SPECTRAFLIX

A MOVIE STREAMING AND BOOKING ANDROID APP

NAME : OMANSHU

CLASS : 10

SECTION : B

ROLL NO. : 43

https://www.github.com/Omanshu209/SpectraFlix

Acknowledgement

I would like to express my sincere gratitude to several individuals who have supported me throughout the development of this project.

First and foremost, I would like to thank my computer teacher, Sir Subhajit Dutta, for his guidance and encouragement, which have been instrumental in enhancing my technical knowledge and shaping the direction of this project. He had also provided the idea of the interactive seat selection feature in the movie booking system.

I am also deeply grateful to my school's principal, Br. Solomon Morris, for providing a conducive learning environment that fostered my growth and allowed me to explore my interests in technology.

Lastly, I extend my heartfelt thanks to my parents for their unwavering support throughout this journey. Their belief in my abilities has been a constant source of inspiration.

Introduction

Introducing SpectraFlix, a movie streaming and booking application crafted using Java and XML within the Android development environment. SpectraFlix offers a seamless and flexible platform for movie enthusiasts, providing multiple ways to enjoy films. Users can stream movies directly from WebView, input URLs, or access movies stored on their devices. Additionally, trailers can be viewed effortlessly through a built-in YouTube WebView.

The booking feature in SpectraFlix sets it apart, allowing users to browse available films and select seats using a visually interactive interface, making the reservation process intuitive and engaging. Built with performance and user experience in mind, the app's robust back-end and fluid design ensure a smooth, responsive experience.

Furthermore, SpectraFlix enables users to expand their movie library by adding new films for both streaming and booking, giving them full control over their entertainment.

Software Requirements

Operating System :

- **Windows(Android Studio) / Android(AIDE) : For Development**
- **Android 8.1.0 or above [Tested by the developer] : For testing and deployment**

Development Tools :

- **Java Development Kit (JDK) : Version 6 or higher (Tested)**
- **AIDE : Latest Stable Version**
- **Android Studio : Latest Stable Version**
- **Gradle**

Languages :

- **Java : For the app's backend**
- **XML : For designing the user interface (UI)**

Third Party Tools :

- **YouTube IFrame API : For embedding trailers via WebView**

Version Control :

- **Git : For version control and code management**
- **Github : To store the project repository**

Device Requirements (For running the application) :

- **Android phone or tablet with sufficient storage and processing capability (minimum 2 GB RAM, 16 GB storage recommended)**

Java™

MainActivity.java

```
package com.app.spectraflix;

import android.app.Activity;
import android.os.Bundle;
import android.content.Intent;
import android.view.View;
import android.widget.ImageButton;
import
android.graphics.drawable.ColorDrawable;
import android.graphics.Color;
import android.app.ActionBar;
import android.widget.ImageButton;
import android.widget.ImageView;
import android.widget.LinearLayout;
import android.view.Gravity;
import android.graphics.Typeface;
import android.widget.TextView;
import android.util.DisplayMetrics;
import android.net.Uri;
import java.io.File;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.Manifest;
import android.content.pm.PackageManager;
import java.util.List;

public class MainActivity extends Activity
{
        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);
                setContentView(R.layout.main);

                ActionBar actionBar =
getActionBar();

                if(actionBar != null)

        actionBar.setBackgroundDrawable(new
ColorDrawable(Color.parseColor("#ACD5C2")));

                if
(checkSelfPermission(Manifest.permission.READ_
EXTERNAL_STORAGE) !=
PackageManager.PERMISSION_GRANTED)
                        requestPermissions(new
String[]{Manifest.permission.READ_EXTERNAL_STO
RAGE}, 1);

                Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");

                TextView textView1 =
findViewById(R.id.category_label_1);

        textView1.setTypeface(customFont);
```

```
                TextView textView2 =
findViewById(R.id.category_label_2);

        textView2.setTypeface(customFont);

                TextView textView3 =
findViewById(R.id.category_label_3);

        textView3.setTypeface(customFont);

                TextView textView4 =
findViewById(R.id.category_label_4);

        textView4.setTypeface(customFont);

                ImageButton button2 =
findViewById(R.id.icon_button2);
                button2.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), activity2.class);

        startActivity(intent);

        overridePendingTransition(0, 0);
                        }
                });

                ImageButton button3 =
findViewById(R.id.icon_button3);
                button3.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), activity3.class);

        startActivity(intent);

        overridePendingTransition(0, 0);
                        }
                });

                DisplayMetrics displayMetrics =
new DisplayMetrics();
```

```
        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
                int width =
displayMetrics.widthPixels;

                DataManager dataManager =
(DataManager) getApplication();
                List<Movie> movies =
dataManager.getMovies();
                streamingMovies categories =
new streamingMovies();

                for(Movie mov : movies)
                {

        switch(mov.getCategory())
                        {
                                case 1:

        categories.addAnimatedMovie(mov);
                                        break;

                                case 2:

        categories.addPopularMovie(mov);
                                        break;

                                case 3:

        categories.addHorrorMovie(mov);
                                        break;

                                case 4:

        categories.addDevelopersChoiceMovie(mo
v);
                                        break;
                        }
                }

                List<Movie> animatedMovies =
categories.getAnimatedMovies();
                List<Movie> popularMovies =
categories.getPopularMovies();
                List<Movie> horrorMovies =
categories.getHorrorMovies();
                List<Movie>
developersChoiceMovies =
categories.getDevelopersChoiceMovies();

                List<Movie>[] moviesList =
{animatedMovies, popularMovies, horrorMovies,
developersChoiceMovies};
                int[] scrollViews =
{R.id.animated_movies_scroll_view,
R.id.popular_movies_scroll_view,
R.id.horror_movies_scroll_view,
R.id.developers_choice_scroll_view};

                for(int i = 0 ; i < 4 ; i++)
                        for(Movie mov :
moviesList[i])

        addStreamingMovie(scrollViews[i], mov,
width);
        }

        public void addStreamingMovie(int
scrollView, Movie mov, int width)
        {
                LinearLayout parentLayout =
findViewById(scrollView);
```

```
                LinearLayout newLayout = new
LinearLayout(this);
                newLayout.setLayoutParams(new
LinearLayout.LayoutParams(


LinearLayout.LayoutParams.WRAP_CONTENT,


LinearLayout.LayoutParams.MATCH_PARENT));

        newLayout.setOrientation(LinearLayout.
VERTICAL);

        newLayout.setGravity(Gravity.CENTER);

                ImageView movieTitleView = new
ImageView(this);
                LinearLayout.LayoutParams
movieTitleParams = new
LinearLayout.LayoutParams(200, 150);
                movieTitleParams.gravity =
Gravity.CENTER;

        movieTitleView.setLayoutParams(movieTi
tleParams);

                if(mov.getResTitleImagePath()
== -1)
                {
                        try
                        {
                                File file = new
File(mov.getTitleImagePath());
                                Uri imageUri =
Uri.fromFile(file);
                                Bitmap bitmap =
BitmapFactory.decodeStream(getContentResolver(
).openInputStream(imageUri));

        movieTitleView.setImageBitmap(bitmap);
                        }

                        catch(Exception e)
                        {}
                }

                else

        movieTitleView.setImageResource(mov.ge
tResTitleImagePath());


        movieTitleView.setScaleType(ImageView.
ScaleType.FIT_CENTER);

                ImageView moviePosterView = new
ImageView(this);
                LinearLayout.LayoutParams
moviePosterParams = new
LinearLayout.LayoutParams(
                        (int) Math.round(width
* 0.75), 400);
                moviePosterParams.gravity =
Gravity.CENTER;

        moviePosterView.setLayoutParams(movieP
osterParams);

                if(mov.getResImagePath() == -1)
                {
                        try
```

```
                       {
                              File file = new
File(mov.getImagePath());
                              Uri imageUri =
Uri.fromFile(file);
                              Bitmap bitmap =
BitmapFactory.decodeStream(getContentResolver(
).openInputStream(imageUri));

        moviePosterView.setImageBitmap(bitmap)
;
                       }

                       catch(Exception e)
                       {}
               }

               else

        moviePosterView.setImageResource(mov.g
etResImagePath());


        moviePosterView.setScaleType(ImageView
.ScaleType.FIT_CENTER);

        moviePosterView.setPadding((int)
Math.round(width * 0.05), 0, (int)
Math.round(width * 0.05), 0);

               ImageButton imageButton = new
ImageButton(this);
               LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(100, 75);
               buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);
```

```

        imageButton.setImageResource(R.drawabl
e.watching);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_CENTER);

        imageButton.setBackground(null);

               final Movie mov_final = mov;

        imageButton.setOnClickListener(new
View.OnClickListener()
               {
                       @Override
                       public void
onClick(View v)
                       {
                              Intent intent =
new Intent();

        intent.putExtra("Movie", mov_final);

        intent.setClass(getApplicationContext(
), PreviewActivity.class);

        startActivity(intent);
                       }
               });


        newLayout.addView(movieTitleView);

        newLayout.addView(moviePosterView);
               newLayout.addView(imageButton);


        parentLayout.addView(newLayout);
        }
}
```

BookableMovie.java

```java
package com.app.spectraflix;

import java.io.Serializable;
import java.util.List;
import java.util.LinkedList;

public class BookableMovie implements Serializable
{
        private int resMovieTitlePath;
        private String movieName, movieTitlePath;
        public List<Cinema> cinemas = new LinkedList<Cinema>();

        public BookableMovie(String movieName, int resMovieTitlePath, String
movieTitlePath)
        {
                this.movieName = movieName;
                this.resMovieTitlePath = resMovieTitlePath;
                this.movieTitlePath = movieTitlePath;
        }

        public List<Cinema> getCinemas()
        {
                return this.cinemas;
        }

        public void addCinema(Cinema cinema)
        {
                this.cinemas.add(cinema);
        }

        public void removeCinema(Cinema cinema)
        {
                this.cinemas.remove(cinema);
        }

        public String getMovieName()
        {
                return this.movieName;
        }

        public String getMovieTitlePath()
        {
                return this.movieTitlePath;
        }

        public int getResMovieTitlePath()
        {
                return this.resMovieTitlePath;
        }
}
```

Cinema.java

```
package com.app.spectraflix;

import java.util.List;
import java.util.LinkedList;
import java.time.LocalDateTime;
import java.io.Serializable;
import java.time.format.DateTimeFormatter;

public class Cinema implements Serializable
{
        private String name;
        private int[] seatRowCol;
        public List<Runtime> runtimes = new
LinkedList<Runtime>();

        public Cinema(String name, int
numSeats)
        {
                this.name = name;
                this.seatRowCol =
this.getMinRowCol(numSeats);
        }

        public String getName()
        {
                return this.name;
        }

        public List<Runtime> getRuntimes()
        {
                return this.runtimes;
        }

        public boolean addRuntime(String
startDateTime, String endDateTime)
        {
                DateTimeFormatter formatter =
DateTimeFormatter.ofPattern("yyyy-MM-dd
HH:mm");
                LocalDateTime start =
LocalDateTime.parse(startDateTime, formatter);
                LocalDateTime end =
LocalDateTime.parse(endDateTime, formatter);

                for(Runtime rt : this.runtimes)
                {
                        LocalDateTime startRt =
rt.getStartDateTime(), endRt =
rt.getEndDateTime();

        if((startRt.isAfter(start) &&
startRt.isBefore(end)) ||
(endRt.isAfter(start) && endRt.isBefore(end))
|| (start.isAfter(startRt) &&
start.isBefore(endRt)) ||
(end.isAfter(startRt) && end.isBefore(endRt))
|| (start.isEqual(startRt) &&
end.isEqual(endRt)))
                                return false;
                }
```

```
                Runtime runtime = new
Runtime(startDateTime, endDateTime,
this.seatRowCol);
                runtimes.add(runtime);
                return true;
        }

        public Runtime getRuntime(int index)
        {
                return
this.runtimes.get(index);
        }

        public int getRuntimesSize()
        {
                return this.runtimes.size();
        }

        public boolean
removeRuntime(LocalDateTime start)
        {
                for(int i = 0 ; i <
this.runtimes.size() ; i++)
                {
                        Runtime runtime =
runtimes.get(i);


        if(runtime.getStartDateTime().isEqual(
start))
                        {

        runtimes.remove(i);
                                return true;
                        }
                }

                return false;
        }

        public int[] getMinRowCol(int num)
        {
                List<int[]> listOfFactors = new
LinkedList<int[]>();

                for(int i = 1 ; i <= num ; i++)
                {
                        if(num % i != 0)
                                continue;
                        else if(i == num / i)
                                return new
int[]{i, i};

                        int[] factors = {i, num
/ i};

        listOfFactors.add(factors);
                }

                int[] outArr = {num, 1};
                int diff = num - 1;
                for(int[] arr : listOfFactors)
                {
                        int numDiff = arr[0] -
arr[1];

                        if(numDiff > 0 &&
numDiff < diff)
                        {
                                outArr = arr;
                                diff = numDiff;
                        }
                }

                return outArr;
        }
}
```

