The entry fee is Rs.60 per head and the peak visiting hours are 5pm to 7:30pm.</item>
        <item>You may want to avoid visiting the beach during the peak hours and swap sunset for sunrise if you wish to avoid crowds.</item>
    </string-array>
    <string name="World_Trade_Park_provider">Mr.Anoop Bartaria</string>

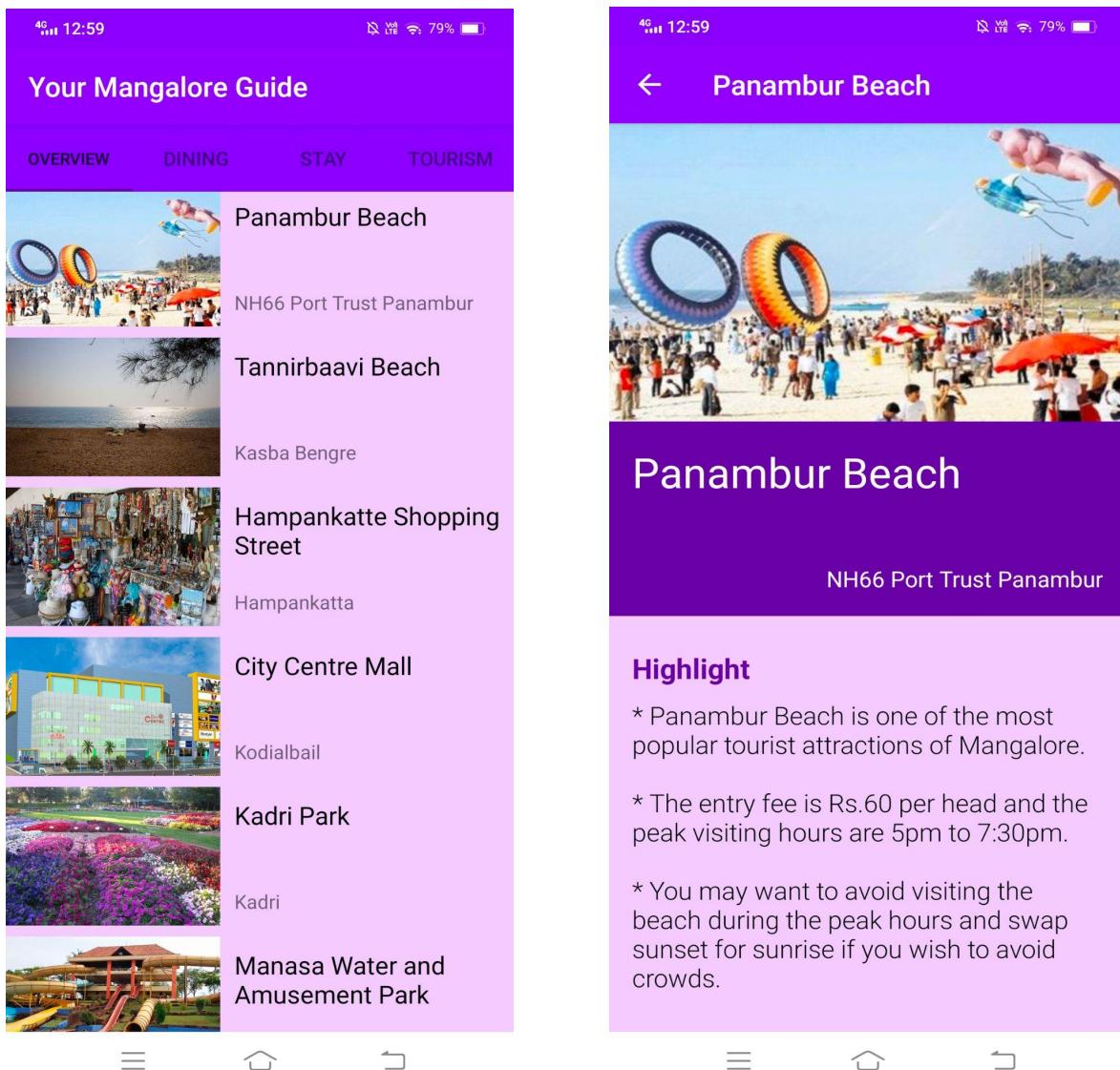
    <string name="Abhaneri_Stepwall_title">Tannirbaavi Beach</string>
    <string name="Abhaneri_Stepwall_location">Kasba Bengre</string>
    <string-array name="Abhaneri_Stepwall_highlights">
        <item>Tannirbaavi Beach is quite famous for water sports and is advertised as a major water sport hub in Coastal Karnataka.</item>
        <item>One can choose from boating, surfing, jet skiing, water boats and kayaks to explore the beautiful Arabian Sea.</item>
        <item>The peak visiting hours are 4pm to 8:30pm.</item>
        <item>The beach also consists of a Tree Park that has emerged as one of the major attractions of the beach in recent times.</item>
    </string-array>
```

**Fig. 3.3.8** Implementation of string elements to display

Fig. 3.3.8 is the code for the combining all display string elements of the application linked with the UI design palette.