DataManager.java

```
package com.app.spectraflix;

import android.app.Application;
import java.util.LinkedList;
import java.util.List;

public class DataManager extends Application
{
        private List<Movie> movies;
        public List<BookableMovie>
bookableMovies;

        @Override
        public void onCreate()
        {
                super.onCreate();

                this.movies = new
LinkedList<Movie>();

                this.movies.add(new
Movie("Moana", "", "", R.drawable.moana,
R.drawable.moana_title, "LKFuXETZUsI", "",
"https://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/BigBuckBunny.mp4", "",
"Moana, daughter of chief Tui, embarks on a
journey to return the heart of goddess Te
Fitti from Maui, a demigod, after the plants
and the fish on her island start dying due to
a blight.", 1));
                this.movies.add(new
Movie("Zootopia", "", "", R.drawable.zootopia,
R.drawable.zootopia_title, "jWM0ct-OLsM",
"<iframe width = \"100%\" height=\"100%\" src
=
\"https://drive.google.com/file/d/1LUvPO6INLgL
Zg2EegeKuTDXKe5uKp2ct/preview\" allow =
\"autoplay\" sandbox = \"allow-same-origin
allow-scripts\" allowfullscreen = \"true\"
scrolling = \"no\"></iframe>", "", "", "When
Judy Hopps, a rookie officer in the Zootopia
Police Department, sniffs out a sinister plot,
she enlists the help of a con artist to solve
the case in order to prove her abilities to
Chief Bogo.", 1));
                this.movies.add(new Movie("Toy
Story 3", "", "", R.drawable.toy_story_3,
R.drawable.toy_story_3_title, "2BlMNH1QTeE",
"",
"https://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/ForBiggerBlazes.mp4", "",
"Before Andy leaves for college, his toys are
mistakenly delivered to a day care centre.
Woody convinces the other toys that they were
not dumped and leads them on an expedition
back home.", 1));
                this.movies.add(new
Movie("Frozen II", "", "",
R.drawable.frozen_2,
R.drawable.frozen_2_title, "Zi4LMpSDccc",
"<iframe width = \"100%\" height=\"100%\" src
=
\"https://drive.google.com/file/d/1FilPpbqmjmb
tYBu_1k7QJ-1G1tQZGzLN/preview\" allow =
\"autoplay\" sandbox = \"allow-same-origin
allow-scripts\" allowfullscreen = \"true\"
scrolling = \"no\"></iframe>", "", "", "Three
years after her coronation when Elsa
celebrates Autumn, she hears a mysterious
voice. She follows that voice along with Anna
and their friends as they are forced to
uncover the truth.", 1));
                this.movies.add(new
Movie("Oppenheimer", "", "",
R.drawable.oppenheimer,
R.drawable.oppenheimer_title, "uYPbbksJxIg",
"",
"https://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/ForBiggerFun.mp4", "",
"During World War II, Lt. Gen. Leslie Groves
Jr. appoints physicist J. Robert Oppenheimer
to work on the top-secret Manhattan Project.
Oppenheimer and a team of scientists spend
years developing and designing the atomic
bomb. Their work comes to fruition on July 16,
1945, as they witness the world's first
nuclear explosion, forever changing the course
of history.", 2));
                this.movies.add(new Movie("Free
Guy", "", "", R.drawable.free_guy,
R.drawable.free_guy_title, "X2m-08cOAbc", "",
"https://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/ForBiggerJoyrides.mp4",
"", "Guy lives a seemingly peaceful life as a
bank teller. However, an encounter with a
pretty but mysterious woman makes him realise
that he is a non-playable character in a
massive online video game.", 2));
                this.movies.add(new
Movie("Kill", "", "", R.drawable.kill,
R.drawable.kill_title, "da7lKeeS67c", "",
"https://commondatastorage.googleapis.com/gtv-
```

```
videos-bucket/sample/ForBiggerMeltdowns.mp4",
"", "A train to New Delhi becomes a combat
battleground as a pair of commandos faces off
against an army of invading bandits.", 2));
                this.movies.add(new
Movie("Srikanth", "", "", R.drawable.srikanth,
R.drawable.srikanth_title, "OMeuJP5iBWY", "",
"", "", "In a world where the odds are against
him, Srikanth defies the norms and makes his
way from rural India to becoming the first
visually impaired student at MIT.", 2));
                this.movies.add(new Movie("The
Conjuring", "", "", R.drawable.the_conjuring,
R.drawable.the_conjuring_title, "k10ETZ41q5o",
"",
"https://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/ElephantsDream.mp4", "",
"Rod and Carolyn find their pet dog dead under
mysterious circumstances and experience a
spirit that harms their daughter Andrea. They
finally call investigators who can help them
get out of the mess.", 3));
                this.movies.add(new Movie("The
Conjuring 2", "", "",
R.drawable.the_conjuring_2,
R.drawable.the_conjuring_2_title,
"VFsmuRPClr4", "<iframe width = \"100%\"
height=\"100%\" src =
\"https://drive.google.com/file/d/1B6OqDkR45Z2
MmPkCoRvKEkg6b5Ol7DWv/preview\" allow =
\"autoplay\" sandbox = \"allow-same-origin
allow-scripts\" allowfullscreen = \"true\"
scrolling = \"no\"></iframe>", "", "", "Peggy,
a single mother of four children, seeks the
help of occult investigators Ed and Lorraine
Warren when she and her children witness
strange, paranormal events in their house.",
3));
                this.movies.add(new
Movie("Annabelle Creation", "", "",
R.drawable.annabelle_creation,
R.drawable.annabelle_creation_title,
"KisPhy7T__Q", "",
"https://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/Sintel.mp4", "", "A doll-
maker and his wife embed the spirit of their
deceased daughter inside a doll. Years later,
a nun and several girls from a shuttered
orphanage become victims of the possessed
doll, Anabelle.", 3));
                this.movies.add(new Movie("The
Nun II", "", "", R.drawable.the_nun_2,
R.drawable.the_nun_2_title, "QF-oyCwaArU", "",
"", "", "In 1956 France, a priest is murdered,
and it seems an evil is spreading. Sister
Irene once again comes face to face with a
demonic force.", 3));
                this.movies.add(new
Movie("Interstellar", "", "",
R.drawable.interstellar,
R.drawable.interstellar_title, "zSWdZVtXT7E",
"",
"https://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/TearsOfSteel.mp4", "",
"When Earth becomes uninhabitable in the
future, a farmer and ex-NASA pilot, Joseph
Cooper, is tasked to pilot a spacecraft, along
with a team of researchers, to find a new
planet for humans.", 4));
                this.movies.add(new Movie("The
Boy In The Striped Pyjamas", "", "",
R.drawable.the_boy_in_the_striped_pyjamas,
R.drawable.the_boy_in_the_striped_pyjamas_titl
```

```
e, "uwysOfnX2Qg", "<iframe width = \"100%\"
height=\"100%\" src =
\"https://drive.google.com/file/d/17VcFkKk7mvD
xVvqRE5E41KcA5Ziby9Ob/preview\" allow =
\"autoplay\" sandbox = \"allow-same-origin
allow-scripts\" allowfullscreen = \"true\"
scrolling = \"no\"></iframe>", "", "", "Bruno,
the son of a Nazi commander, meets Shmuel, a
Jewish boy living in a concentration camp.
Later, both the children become friends while
being oblivious to the reality of the
situation.", 4));
                this.movies.add(new
Movie("RRR", "", "", R.drawable.rrr,
R.drawable.rrr_title, "GY4BgdUSpbE", "",
"http://commondatastorage.googleapis.com/gtv-
videos-bucket/sample/ForBiggerEscapes.mp4",
"", "A fearless revolutionary and an officer
in the British force, who once shared a deep
bond, decide to join forces and chart out an
inspirational path of freedom against the
despotic rulers.", 4));
                this.movies.add(new
Movie("Ralph Breaks The Internet", "", "",
R.drawable.ralph_breaks_the_internet,
R.drawable.ralph_breaks_the_internet_title,
"_BcYBFC6zfY", "", "", "", "On a quest to save
the video game 'Sugar Rush' and to find a
replacement, Ralph and his best friend
Vanellope travel to the World Wide Web through
a Wi-Fi router they find at the arcade.", 4));

                this.bookableMovies = new
LinkedList<BookableMovie>();

                Cinema cinema1 = new
Cinema("Theater A", 24);
                cinema1.addRuntime("2024-10-14
11:15", "2024-10-14 14:00");
                cinema1.addRuntime("2024-10-15
11:15", "2024-10-15 14:00");

                Cinema cinema2 = new
Cinema("Theater B", 36);
                cinema2.addRuntime("2024-10-17
07:00", "2024-10-17 10:00");
                cinema2.addRuntime("2024-10-15
17:35", "2024-10-15 20:20");

                BookableMovie movie1 = new
BookableMovie("Free Guy",
R.drawable.free_guy_title,null);
                movie1.addCinema(cinema1);
                movie1.addCinema(cinema2);

                BookableMovie movie2 = new
BookableMovie("Moana", R.drawable.moana_title,
null);
                movie2.addCinema(cinema2);

                BookableMovie movie3 = new
BookableMovie("Interstellar",
R.drawable.interstellar_title, null);
                movie3.addCinema(cinema1);

                BookableMovie movie4 = new
BookableMovie("RRR", R.drawable.rrr_title,
null);
                movie4.addCinema(cinema2);


        this.bookableMovies.add(movie1);
        this.bookableMovies.add(movie2);

        this.bookableMovies.add(movie3);

        this.bookableMovies.add(movie4);
        }

        public List<Movie> getMovies()
        {
                return this.movies;
        }

        public void addMovie(Movie mov)
        {
                this.movies.add(mov);
        }

        public void removeMovie(String title)
        {
                for(int i = 0 ; i <
this.movies.size() ; i++)

        if(this.movies.get(i).getTitle().toLow
erCase().equals(title.toLowerCase()))

        this.movies.remove(i);
        }

        public List<BookableMovie>
getBookableMovies()
        {
                return this.bookableMovies;
        }

        public void removeBookableMovie(String
movieName)
        {
                for(int i = 0 ; i <
this.bookableMovies.size() ; i++)

        if(this.bookableMovies.get(i).getMovie
Name().toLowerCase().equals(movieName.toLowerC
ase()))

        this.bookableMovies.remove(i);
        }

        public void
addBookableMovie(BookableMovie mov)
        {
                this.bookableMovies.add(mov);
        }
}
```

EnterDetails.java

```
package com.app.spectraflix;

import android.os.Bundle;
import android.app.Activity;
import android.widget.Spinner;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.ImageButton;
import android.graphics.Typeface;
import android.widget.TextView;
import android.view.View;
import android.view.Gravity;
import android.util.DisplayMetrics;
import android.widget.EditText;
import android.widget.LinearLayout;
import android.widget.RelativeLayout;
import android.content.Intent;
import java.util.List;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;

public class EnterDetails extends Activity
{
        private String selectedCinema;
        private String selectedRuntime;

        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.enter_details)
;

                if(getActionBar() != null)
                        getActionBar().hide();

                DisplayMetrics displayMetrics =
new DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
                int width =
displayMetrics.widthPixels;
                int height =
displayMetrics.heightPixels;

                Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");

                TextView detailsTextView =
findViewById(R.id.details_label);

        detailsTextView.setTypeface(customFont
);

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton imageButton = new
ImageButton(this);
```

```
               LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
               buttonParams.gravity =
Gravity.CENTER;

       imageButton.setLayoutParams(buttonPara
ms);

       imageButton.setImageResource(R.drawabl
e.back);

       imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

       imageButton.setBackground(null);

       imageButton.setOnClickListener(new
View.OnClickListener()
               {
                      @Override
                      public void
onClick(View v)
                      {
                             Intent intent =
new Intent();

       intent.setClass(getApplicationContext(
), activity2.class);

       startActivity(intent);
                      }
               });


       relativeLayout.addView(imageButton);

               Intent intent = getIntent();
               BookableMovie movie =
(BookableMovie)
intent.getSerializableExtra("BookableMovie");

               Spinner cinemaSpinner =
findViewById(R.id.cinemaSpinner);

               List<Cinema> cinemas =
movie.getCinemas();
               String[] cinemaNames = new
String[cinemas.size()];

               for(int i = 0 ; i <
cinemas.size() ; i++)
                      cinemaNames[i] =
cinemas.get(i).getName();

               ArrayAdapter<String>
cinemaAdapter = new ArrayAdapter<>(this,
android.R.layout.simple_spinner_item,
cinemaNames);

       cinemaAdapter.setDropDownViewResource(
android.R.layout.simple_spinner_dropdown_item)
;

       cinemaSpinner.setAdapter(cinemaAdapter
);

               final List<Cinema>
cinemas_final = cinemas;

       cinemaSpinner.setOnItemSelectedListene
r(new AdapterView.OnItemSelectedListener()
```

```
               {
                      @Override
                      public void
onItemSelected(AdapterView<?> parent, View
view, int position, long id)
                      {
                             selectedCinema =
parent.getItemAtPosition(position).toString();
                             Cinema cinema =
null;

                             for(Cinema
cinema_item : cinemas_final)

       if(cinema_item.getName().equals(select
edCinema))

       cinema = cinema_item;

                             List<Runtime>
runtimes = cinema.getRuntimes();
                             String[]
runtimes_string = new String[runtimes.size()];

                             for(int i = 0 ;
i < runtimes.size() ; i++)

       runtimes_string[i] =
runtimes.get(i).getStartDateTime().format(Date
TimeFormatter.ofPattern("yyyy-MM-dd HH:mm"));

                             Spinner
runtimeSpinner =
findViewById(R.id.runtimeSpinner);


       ArrayAdapter<String> runtimeAdapter =
new ArrayAdapter<>(EnterDetails.this,
android.R.layout.simple_spinner_item,
runtimes_string);

       runtimeAdapter.setDropDownViewResource
(android.R.layout.simple_spinner_dropdown_item
);

       runtimeSpinner.setAdapter(runtimeAdapt
er);


       runtimeSpinner.setOnItemSelectedListen
er(new AdapterView.OnItemSelectedListener()
                             {

       @Override
                                    public
void onItemSelected(AdapterView<?> parent,
View view, int position, long id)
                                    {

       selectedRuntime =
parent.getItemAtPosition(position).toString();
                                    }


       @Override
                                    public
void onNothingSelected(AdapterView<?> parent)
                                    {}
                             });
                      }

                      @Override
```

```
                        public void
onNothingSelected(AdapterView<?> parent)
                        {}
                });

                LinearLayout linearLayout =
findViewById(R.id.LinearLayout);

                ImageButton nextButton = new
ImageButton(this);
                LinearLayout.LayoutParams
nextButtonParams = new
LinearLayout.LayoutParams(width / 6, height /
6);
                nextButtonParams.gravity =
Gravity.CENTER;

        nextButton.setLayoutParams(nextButtonP
arams);

        nextButton.setImageResource(R.drawable
.next_screen);

        nextButton.setScaleType(ImageView.Scal
eType.FIT_CENTER);
                nextButton.setBackground(null);

                final BookableMovie mov_final =
movie;

        nextButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                EditText
editName = findViewById(R.id.editName);
                                String
enteredName = editName.getText().toString();

                                EditText
editPhoneNum =
findViewById(R.id.editPhoneNum);
                                String
enteredPhoneNum =
editPhoneNum.getText().toString();

                                EditText
editEmail = findViewById(R.id.editEmail);
                                String
enteredEmail = editEmail.getText().toString();

                                final String[]
data = {enteredName, enteredPhoneNum,
enteredEmail, selectedCinema,
selectedRuntime};

                                Intent intent =
new Intent();

        intent.putExtra("Data", data);

        intent.putExtra("BookableMovie",
mov_final);

        intent.setClass(getApplicationContext(
), SelectSeat.class);

        startActivity(intent);
                        }
                });


        linearLayout.addView(nextButton);
        }
}
```

Movie.java

```
package com.app.spectraflix;

import java.io.Serializable;

public class Movie implements Serializable
{
        private String title, imagePath,
titleImagePath, trailerId, movieEmbedCode,
movieURL, localPath, description;
        private int resImagePath,
resTitleImagePath, category;

        public Movie(String title, String
imagePath, String titleImagePath, int
resImagePath, int resTitleImagePath, String
trailerId, String movieEmbedCode, String
movieURL, String localPath, String
description, int category)
        {
                this.title = title;
                this.imagePath = imagePath;
                this.titleImagePath =
titleImagePath;
                this.trailerId = trailerId;
                this.resImagePath =
resImagePath;
                this.resTitleImagePath =
resTitleImagePath;
                this.description = description;
                this.movieEmbedCode =
movieEmbedCode;
                this.movieURL = movieURL;
                this.localPath = localPath;
                this.category = category;
        }

        public String getTitle()
        {
                return this.title;
        }

        public int getCategory()
        {
                return this.category;
        }

        public String getImagePath()
        {
                return this.imagePath;
        }

        public String getTitleImagePath()
        {
                return this.titleImagePath;
        }

        public int getResImagePath()
        {
                return this.resImagePath;
        }

        public int getResTitleImagePath()
        {
                return this.resTitleImagePath;
        }

        public String getDescription()
        {
                return this.description;
        }

        public String getTrailerId()
        {
                return this.trailerId;
        }

        public String getMovieEmbedCode()
        {
                return this.movieEmbedCode;
        }

        public String getLocalPath()
        {
                return this.localPath;
        }

        public String getMovieURL()
        {
                return this.movieURL;
        }

        public void setTitle(String title)
        {
                this.title = title;
        }

        public void setImagePath(String
imagePath)
        {
                this.imagePath = imagePath;
        }

        public void setResImagePath(int
resImagePath)
        {
                this.resImagePath =
resImagePath;
        }

        public void setResTitleImagePath(int
resTitleImagePath)
        {
                this.resTitleImagePath =
resTitleImagePath;
        }

        public void setDescription(String
description)
        {
                this.description = description;
        }

        public void setTitleImagePath(String
titleImagePath)
        {
                this.titleImagePath =
titleImagePath;
        }

        public void setTrailerId(String
trailerId)
        {
                this.trailerId = trailerId;
        }

        public void setMovieEmbedCode(String
movieEmbedCode)
        {
                this.movieEmbedCode =
movieEmbedCode;
        }

        public void setCategory(int category)
        {
                this.category = category;
        }

        public void setMovieURL(String
movieURL)
        {
                this.movieURL = movieURL;
        }

        public void setLocalPath(String
localPath)
        {
                this.localPath = localPath;
        }
}
```

MovieLocalView.java

```
package com.app.spectraflix;
```

```
import android.app.Activity;
import android.os.Bundle;
import android.widget.VideoView;
import android.widget.MediaController;
import android.content.Intent;

public class MovieLocalView extends Activity
{
        @Override
        protected void onCreate(Bundle savedInstanceState)
        {
                super.onCreate(savedInstanceState);
                setContentView(R.layout.movie_url_view);

                if (getActionBar() != null)
                        getActionBar().hide();

                Intent intent = getIntent();
                String moviePath = intent.getStringExtra("MoviePath");

                VideoView videoView = findViewById(R.id.videoView);
                MediaController mediaController = new MediaController(this);
                videoView.setMediaController(mediaController);
                mediaController.setAnchorView(videoView);
                videoView.setVideoPath(moviePath);
                videoView.start();
        }
}
```

MovieTrailerView.java

```
package com.app.spectraflix;

import android.os.Bundle;
import android.webkit.WebSettings;
import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.app.Activity;
import android.widget.RelativeLayout;
import android.widget.LinearLayout;
import android.content.Intent;
import android.util.DisplayMetrics;
import android.widget.ImageButton;
import android.view.Gravity;
import android.view.View;
import android.widget.ImageView;

public class MovieTrailerView extends Activity
{
        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.movie_webview)
;
                if (getActionBar() != null)
                        getActionBar().hide();

                DisplayMetrics dM = new
DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(dM);
                int width = dM.widthPixels;
                int height = dM.heightPixels;

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton imageButton = new
ImageButton(this);
                LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
                buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setImageResource(R.drawabl
e.back);
```

```
        imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

        imageButton.setBackground(null);

        imageButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), MainActivity.class);

        startActivity(intent);
                        }
                });


        relativeLayout.addView(imageButton);
```

```
                Intent intent = getIntent();
                String movieTrailerId =
intent.getStringExtra("MovieTrailerId");
                String trailerEmbedCode =
"<iframe id=\"player\" type=\"text/html\"
width=\"100%\" height=\"100%\"
src=\"https://www.youtube.com/embed/" +
movieTrailerId + "?enablejsapi=1\"
frameborder=\"0\"></iframe>";

                WebView webView =
findViewById(R.id.webView);
                WebSettings webSettings =
webView.getSettings();

        webSettings.setJavaScriptEnabled(true)
;
                webView.setWebViewClient(new
WebViewClient());

        webView.loadData(trailerEmbedCode,
"text/html", "UTF-8");
        }
}
```

MovieURLView.java

```
package com.app.spectraflix;

import android.app.Activity;
import android.os.Bundle;
import android.net.Uri;
import android.widget.VideoView;
import android.content.Intent;
import android.widget.MediaController;

public class MovieURLView extends Activity
{

        private VideoView videoView;

        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.movie_url_view
);
```

```
                if (getActionBar() != null)
                        getActionBar().hide();

                Intent intent = getIntent();
                String movieURL =
intent.getStringExtra("MovieURL");

                videoView =
findViewById(R.id.videoView);

                Uri uri = Uri.parse(movieURL);
                videoView.setVideoURI(uri);
                MediaController mediaController
= new MediaController(this);

        mediaController.setAnchorView(videoVie
w);

        videoView.setMediaController(mediaCont
roller);
                videoView.start();
        }
}
```