## CHAPTER 4 - SCREENSHOTS

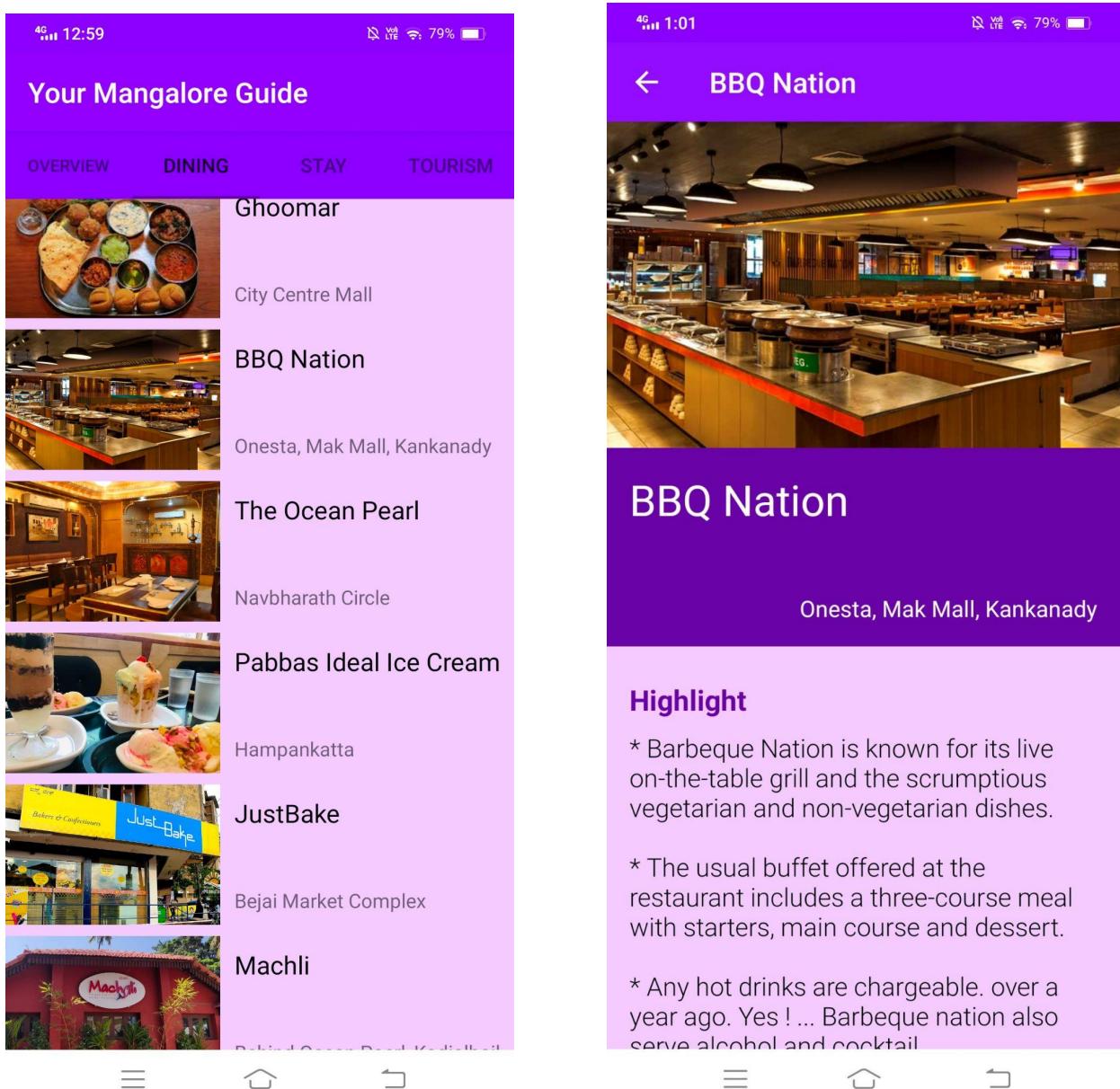
### 4.1 Overview Page



**Fig 4.1:** Overview Page

Fig 4.1 is the Overview Page which contains the list of famous places in the city

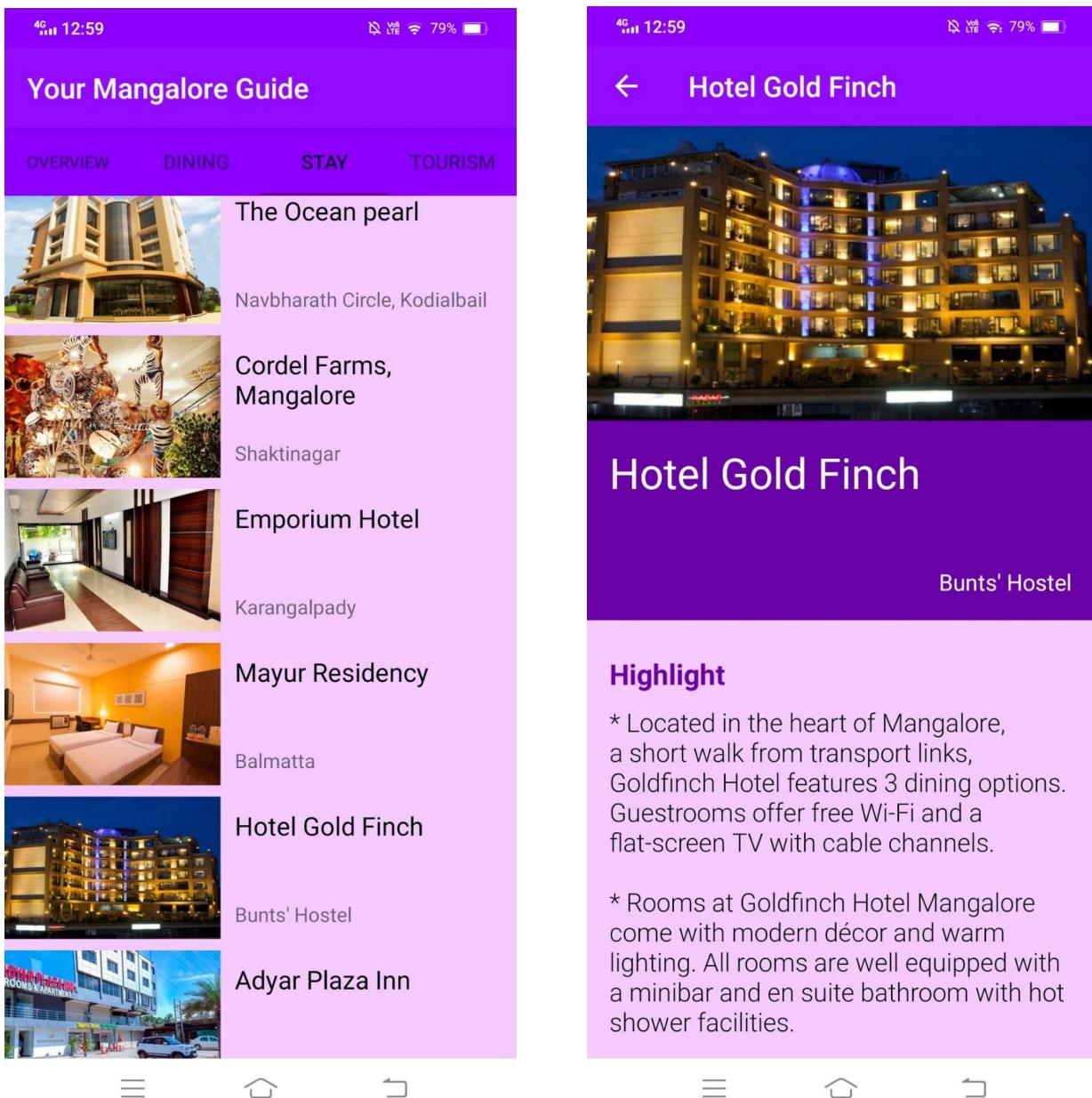
## 4.2 Dinning Area Page



**Fig 4.2: Dinning Area Page**

Fig 4.2 is the dinning area page which contains the list of all the famous restaurants in the city

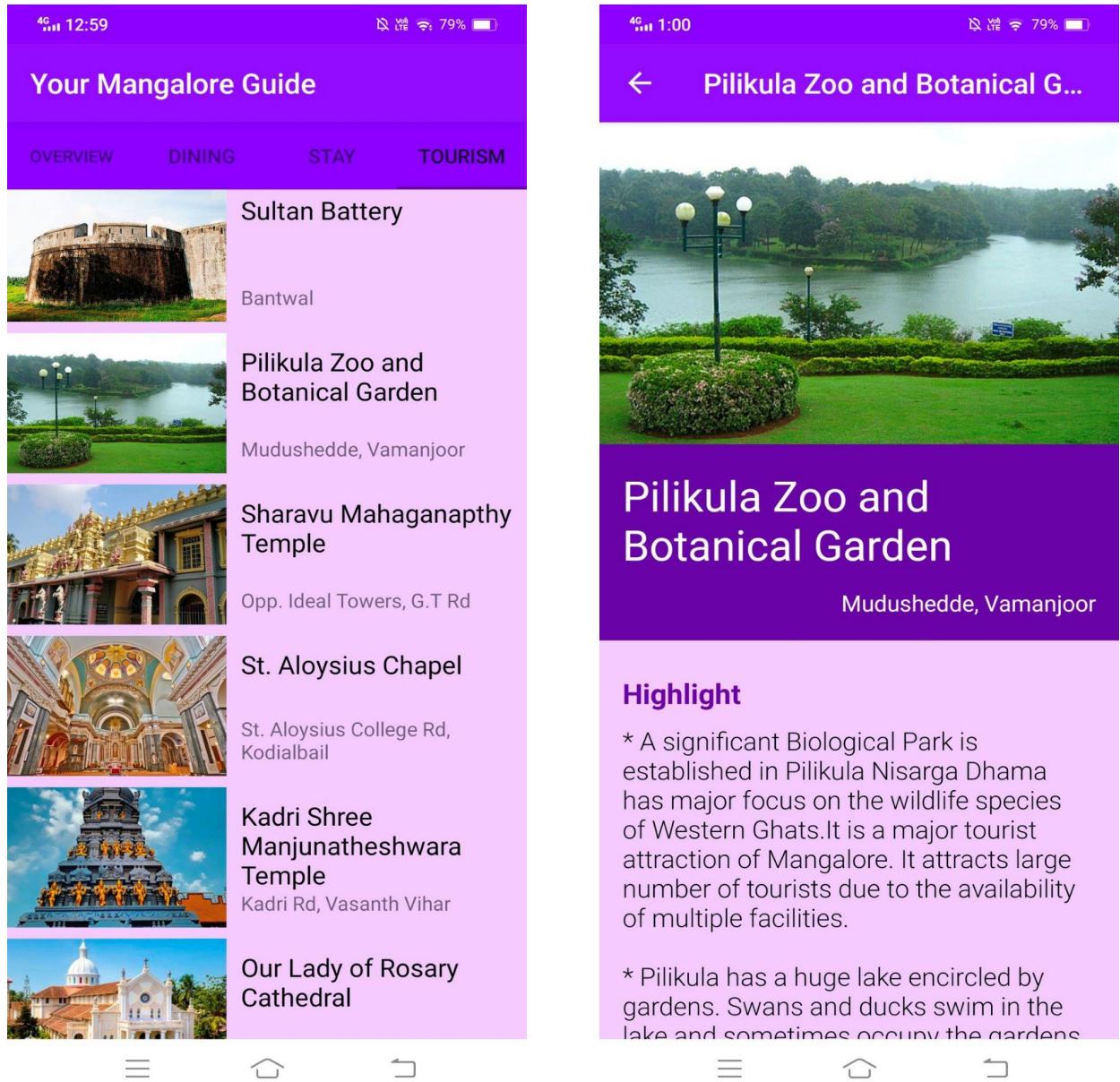
## 4.3 Logging Area Page



**Fig 4.3: Dinning Area Page**

Fig 4.3 is the dinning area page which contains the list of all the famous restaurants in the city

## 4.4 Tourism Page



**Fig 4.3: Tourism Page**

Fig 4.4 is the tourism page which contains the list of all the famous places in the city

## **CHAPTER 5 - CONCLUSION AND FUTURE WORKS**

The application provides a list of the most tourist friendly and frequently visited places in and around India's major port city, Mangalore. The collection of these popular travel destinations in one place along with the inclusion of places to dine in and stay makes the application an efficient pick for planning a user's itinerary to the city. The user can access all the necessary information about the city and its major attractions without having to surf through multiple websites.

An application based on Tourism has a future scope in various aspects. The future scope of our project is to make the application capable of planning an itinerary to multiple cities across India and to introduce an efficient interactive system that enables users of the application to share their experiences on their visit to the various destinations mentioned in our application whilst enabling interactions with other users on the app to ensure that potential travellers can gain information about the recent developments made by travel authorities for tourists.

## REFERENCES

1. Stack Overflow(<https://stackoverflow.com>)
2. Geeksforgeeks(<https://www.geeksforgeek.org>)
3. Android Studio Documentation(<https://developer.android.com/docs>)