MovieWebView.java

```
package com.app.spectraflix;

import android.os.Bundle;
import android.webkit.WebSettings;
import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.app.Activity;
import android.widget.RelativeLayout;
import android.widget.LinearLayout;
import android.content.Intent;
import android.util.DisplayMetrics;
import android.widget.ImageButton;
import android.view.Gravity;
import android.view.View;
import android.widget.ImageView;

public class MovieWebView extends Activity
{
        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.movie_webview)
;

                if (getActionBar() != null)
                        getActionBar().hide();

                DisplayMetrics dM = new
DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(dM);
                int width = dM.widthPixels;
                int height = dM.heightPixels;

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton imageButton = new
ImageButton(this);
                LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
                buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setImageResource(R.drawabl
e.back);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

        imageButton.setBackground(null);

        imageButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), MainActivity.class);

        startActivity(intent);
                        }
                });


        relativeLayout.addView(imageButton);

                Intent intent = getIntent();
                String movieEmbedCode =
intent.getStringExtra("MovieEmbedCode");

                WebView webView =
findViewById(R.id.webView);

                WebSettings webSettings =
webView.getSettings();

        webSettings.setJavaScriptEnabled(true)
;

                webView.setWebViewClient(new
WebViewClient());

        webView.loadData(movieEmbedCode,
"text/html", "UTF-8");
        }
}
```

PreviewActivity.java

```
package com.app.spectraflix;

import android.os.Bundle;
import android.util.DisplayMetrics;
import android.widget.LinearLayout;
import android.widget.RelativeLayout;
import android.widget.ScrollView;
import android.view.View;
import android.widget.TextView;
import android.widget.ImageView;
import android.widget.ImageButton;
import android.net.Uri;
import java.io.File;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.view.Gravity;
import android.content.Intent;
import android.app.Activity;
import android.graphics.Typeface;
import android.graphics.drawable.Drawable;
import android.widget.Button;
import android.widget.Toast;

public class PreviewActivity extends Activity
{
    @Override
    protected void onCreate(Bundle
savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.preview);

               if (getActionBar() != null)
            getActionBar().hide();

        Intent intent = getIntent();
        Movie mov = (Movie)
intent.getSerializableExtra("Movie");

               Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");

               TextView movieTextView =
findViewById(R.id.watch_movie);

       movieTextView.setTypeface(customFont);

               RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);
               LinearLayout linearLayout =
findViewById(R.id.LinearLayout);

        DisplayMetrics displayMetrics = new
DisplayMetrics();

getWindowManager().getDefaultDisplay().getMetr
ics(displayMetrics);
        int width =
displayMetrics.widthPixels;
```

```
        int height =
displayMetrics.heightPixels;

               ImageButton imageButton = new
ImageButton(this);
               LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
               buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setImageResource(R.drawabl
e.back);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

        imageButton.setBackground(null);

        imageButton.setOnClickListener(new
View.OnClickListener()
               {
                      @Override
                      public void
onClick(View v)
                      {
                              Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), MainActivity.class);

        startActivity(intent);
                      }
               });


        relativeLayout.addView(imageButton);

        RelativeLayout.LayoutParams
layoutParams = new
RelativeLayout.LayoutParams(
                      width / 2,
                      height / 2
        );

layoutParams.addRule(RelativeLayout.ALIGN_PARE
NT_BOTTOM);

layoutParams.addRule(RelativeLayout.ALIGN_PARE
NT_START);

linearLayout.setLayoutParams(layoutParams);

               ImageView movieTitleView = new
ImageView(this);
```

```
               LinearLayout.LayoutParams
movieTitleParams = new
LinearLayout.LayoutParams(width / 3, height /
4);
               movieTitleParams.gravity =
Gravity.CENTER;

       movieTitleView.setLayoutParams(movieTi
tleParams);

               if(mov.getResTitleImagePath()
== -1)
               {
                      try
                      {
                             File file = new
File(mov.getTitleImagePath());
                             Uri imageUri =
Uri.fromFile(file);
                             Bitmap bitmap =
BitmapFactory.decodeStream(getContentResolver(
).openInputStream(imageUri));

       movieTitleView.setImageBitmap(bitmap);
                      }

                      catch(Exception e)
                      {}
               }

               else

       movieTitleView.setImageResource(mov.ge
tResTitleImagePath());


       movieTitleView.setScaleType(ImageView.
ScaleType.FIT_CENTER);

               ImageView bgImage =
findViewById(R.id.background_image);

               if(mov.getResImagePath() == -1)
               {
                      try
                      {
                             File file = new
File(mov.getImagePath());
                             Uri imageUri =
Uri.fromFile(file);
                             Bitmap bitmap =
BitmapFactory.decodeStream(getContentResolver(
).openInputStream(imageUri));

       bgImage.setImageBitmap(bitmap);
                      }

                      catch(Exception e)
                      {}
               }

               else

       bgImage.setImageResource(mov.getResIma
gePath());

        ScrollView scrollView = new
ScrollView(this);

        TextView textView = new
TextView(this);

textView.setText(mov.getDescription());

       textView.setTypeface(customFont);
        textView.setTextSize(18);

       textView.setBackgroundResource(R.drawa
ble.rounded_textview);

        scrollView.addView(textView);


       linearLayout.addView(movieTitleView);
        linearLayout.addView(scrollView);

               LinearLayout buttonsLayout =
findViewById(R.id.WatchMoviesLayout);
               RelativeLayout.LayoutParams
buttonsParams = new
RelativeLayout.LayoutParams(
                      width / 4,
                      height / 2
               );

       buttonsParams.addRule(RelativeLayout.A
LIGN_PARENT_BOTTOM);

buttonsParams.addRule(RelativeLayout.ALIGN_PAR
ENT_END);

       buttonsLayout.setLayoutParams(buttonsP
arams);

               ImageButton trailerButton = new
ImageButton(this);
               RelativeLayout.LayoutParams
trailerParams = new
RelativeLayout.LayoutParams(
                      width / 6,
                      height / 6
               );

       trailerParams.addRule(RelativeLayout.A
LIGN_PARENT_TOP);

trailerParams.addRule(RelativeLayout.ALIGN_PAR
ENT_END);

       trailerButton.setLayoutParams(trailerP
arams);

       trailerButton.setImageResource(R.drawa
ble.trailer);

       trailerButton.setScaleType(ImageView.S
caleType.FIT_CENTER);

       trailerButton.setBackground(null);

               final String trailerId =
mov.getTrailerId();

       trailerButton.setOnClickListener(new
View.OnClickListener()
               {
                      @Override
                      public void
onClick(View v)
                      {

       if(trailerId.equals("") || trailerId
== null)

       Toast.makeText(getApplicationContext()
, "TRAILER NOT AVAILABLE!",
Toast.LENGTH_SHORT).show();

                                else
                                {
                                        Intent
intent = new Intent();

        intent.putExtra("MovieTrailerId",
trailerId);

        intent.setClass(getApplicationContext(
), MovieTrailerView.class);

        startActivity(intent);
                                }
                        }
                });


        relativeLayout.addView(trailerButton);

                int[] buttonIds =
{R.id.icon_button1, R.id.icon_button2,
R.id.icon_button3};
                final String[] strIds =
{"MovieEmbedCode", "MovieURL", "MoviePath"};
                final String[] strData =
{mov.getMovieEmbedCode(), mov.getMovieURL(),
mov.getLocalPath()};
                final Class<?>[] classes = new
Class<?>[] {
                        MovieWebView.class,
                        MovieURLView.class,
                        MovieLocalView.class
                };

                for(int i = 0 ; i < 3 ; i++)
                {
```

```
                        ImageButton button =
findViewById(buttonIds[i]);
                        final String movieStr =
strData[i];
                        final int k = i;

        button.setOnClickListener(new
View.OnClickListener()
                        {
                                @Override
                                public void
onClick(View v)
                                {

        if(movieStr.equals("") || movieStr ==
null)

        Toast.makeText(getApplicationContext()
, "MOVIE NOT AVAILABLE!",
Toast.LENGTH_SHORT).show();

                                        else
                                        {

        Intent intent = new Intent();

        intent.putExtra(strIds[k],
strData[k]);

        intent.setClass(getApplicationContext(
), classes[k]);

        startActivity(intent);
                                        }
                                }
                        });
                }
    }
}
```

Runtime.java

```java
package com.app.spectraflix;

import java.util.List;
import java.util.LinkedList;
import java.time.LocalDateTime;
import java.io.Serializable;
import java.time.format.DateTimeFormatter;

public class Runtime implements Serializable
{
        private LocalDateTime startDateTime, endDateTime;
        public int[][] seats;

        public Runtime(String startDateTime, String endDateTime, int[] rowCol)
        {
                DateTimeFormatter formatter = DateTimeFormatter.ofPattern("yyyy-MM-dd HH:mm");
                this.startDateTime = LocalDateTime.parse(startDateTime, formatter);
                this.endDateTime = LocalDateTime.parse(endDateTime, formatter);

                this.seats = new int[rowCol[0]][rowCol[1]];
                for(int i = 0 ; i < rowCol[0] ; i++)
                        for(int j = 0 ; j < rowCol[1] ; j++)
                                this.seats[i][j] = 0;
        }

        public int[][] getSeats()
        {
                return this.seats;
        }

        public LocalDateTime getStartDateTime()
        {
                return this.startDateTime;
        }

        public LocalDateTime getEndDateTime()
        {
                return this.endDateTime;
        }

        public boolean bookSeat(int i, int j)
        {
                if(this.seats[i][j] == 1)
                        return false;
                this.seats[i][j] = 1;
                return true;
        }

        public boolean cancelSeat(int i, int j)
        {
                if(this.seats[i][j] == 0)
                        return false;
                this.seats[i][j] = 0;
                return true;
        }
}
```

SelectSeat.java

```
package com.app.spectraflix;

import android.app.Activity;
import android.os.Bundle;
import android.content.Intent;
import android.widget.GridLayout;
import android.view.Gravity;
import android.widget.ImageButton;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;
import android.widget.LinearLayout;
import android.widget.RelativeLayout;
import android.widget.Toast;
import java.util.List;
import android.view.View;
import android.util.DisplayMetrics;
import android.graphics.Typeface;
import android.widget.TextView;
import android.content.Context;
import android.widget.ImageView;

public class SelectSeat extends Activity
{
        private ImageButton[][] buttonArray;
        private BookableMovie movie;
        private int movie_index, cinema_index,
runtime_index, selected_row = -1, selected_col
= -1;
        private List<BookableMovie>
bookableMovies;

        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.select_seat);

                if(getActionBar() != null)
                        getActionBar().hide();

                Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");

                TextView seatTextView =
findViewById(R.id.seat_label);

        seatTextView.setTypeface(customFont);

                DisplayMetrics displayMetrics =
new DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
                int width =
displayMetrics.widthPixels;
                int height =
displayMetrics.heightPixels;
```

```

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton backButton = new
ImageButton(this);
                LinearLayout.LayoutParams
backButtonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
                backButtonParams.gravity =
Gravity.CENTER;

        backButton.setLayoutParams(backButtonP
arams);

        backButton.setImageResource(R.drawable
.back);

        backButton.setScaleType(ImageView.Scal
eType.FIT_START);
                backButton.setBackground(null);

        backButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), activity2.class);

        startActivity(intent);
                        }
                });


        relativeLayout.addView(backButton);

                Intent intent = getIntent();
                String[] data =
intent.getStringArrayExtra("Data");
                movie = (BookableMovie)
intent.getSerializableExtra("BookableMovie");

                final DataManager dataManager =
(DataManager) getApplication();
                bookableMovies =
dataManager.getBookableMovies();
                for(int i = 0 ; i <
bookableMovies.size() ; i++)

        if(bookableMovies.get(i).getMovieName(
).equals(movie.getMovieName()))
                                movie_index = i;
                List<Cinema> cinemas =
movie.getCinemas();
                for(int i = 0 ; i <
cinemas.size() ; i++)

        if(cinemas.get(i).getName().equals(dat
a[3]))
                                cinema_index =
i;

                List<Runtime> runtimes =
movie.cinemas.get(cinema_index).getRuntimes();
                for(int i = 0 ; i <
runtimes.size() ; i++)

        if(runtimes.get(i).getStartDateTime().
format(DateTimeFormatter.ofPattern("yyyy-MM-dd
HH:mm")).equals(data[4]))
                                runtime_index =
i;

                LinearLayout linearLayout =
findViewById(R.id.linearlayout);
                int rows =
movie.cinemas.get(cinema_index).runtimes.get(r
untime_index).seats.length;
                int cols =
movie.cinemas.get(cinema_index).runtimes.get(r
untime_index).seats[0].length;

                buttonArray = new
ImageButton[rows][cols];

                GridLayout gridLayout = new
GridLayout(this);
                gridLayout.setRowCount(rows);

        gridLayout.setColumnCount(cols);

                LinearLayout.LayoutParams
gridParams = new LinearLayout.LayoutParams(

        LinearLayout.LayoutParams.WRAP_CONTENT
,

        LinearLayout.LayoutParams.WRAP_CONTENT
                );


        gridLayout.setLayoutParams(gridParams)
;
                gridLayout.setPadding(20, 20,
20, 20);

                for(int row = 0 ; row < rows ;
row++)
                {
                        for(int col = 0 ; col <
cols ; col++)
                        {
                                ImageButton
imageButton = new ImageButton(this);


        if(bookableMovies.get(movie_index).cin
emas.get(cinema_index).runtimes.get(runtime_in
dex).seats[row][col] == 0)

        imageButton.setImageResource(R.drawabl
e.chair_available);
                                else
```

```

        imageButton.setImageResource(R.drawabl
e.chair_booked);


        LinearLayout.LayoutParams buttonParams
= new LinearLayout.LayoutParams(
                                        width /
cols / 2,
                                        height /
rows / 2
                                );


        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_CENTER);

        imageButton.setBackground(null);

        imageButton.setPadding(5, 5, 5, 5);

        buttonArray[row][col] = imageButton;

                                final int
currentRow = row;
                                final int
currentCol = col;

        imageButton.setOnClickListener(new
View.OnClickListener()
                                {

        @Override
                                        public
void onClick(View v)
                                        {

        if(bookableMovies.get(movie_index).cin
emas.get(cinema_index).runtimes.get(runtime_in
dex).seats[currentRow][currentCol] == 1)

        Toast.makeText(SelectSeat.this, "Seat
already booked!", Toast.LENGTH_SHORT).show();

        else
                                                {

        if(selected_row != -1)

        {


        buttonArray[selected_row][selected_col
].setImageResource(R.drawable.chair_available)
;


        bookableMovies.get(movie_index).cinema
s.get(cinema_index).runtimes.get(runtime_index
).seats[selected_row][selected_col] = 0;

        }



        buttonArray[currentRow][currentCol].se
tImageResource(R.drawable.chair_booked);

        selected_row = currentRow;
        selected_col = currentCol;

        bookableMovies.get(movie_index).cinema
s.get(cinema_index).runtimes.get(runtime_index
).seats[currentRow][currentCol] = 1;
                                                }
                                        }
                                });


        gridLayout.addView(imageButton);
                        }
                }


        linearLayout.addView(gridLayout);

                ImageButton bookButton = new
ImageButton(this);
                LinearLayout.LayoutParams
bookButtonParams = new
LinearLayout.LayoutParams(width / 4, height /
6);
                bookButtonParams.gravity =
Gravity.CENTER;

        bookButton.setLayoutParams(bookButtonP
arams);

        bookButton.setImageResource(R.drawable
.book_ticket);

        bookButton.setScaleType(ImageView.Scal
eType.FIT_CENTER);
```

```
                bookButton.setBackground(null);

                final String[] data_new = data;

        bookButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                String[]
new_data = {data_new[0], data_new[1],
data_new[2], data_new[3], data_new[4],
Character.toString((char)(65 + selected_row))
+ selected_col};

                                Intent intent =
new Intent();

        intent.putExtra("Data", new_data);

        intent.setClass(getApplicationContext(
), Ticket.class);

        startActivity(intent);
                        }
                });


        linearLayout.addView(bookButton);
        }
}
```

Ticket.java

```
package com.app.spectraflix;

import android.app.Activity;
import android.os.Bundle;
import android.content.Intent;
import android.widget.TextView;

public class Ticket extends Activity
{
        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.ticket);

                if (getActionBar() != null)
```

```
                        getActionBar().hide();

                Intent intent = getIntent();
                String[] data =
intent.getStringArrayExtra("Data");

                String text = "Name : " +
data[0] + "\nPhone No. : " + data[1] +
"\nEmail Address : " + data[2] + "\nCinema : "
+ data[3] + "\nRuntime : " + data[4] +
"\nSeat : " + data[5] + "\n\nPLEASE TAKE A
SCREENSHOT OF THIS PAGE";
                TextView textView =
findViewById(R.id.ticket_details);
                textView.setText(text);
        }
}
```

activity2.java

```
package com.app.spectraflix;

import android.app.Activity;
import android.os.Bundle;
import android.content.Intent;
import android.view.View;
import android.widget.ImageButton;
import android.widget.ImageView;
import
android.graphics.drawable.ColorDrawable;
import android.widget.LinearLayout;
import android.view.Gravity;
import android.util.DisplayMetrics;
import android.graphics.Color;
import android.app.ActionBar;
import java.util.List;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.net.Uri;
import java.io.File;

public class activity2 extends Activity
{
    @Override
    protected void onCreate(Bundle
savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity2);

        ActionBar actionBar = getActionBar();

        if(actionBar != null)

actionBar.setBackgroundDrawable(new
ColorDrawable(Color.parseColor("#ACD5C2")));

               ImageButton button1 =
findViewById(R.id.icon_button1);
        button1.setOnClickListener(new
View.OnClickListener()
               {
                              @Override
                              public void
onClick(View v)
                              {
                                     Intent
intent = new Intent();

        intent.setClass(getApplicationContext(
), MainActivity.class);

        startActivity(intent);

        overridePendingTransition(0, 0);
                              }
               });

               ImageButton button3 =
findViewById(R.id.icon_button3);
```

```
        button3.setOnClickListener(new
View.OnClickListener()
               {
                       @Override
                       public void
onClick(View v)
                       {
                              Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), activity3.class);

        startActivity(intent);

        overridePendingTransition(0, 0);
                       }
               });

               DataManager dataManager =
(DataManager) getApplication();
               List<BookableMovie>
bookableMovies =
dataManager.getBookableMovies();

               DisplayMetrics displayMetrics =
new DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
               int height =
displayMetrics.heightPixels;

               for(BookableMovie movie :
bookableMovies)
                       addBookableMovie(movie,
height);
    }

    public void addBookableMovie(BookableMovie
movie, int height)
        {
               LinearLayout parentLayout =
findViewById(R.id.ImageLinearLayout);

               ImageButton imageButton = new
ImageButton(this);
               LinearLayout.LayoutParams
buttonParams = new LinearLayout.LayoutParams(

        LinearLayout.LayoutParams.MATCH_PARENT
,
                       height / 3
               );
               buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);
```

```
                if(movie.getResMovieTitlePath()
== -1)
                {
                        try
                        {
                                File file = new
File(movie.getMovieTitlePath());
                                Uri imageUri =
Uri.fromFile(file);
                                Bitmap bitmap =
BitmapFactory.decodeStream(getContentResolver(
).openInputStream(imageUri));

        imageButton.setImageBitmap(bitmap);
                        }

                        catch(Exception e)
                        {}
                }

                else

        imageButton.setImageResource(movie.get
ResMovieTitlePath());


        imageButton.setScaleType(ImageView.Sca
leType.FIT_CENTER);

        imageButton.setBackground(null);
```

```
                final BookableMovie mov_final =
movie;

        imageButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.putExtra("BookableMovie",
mov_final);

        intent.setClass(getApplicationContext(
), EnterDetails.class);

        startActivity(intent);
                        }
                });


        parentLayout.addView(imageButton);
        }
}
```

activity3.java

```
package com.app.spectraflix;

import android.app.Activity;
import android.os.Bundle;
import android.content.Intent;
import android.view.View;
import android.widget.ImageButton;
import
android.graphics.drawable.ColorDrawable;
import android.widget.LinearLayout;
import android.widget.ImageView;
import android.util.DisplayMetrics;
import android.graphics.Color;
import android.view.Gravity;
import android.app.ActionBar;
import android.graphics.Typeface;
import android.widget.TextView;

public class activity3 extends Activity
{
    @Override
    protected void onCreate(Bundle
savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity3);

        ActionBar actionBar = getActionBar();

        if(actionBar != null)
```

```
actionBar.setBackgroundDrawable(new
ColorDrawable(Color.parseColor("#ACD5C2")));

        Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");
                TextView movieView =
findViewById(R.id.add_remove_movie);

        movieView.setTypeface(customFont);
                TextView bookableMovieView =
findViewById(R.id.add_remove_bookable_movie);

        bookableMovieView.setTypeface(customFo
nt);

                ImageButton button1 =
findViewById(R.id.icon_button1);
        button1.setOnClickListener(new
View.OnClickListener()
                {
                                @Override
                                public void
onClick(View v)
                                {
                                        Intent
intent = new Intent();

        intent.setClass(getApplicationContext(
), MainActivity.class);
```

```
        startActivity(intent);

        overridePendingTransition(0, 0);
                                }
                });

                ImageButton button2 =
findViewById(R.id.icon_button2);
        button2.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), activity2.class);

        startActivity(intent);

        overridePendingTransition(0, 0);
                        }
                });

                LinearLayout linearLayout =
findViewById(R.id.add_remove_movie_layout);

                DisplayMetrics displayMetrics =
new DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
                int width =
displayMetrics.widthPixels;
                int height =
displayMetrics.heightPixels;

                ImageButton addMovieButton =
new ImageButton(this);
                LinearLayout.LayoutParams
addMovieParams = new
LinearLayout.LayoutParams(width / 3, height /
3);
                addMovieParams.gravity =
Gravity.CENTER;

        addMovieButton.setLayoutParams(addMovi
eParams);

        addMovieButton.setImageResource(R.draw
able.add);

        addMovieButton.setScaleType(ImageView.
ScaleType.FIT_CENTER);

        addMovieButton.setBackground(null);

        addMovieButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), addMovie.class);
```

```
        startActivity(intent);
                        }
                });

                ImageButton removeMovieButton =
new ImageButton(this);
                LinearLayout.LayoutParams
removeMovieParams = new
LinearLayout.LayoutParams(width / 3, height /
3);
                removeMovieParams.gravity =
Gravity.CENTER;

        removeMovieButton.setLayoutParams(remo
veMovieParams);

        removeMovieButton.setImageResource(R.d
rawable.remove);

        removeMovieButton.setScaleType(ImageVi
ew.ScaleType.FIT_CENTER);

        removeMovieButton.setBackground(null);

        removeMovieButton.setOnClickListener(n
ew View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), removeMovie.class);

        startActivity(intent);
                        }
                });


        linearLayout.addView(addMovieButton);

        linearLayout.addView(removeMovieButton
);

                LinearLayout linearLayout2 =
findViewById(R.id.add_remove_bookable_movie_la
yout);

                ImageButton
addBookableMovieButton = new
ImageButton(this);
                LinearLayout.LayoutParams
addBookableMovieParams = new
LinearLayout.LayoutParams(width / 3, height /
3);
                addBookableMovieParams.gravity
= Gravity.CENTER;

        addBookableMovieButton.setLayoutParams
(addBookableMovieParams);

        addBookableMovieButton.setImageResourc
e(R.drawable.add);

        addBookableMovieButton.setScaleType(Im
ageView.ScaleType.FIT_CENTER);

        addBookableMovieButton.setBackground(n
ull);
```

```
        addBookableMovieButton.setOnClickListe
ner(new View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), addBookableMovie.class);

        startActivity(intent);
                        }
                });

                ImageButton
removeBookableMovieButton = new
ImageButton(this);
                LinearLayout.LayoutParams
removeBookableMovieParams = new
LinearLayout.LayoutParams(width / 3, height /
3);

        removeBookableMovieParams.gravity =
Gravity.CENTER;

        removeBookableMovieButton.setLayoutPar
ams(removeBookableMovieParams);

        removeBookableMovieButton.setImageReso
urce(R.drawable.remove);
```

```
        removeBookableMovieButton.setScaleType
(ImageView.ScaleType.FIT_CENTER);

        removeBookableMovieButton.setBackgroun
d(null);

        removeBookableMovieButton.setOnClickLi
stener(new View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), removeBookableMovie.class);

        startActivity(intent);
                        }
                });


        linearLayout2.addView(addBookableMovie
Button);

        linearLayout2.addView(removeBookableMo
vieButton);
    }
}
```

addBookableMovie.java

```
package com.app.spectraflix;

import android.os.Bundle;
import android.app.Activity;
import android.widget.ImageView;
import android.widget.ImageButton;
import android.graphics.Typeface;
import android.widget.TextView;
import android.view.View;
import android.view.Gravity;
import android.util.DisplayMetrics;
import android.widget.EditText;
import android.widget.Toast;
import android.widget.LinearLayout;
import android.widget.RelativeLayout;
import android.content.Intent;
import java.util.List;

public class addBookableMovie extends Activity
{
        private BookableMovie mov = null;

        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {
```

```
        super.onCreate(savedInstanceState);

        setContentView(R.layout.add_bookable_m
ovie);

                if(getActionBar() != null)
                        getActionBar().hide();

                DisplayMetrics displayMetrics =
new DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
                int width =
displayMetrics.widthPixels;
                int height =
displayMetrics.heightPixels;

                Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");
                TextView addTextView1 =
findViewById(R.id.add_bookable_movie);

        addTextView1.setTypeface(customFont);
```

```
                TextView addTextView2 =
findViewById(R.id.add_cinema);

        addTextView2.setTypeface(customFont);
                TextView addTextView3 =
findViewById(R.id.add_runtime);

        addTextView3.setTypeface(customFont);

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton imageButton = new
ImageButton(this);
                LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
                buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setImageResource(R.drawabl
e.back);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

        imageButton.setBackground(null);

        imageButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), activity3.class);

        startActivity(intent);
                        }
                });


        relativeLayout.addView(imageButton);

                LinearLayout linearLayout1 =
findViewById(R.id.InnerLinearLayout1);

                ImageButton addButton1 = new
ImageButton(this);
                LinearLayout.LayoutParams
addButtonParams1 = new
LinearLayout.LayoutParams(width / 6, height /
6);
                addButtonParams1.gravity =
Gravity.CENTER;

        addButton1.setLayoutParams(addButtonPa
rams1);

        addButton1.setImageResource(R.drawable
.add);

        addButton1.setScaleType(ImageView.Scal
eType.FIT_CENTER);
                addButton1.setBackground(null);
```

```

        addButton1.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                EditText
editName = findViewById(R.id.editMovieName);
                                String name =
editName.getText().toString();

                                EditText
editTitlePath =
findViewById(R.id.editMovieTitlePath);
                                String path =
editTitlePath.getText().toString();


        if(name.equals("") || path.equals(""))

        Toast.makeText(getApplicationContext()
, "PLEASE ENTER THE DETAILS",
Toast.LENGTH_SHORT).show();

                                else
                                {
                                        mov =
new BookableMovie(name, -1, path);

        Toast.makeText(getApplicationContext()
, "SUCCESSFULLY CREATED!",
Toast.LENGTH_SHORT).show();
                                }
                        }
                });


        linearLayout1.addView(addButton1);

                LinearLayout linearLayout2 =
findViewById(R.id.InnerLinearLayout2);

                ImageButton addButton2 = new
ImageButton(this);
                LinearLayout.LayoutParams
addButtonParams2 = new
LinearLayout.LayoutParams(width / 6, height /
6);
                addButtonParams2.gravity =
Gravity.CENTER;

        addButton2.setLayoutParams(addButtonPa
rams2);

        addButton2.setImageResource(R.drawable
.add);

        addButton2.setScaleType(ImageView.Scal
eType.FIT_CENTER);
                addButton2.setBackground(null);


        addButton2.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                              EditText
editName = findViewById(R.id.editName);
                              String name =
editName.getText().toString();

                              EditText
editNumSeats =
findViewById(R.id.editNumSeats);
                              String numSeats
= editNumSeats.getText().toString();


        if(name.equals("") ||
numSeats.equals(""))

        Toast.makeText(getApplicationContext()
, "PLEASE ENTER THE DETAILS",
Toast.LENGTH_SHORT).show();

                              else if(mov ==
null)

        Toast.makeText(getApplicationContext()
, "PLEASE CREATE A BOOKABLE MOVIE!",
Toast.LENGTH_SHORT).show();

                              else
                              {
                                      Cinema
cinema = new Cinema(name,
Integer.parseInt(numSeats));

        mov.addCinema(cinema);

        Toast.makeText(getApplicationContext()
, "SUCCESSFULLY CREATED!",
Toast.LENGTH_SHORT).show();
                              }
                       }
               });


        linearLayout2.addView(addButton2);

               LinearLayout linearLayout3 =
findViewById(R.id.InnerLinearLayout3);

               ImageButton addButton3 = new
ImageButton(this);
               LinearLayout.LayoutParams
addButtonParams3 = new
LinearLayout.LayoutParams(width / 6, height /
6);
               addButtonParams3.gravity =
Gravity.CENTER;

        addButton3.setLayoutParams(addButtonPa
rams3);

        addButton3.setImageResource(R.drawable
.add);

        addButton3.setScaleType(ImageView.Scal
eType.FIT_CENTER);
               addButton3.setBackground(null);


        addButton3.setOnClickListener(new
View.OnClickListener()
               {
                       @Override
                       public void
onClick(View v)
```

```
                       {
                              EditText
editStart =
findViewById(R.id.editStartDateTime);
                              String start =
editStart.getText().toString();

                              EditText editEnd
= findViewById(R.id.editEndDateTime);
                              String end =
editEnd.getText().toString();


        if(start.equals("") || end.equals(""))

        Toast.makeText(getApplicationContext()
, "PLEASE ENTER THE DETAILS",
Toast.LENGTH_SHORT).show();

                              else if(mov ==
null)

        Toast.makeText(getApplicationContext()
, "PLEASE CREATE A BOOKABLE MOVIE!",
Toast.LENGTH_SHORT).show();

                              else
if(mov.getCinemas().size() == 0)

        Toast.makeText(getApplicationContext()
, "PLEASE ADD A CINEMA!",
Toast.LENGTH_SHORT).show();

                              else
                              {

        mov.cinemas.get(mov.getCinemas().size(
) - 1).addRuntime(start, end);

        Toast.makeText(getApplicationContext()
, "SUCCESSFULLY CREATED!",
Toast.LENGTH_SHORT).show();
                              }
                       }
               });


        linearLayout3.addView(addButton3);

               LinearLayout linearLayout =
findViewById(R.id.LinearLayout);

               ImageButton addButton = new
ImageButton(this);
               LinearLayout.LayoutParams
addButtonParams = new
LinearLayout.LayoutParams(width / 4, height /
4);
               addButtonParams.gravity =
Gravity.CENTER;

        addButton.setLayoutParams(addButtonPar
ams);

        addButton.setImageResource(R.drawable.
next_screen);

        addButton.setScaleType(ImageView.Scale
Type.FIT_CENTER);
               addButton.setBackground(null);
        addButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {

                                if(mov == null)

        Toast.makeText(getApplicationContext()
, "PLEASE CREATE A BOOKABLE MOVIE!",
Toast.LENGTH_SHORT).show();

                                else
                                {
```

```
        DataManager dataManager =
(DataManager) getApplication();

        dataManager.addBookableMovie(mov);

        Toast.makeText(getApplicationContext()
, "SUCCESSFULLY ADDED!",
Toast.LENGTH_SHORT).show();
                                }
                        }
                });


        linearLayout.addView(addButton);
        }
}
```

addMovie.java

```
package com.app.spectraflix;

import android.os.Bundle;
import android.app.Activity;
import android.widget.Spinner;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.ImageButton;
import android.graphics.Typeface;
import android.widget.TextView;
import android.view.View;
import android.view.Gravity;
import android.util.DisplayMetrics;
import android.widget.EditText;
import android.widget.Toast;
import android.widget.LinearLayout;
import android.widget.RelativeLayout;
import android.content.Intent;
import java.util.List;

public class addMovie extends Activity
{
        private String selectedCategory;

        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.add_movie);

                if(getActionBar() != null)
                        getActionBar().hide();

                DisplayMetrics displayMetrics =
new DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
                int width =
displayMetrics.widthPixels;
```

```
                int height =
displayMetrics.heightPixels;

                Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");

                TextView addTextView =
findViewById(R.id.add_movie);

        addTextView.setTypeface(customFont);

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton imageButton = new
ImageButton(this);
                LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
                buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setImageResource(R.drawabl
e.back);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

        imageButton.setBackground(null);

        imageButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();
```

```
        intent.setClass(getApplicationContext(
), activity3.class);

        startActivity(intent);
                        }
                });


        relativeLayout.addView(imageButton);

                Spinner categorySpinner =
findViewById(R.id.movieCategory);

                String[] categories =
{"Animated Movie", "Popular Movie", "Horror
Movie", "Developer's Choice"};

                ArrayAdapter<String>
categoriesAdapter = new ArrayAdapter<>(this,
android.R.layout.simple_spinner_item,
categories);

        categoriesAdapter.setDropDownViewResou
rce(android.R.layout.simple_spinner_dropdown_i
tem);

        categorySpinner.setAdapter(categoriesA
dapter);


        categorySpinner.setOnItemSelectedListe
ner(new AdapterView.OnItemSelectedListener()
                {
                        @Override
                        public void
onItemSelected(AdapterView<?> parent, View
view, int position, long id)
                        {
                                selectedCategory
=
parent.getItemAtPosition(position).toString();
                        }

                        @Override
                        public void
onNothingSelected(AdapterView<?> parent)
                        {}
                });

                LinearLayout linearLayout =
findViewById(R.id.LinearLayout);

                ImageButton addButton = new
ImageButton(this);
                LinearLayout.LayoutParams
addButtonParams = new
LinearLayout.LayoutParams(width / 6, height /
6);
                addButtonParams.gravity =
Gravity.CENTER;

        addButton.setLayoutParams(addButtonPar
ams);

        addButton.setImageResource(R.drawable.
add);

        addButton.setScaleType(ImageView.Scale
Type.FIT_CENTER);
                addButton.setBackground(null);
```

```
        addButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                EditText
editTitle = findViewById(R.id.editTitle);
                                String title =
editTitle.getText().toString();

                                EditText
editImagePath =
findViewById(R.id.editImagePath);
                                String imagePath
= editImagePath.getText().toString();

                                EditText
editTitleImagePath =
findViewById(R.id.editTitleImagePath);
                                String
titleImagePath =
editTitleImagePath.getText().toString();

                                EditText
editTrailerId =
findViewById(R.id.editTrailerId);
                                String trailerId
= editTrailerId.getText().toString();

                                EditText
editCode =
findViewById(R.id.editMovieEmbedCode);
                                String code =
editCode.getText().toString();

                                EditText editURL
= findViewById(R.id.editMovieURL);
                                String url =
editURL.getText().toString();

                                EditText
editLocalPath =
findViewById(R.id.editMovieLocalPath);
                                String localPath
= editLocalPath.getText().toString();

                                EditText
editDescription =
findViewById(R.id.editMovieDescription);
                                String
description =
editDescription.getText().toString();


                                int category = -
1;

        if(selectedCategory.equals("Animated
Movie"))
                                        category
= 1;
                                else
if(selectedCategory.equals("Popular Movie"))
                                        category
= 2;
                                else
if(selectedCategory.equals("Horror Movie"))
                                        category
= 3;
                                else
```

```
                                        category
= 4;

        if(title.equals("") ||
imagePath.equals("") ||
titleImagePath.equals(""))

        Toast.makeText(getApplicationContext()
, "PLEASE ENTER THE DETAILS",
Toast.LENGTH_SHORT).show();

                                else
                                {
                                        Movie
newMovie = new Movie(title, imagePath,
titleImagePath, -1, -1, trailerId, code, url,
localPath, description, category);

        DataManager dataManager =
(DataManager) getApplication();

        dataManager.addMovie(newMovie);

        Toast.makeText(getApplicationContext()
, "SUCCESSFULLY ADDED!",
Toast.LENGTH_SHORT).show();
                                }
                        }
                });

        linearLayout.addView(addButton);
        }
}
```

removeBookableMovie.java

```
package com.app.spectraflix;

import android.os.Bundle;
import android.app.Activity;
import android.widget.ImageView;
import android.widget.ImageButton;
import android.graphics.Typeface;
import android.widget.TextView;
import android.view.View;
import android.view.Gravity;
import android.util.DisplayMetrics;
import android.widget.EditText;
import android.widget.Toast;
import android.widget.LinearLayout;
import android.widget.RelativeLayout;
import android.content.Intent;
import java.util.List;

public class removeBookableMovie extends
Activity
{
        @Override
        protected void onCreate(Bundle
savedInstanceState)
        {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.remove_bookabl
e_movie);

                if(getActionBar() != null)
                        getActionBar().hide();

                DisplayMetrics displayMetrics =
new DisplayMetrics();

        getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
                int width =
displayMetrics.widthPixels;
                int height =
displayMetrics.heightPixels;

                Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");

                TextView removeTextView =
findViewById(R.id.remove_bookable_movie);

        removeTextView.setTypeface(customFont)
;

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton imageButton = new
ImageButton(this);
                LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
                buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setImageResource(R.drawabl
e.back);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

        imageButton.setBackground(null);

        imageButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                              Intent intent =
new Intent();

       intent.setClass(getApplicationContext(
), activity3.class);

       startActivity(intent);
                      }
              });


       relativeLayout.addView(imageButton);

              LinearLayout linearLayout =
findViewById(R.id.LinearLayout);

              ImageButton removeButton = new
ImageButton(this);
              LinearLayout.LayoutParams
removeButtonParams = new
LinearLayout.LayoutParams(width / 6, height /
6);
              removeButtonParams.gravity =
Gravity.CENTER;

       removeButton.setLayoutParams(removeBut
tonParams);

       removeButton.setImageResource(R.drawab
le.remove);

       removeButton.setScaleType(ImageView.Sc
aleType.FIT_CENTER);

       removeButton.setBackground(null);


       removeButton.setOnClickListener(new
View.OnClickListener()
```

```
              {
                     @Override
                     public void
onClick(View v)
                     {
                            EditText
editTitle = findViewById(R.id.editTitle);
                            String title =
editTitle.getText().toString();



       if(title.equals(""))

       Toast.makeText(getApplicationContext()
, "PLEASE ENTER THE TITLE!",
Toast.LENGTH_SHORT).show();

                            else
                            {

       DataManager dataManager =
(DataManager) getApplication();

       dataManager.removeBookableMovie(title)
;

       Toast.makeText(getApplicationContext()
, "SUCCESSFULLY REMOVED!",
Toast.LENGTH_SHORT).show();
                            }
                     }
              });


       linearLayout.addView(removeButton);
       }
}
```

removeMovie.java

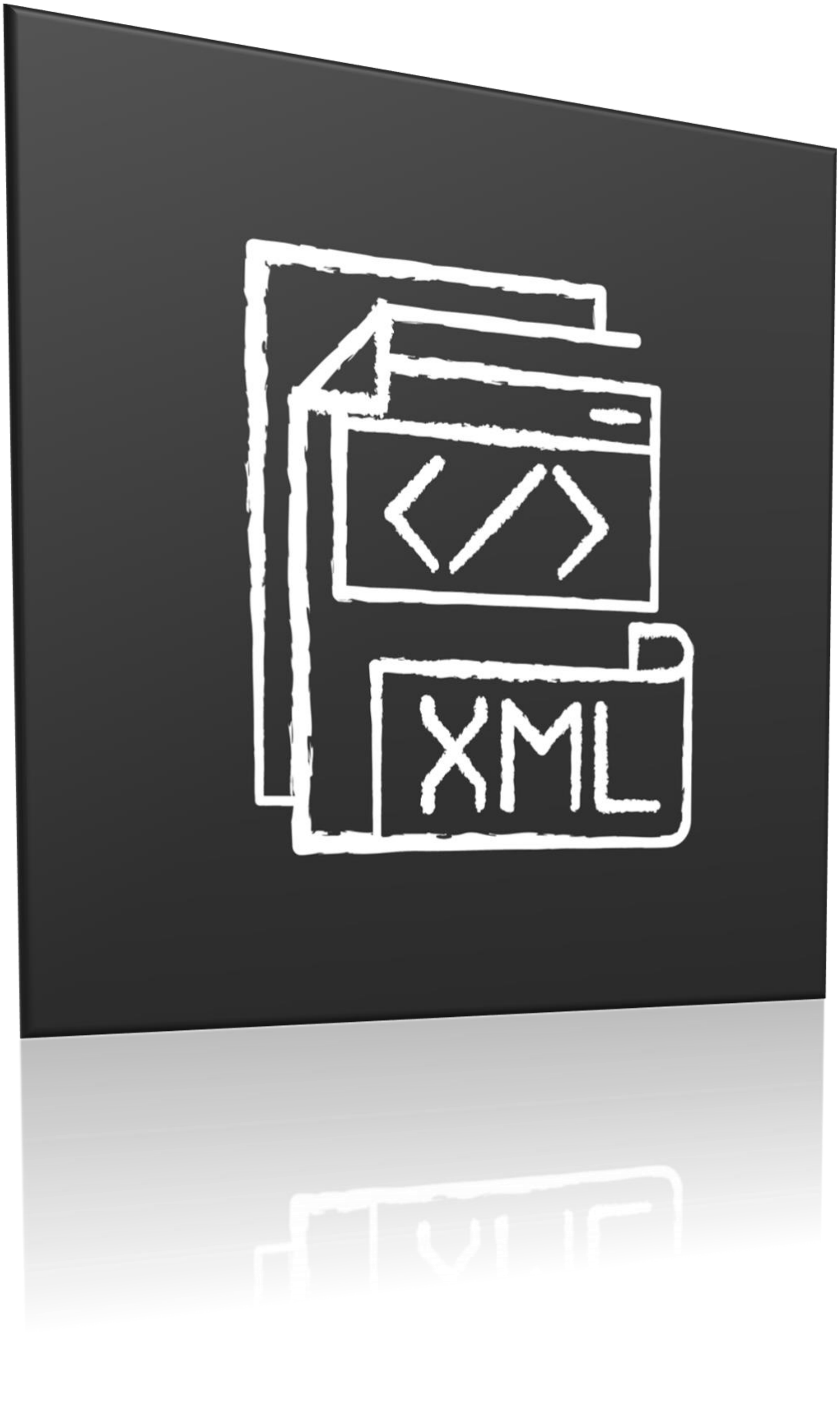
```
package com.app.spectraflix;

import android.os.Bundle;
import android.app.Activity;
import android.widget.ImageView;
import android.widget.ImageButton;
import android.graphics.Typeface;
import android.widget.TextView;
import android.view.View;
import android.view.Gravity;
import android.util.DisplayMetrics;
import android.widget.EditText;
import android.widget.Toast;
import android.widget.LinearLayout;
import android.widget.RelativeLayout;
import android.content.Intent;
import java.util.List;

public class removeMovie extends Activity
{
       @Override
```

```
       protected void onCreate(Bundle
savedInstanceState)
       {

       super.onCreate(savedInstanceState);

       setContentView(R.layout.remove_movie);

              if(getActionBar() != null)
                     getActionBar().hide();

              DisplayMetrics displayMetrics =
new DisplayMetrics();

       getWindowManager().getDefaultDisplay()
.getMetrics(displayMetrics);
              int width =
displayMetrics.widthPixels;
              int height =
displayMetrics.heightPixels;
```

```
                Typeface customFont =
Typeface.createFromAsset(getAssets(),
"fonts/nasalization.ttf");

                TextView removeTextView =
findViewById(R.id.remove_movie);

        removeTextView.setTypeface(customFont)
;

                RelativeLayout relativeLayout =
findViewById(R.id.RelativeLayout);

                ImageButton imageButton = new
ImageButton(this);
                LinearLayout.LayoutParams
buttonParams = new
LinearLayout.LayoutParams(width / 8, height /
12);
                buttonParams.gravity =
Gravity.CENTER;

        imageButton.setLayoutParams(buttonPara
ms);

        imageButton.setImageResource(R.drawabl
e.back);

        imageButton.setScaleType(ImageView.Sca
leType.FIT_START);

        imageButton.setBackground(null);

        imageButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                Intent intent =
new Intent();

        intent.setClass(getApplicationContext(
), activity3.class);

        startActivity(intent);
                        }
                });


        relativeLayout.addView(imageButton);

                LinearLayout linearLayout =
findViewById(R.id.LinearLayout);

                ImageButton removeButton = new
ImageButton(this);
                LinearLayout.LayoutParams
removeButtonParams = new
LinearLayout.LayoutParams(width / 6, height /
6);
                removeButtonParams.gravity =
Gravity.CENTER;

        removeButton.setLayoutParams(removeBut
tonParams);

        removeButton.setImageResource(R.drawab
le.remove);

        removeButton.setScaleType(ImageView.Sc
aleType.FIT_CENTER);

        removeButton.setBackground(null);


        removeButton.setOnClickListener(new
View.OnClickListener()
                {
                        @Override
                        public void
onClick(View v)
                        {
                                EditText
editTitle = findViewById(R.id.editTitle);
                                String title =
editTitle.getText().toString();



        if(title.equals(""))

        Toast.makeText(getApplicationContext()
, "PLEASE ENTER THE TITLE!",
Toast.LENGTH_SHORT).show();

                                else
                                {

        DataManager dataManager =
(DataManager) getApplication();

        dataManager.removeMovie(title);

        Toast.makeText(getApplicationContext()
, "SUCCESSFULLY REMOVED!",
Toast.LENGTH_SHORT).show();
                                }
                        }
                });


        linearLayout.addView(removeButton);
        }
}
```

streamingMovies.java

```
package com.app.spectraflix;

import java.util.List;
import java.util.LinkedList;

public class streamingMovies
{
        private List<Movie> animatedMovies =
new LinkedList<Movie>();
        private List<Movie> horrorMovies = new
LinkedList<Movie>();
        private List<Movie> popularMovies =
new LinkedList<Movie>();
        private List<Movie>
developersChoiceMovies = new
LinkedList<Movie>();
        private List<Movie> documentaries =
new LinkedList<Movie>();

        public List<Movie> getHorrorMovies()
        {
                return this.horrorMovies;
        }

        public List<Movie> getAnimatedMovies()
        {
                return this.animatedMovies;
        }

        public List<Movie> getPopularMovies()
        {
                return this.popularMovies;
        }

        public List<Movie>
getDevelopersChoiceMovies()
        {
                return
this.developersChoiceMovies;
        }

        public List<Movie> getDocumentaries()
        {
                return this.documentaries;
        }

        public void addHorrorMovie(Movie
movie)
        {
                this.horrorMovies.add(movie);
        }

        public void addAnimatedMovie(Movie
movie)
        {
                this.animatedMovies.add(movie);
        }

        public void addPopularMovie(Movie
movie)
        {
                this.popularMovies.add(movie);
        }

        public void
addDevelopersChoiceMovie(Movie movie)
        {

        this.developersChoiceMovies.add(movie)
;
        }

        public void addDocumentary(Movie
movie)
        {
                this.documentaries.add(movie);
        }
}
```


XML

AndroidManifest.xml

```
<?xml version = "1.0" encoding = "utf-8"?>

<manifest
    xmlns:android =
"http://schemas.android.com/apk/res/android"
    package = "com.app.spectraflix"
>

    <uses-permission
        android:name =
"android.permission.INTERNET"
    />

    <uses-permission
        android:name =
"android.permission.READ_EXTERNAL_STORAGE"
    />


    <application
        android:name = ".DataManager"
        android:requestLegacyExternalStorage =
"true"
        android:allowBackup = "true"
        android:icon = "@drawable/app_icon"
        android:label = "@string/app_name"
        android:theme = "@style/AppTheme"
        android:resizeableActivity = "true"
        >

        <activity
            android:name = ".MainActivity"
            android:label = "@string/app_name"
        >

            <intent-filter>
                <action android:name =
"android.intent.action.MAIN" />
                <category android:name =
"android.intent.category.LAUNCHER" />
            </intent-filter>

        </activity>

               <activity android:name =
".PreviewActivity" />
               <activity android:name =
".MovieWebView" />
               <activity android:name =
".MovieURLView" />
               <activity android:name =
".MovieLocalView" />
               <activity android:name =
".SelectSeat" />
               <activity android:name =
".Ticket" />
               <activity android:name =
".addMovie" />
               <activity android:name =
".removeMovie" />
               <activity android:name =
".addBookableMovie" />
               <activity android:name =
".removeBookableMovie" />
               <activity android:name =
".MovieTrailerView" />
               <activity android:name =
".activity2" />
               <activity android:name =
".EnterDetails" />
               <activity android:name =
".activity3" />

    </application>
</manifest>
```

main.xml

```
<?xml version="1.0" encoding="utf-8"?>

<GridLayout
        xmlns:android =
"http://schemas.android.com/apk/res/android"
        android:layout_width = "fill_parent"
        android:layout_height = "fill_parent"
        android:rowCount = "2"
        android:columnCount = "1"
        android:orientation = "horizontal"
        android:layout_gravity = "fill"
>

        <LinearLayout
                xmlns:android =
"http://schemas.android.com/apk/res/android"
                android:layout_width =
"match_parent"
                android:layout_height = "0dp"
                android:background =
"@drawable/bg"
                android:orientation =
"vertical"
                android:gravity = "center"
                android:layout_rowWeight = "9"
        >

                <ScrollView
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                >

                        <LinearLayout

        android:layout_width = "wrap_content"

        android:layout_height = "wrap_content"
                                android:gravity
= "center"

        android:orientation = "vertical"
                        >

                                <TextView

        android:id = "@+id/category_label_1"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Animated Movies"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"

        android:gravity = "start"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"

        android:shadowDx = "2"

        android:shadowDy = "2"

        android:shadowRadius = "3"
                                />


        <HorizontalScrollView

        android:id =
"@+id/horizontalScrollView"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:layout_marginStart = "1dp"

        android:layout_marginTop = "1dp"

        android:layout_marginEnd = "1dp"

        android:layout_marginBottom = "1dp"

        android:foregroundGravity =
"center_vertical"
                                >


        <LinearLayout

        android:id =
"@+id/animated_movies_scroll_view"

        android:layout_width = "wrap_content"

        android:layout_height = "match_parent"

        android:foregroundGravity = "center"
        android:gravity = "center"

        android:orientation = "horizontal"
                                      />


        </HorizontalScrollView>

                               <TextView

        android:id = "@+id/category_label_2"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Popular Movies"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"

        android:gravity = "start"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"

        android:shadowDx = "2"

        android:shadowDy = "2"

        android:shadowRadius = "3"
                               />

        <HorizontalScrollView

        android:id =
"@+id/horizontalScrollView"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:layout_marginStart = "1dp"

        android:layout_marginTop = "1dp"

        android:layout_marginEnd = "1dp"

        android:layout_marginBottom = "1dp"

        android:foregroundGravity =
"center_vertical"
                               >
```

```
        <LinearLayout

        android:id =
"@+id/popular_movies_scroll_view"

        android:layout_width = "wrap_content"

        android:layout_height = "match_parent"

        android:foregroundGravity = "center"

        android:gravity = "center"

        android:orientation = "horizontal"
                                      />


        </HorizontalScrollView>

                               <TextView

        android:id = "@+id/category_label_3"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Horror Movies"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"

        android:gravity = "start"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"

        android:shadowDx = "2"

        android:shadowDy = "2"

        android:shadowRadius = "3"
                               />


        <HorizontalScrollView

        android:id =
"@+id/horizontalScrollView"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:layout_marginStart = "1dp"
        android:layout_marginTop = "1dp"

        android:layout_marginEnd = "1dp"

        android:layout_marginBottom = "1dp"

        android:foregroundGravity =
"center_vertical"
                              >


        <LinearLayout

        android:id =
"@+id/horror_movies_scroll_view"

        android:layout_width = "wrap_content"

        android:layout_height = "match_parent"

        android:foregroundGravity = "center"

        android:gravity = "center"

        android:orientation = "horizontal"
                                      />


        </HorizontalScrollView>

                              <TextView

        android:id = "@+id/category_label_4"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Developer's Choice"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"

        android:gravity = "start"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"

        android:shadowDx = "2"

        android:shadowDy = "2"

        android:shadowRadius = "3"
                              />
```

```
        <HorizontalScrollView

        android:id =
"@+id/horizontalScrollView"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:layout_marginStart = "1dp"

        android:layout_marginTop = "1dp"

        android:layout_marginEnd = "1dp"

        android:layout_marginBottom = "1dp"

        android:foregroundGravity =
"center_vertical"
                              >


        <LinearLayout

        android:id =
"@+id/developers_choice_scroll_view"

        android:layout_width = "wrap_content"

        android:layout_height = "match_parent"

        android:foregroundGravity = "center"

        android:gravity = "center"

        android:orientation = "horizontal"
                                      />


        </HorizontalScrollView>
                        </LinearLayout>
                </ScrollView>
        </LinearLayout>

        <GridLayout
                xmlns:android =
"http://schemas.android.com/apk/res/android"
                android:layout_height = "0dp"
                android:layout_width =
"match_parent"
                android:layout_rowWeight = "1"
                android:background = "#ACD5C2"
                android:rowCount = "1"
                android:columnCount = "3"
                android:orientation =
"horizontal"
                android:layout_gravity = "fill"
        >

                <ImageButton
                        android:id =
"@+id/icon_button1"
                        android:layout_height =
"match_parent"
                        android:layout_width =
"0dp"

        android:layout_columnWeight = "1"
                        android:src =
"@drawable/icon1"
```

```
                        android:background =
"?android:attr/selectableItemBackgroundBorderl
ess"

        android:contentDescription = "Icon
button"
                        android:scaleType =
"centerInside"
                        android:padding = "8dp"
                />

                <ImageButton
                        android:id =
"@+id/icon_button2"
                        android:layout_height =
"match_parent"
                        android:layout_width =
"0dp"

        android:layout_columnWeight = "1"
                        android:src =
"@drawable/icon2"
                        android:background =
"?android:attr/selectableItemBackgroundBorderl
ess"

        android:contentDescription = "Icon
button"
                        android:scaleType =
"centerInside"
                        android:padding = "8dp"
                />

                <ImageButton
                        android:id =
"@+id/icon_button3"
                        android:layout_height =
"match_parent"
                        android:layout_width =
"0dp"

        android:layout_columnWeight = "1"
                        android:src =
"@drawable/icon3"
                        android:background =
"?android:attr/selectableItemBackgroundBorderl
ess"

        android:contentDescription = "Icon
button"
                        android:scaleType =
"centerInside"
                        android:padding = "8dp"
                />

        </GridLayout>

</GridLayout>
```

activity2.xml

```
<?xml version="1.0" encoding="utf-8"?>

<GridLayout
        xmlns:android = "http://schemas.android.com/apk/res/android"
    android:layout_width = "fill_parent"
    android:layout_height = "fill_parent"
        android:rowCount = "2"
        android:columnCount = "1"
        android:orientation = "horizontal"
        android:layout_gravity = "fill"
>

        <LinearLayout
                xmlns:android = "http://schemas.android.com/apk/res/android"
                android:layout_width = "match_parent"
                android:layout_height = "0dp"
                android:background = "@drawable/bg"
                android:orientation = "vertical"
                android:gravity = "center"
                android:layout_rowWeight = "9"
        >

                <ScrollView
                        android:layout_width = "match_parent"
                        android:layout_height = "match_parent"
                >

                        <LinearLayout
                                android:id = "@+id/ImageLinearLayout"
                                android:layout_width = "match_parent"
                                android:layout_height = "wrap_content"
                                android:gravity = "center"
                                android:orientation = "vertical"
                                android:padding = "16dp"
                        />

                </ScrollView>

        </LinearLayout>

        <GridLayout
                xmlns:android = "http://schemas.android.com/apk/res/android"
                android:layout_height = "0dp"
                android:layout_width = "match_parent"
                android:layout_rowWeight = "1"
                android:background = "#ACD5C2"
                android:rowCount = "1"
                android:columnCount = "3"
                android:orientation = "horizontal"
                android:layout_gravity = "fill"
        >

                <ImageButton
                        android:id = "@+id/icon_button1"
                        android:layout_height = "match_parent"
                        android:layout_width = "0dp"
                        android:layout_columnWeight = "1"
                        android:src = "@drawable/icon1"
                        android:background = "?android:attr/selectableItemBackgroundBorderless"
                        android:contentDescription = "Icon button"
                        android:scaleType = "centerInside"
            android:padding = "8dp"
                />

                <ImageButton
                        android:id = "@+id/icon_button2"
                        android:layout_height = "match_parent"
                        android:layout_width = "0dp"
                        android:layout_columnWeight = "1"
                        android:src = "@drawable/icon2"
                        android:background = "?android:attr/selectableItemBackgroundBorderless"
                        android:contentDescription = "Icon button"
                        android:scaleType = "centerInside"
            android:padding = "8dp"
                />

                <ImageButton
                        android:id = "@+id/icon_button3"
                        android:layout_height = "match_parent"
                        android:layout_width = "0dp"
                        android:layout_columnWeight = "1"
                        android:src = "@drawable/icon3"
                        android:background = "?android:attr/selectableItemBackgroundBorderless"
                        android:contentDescription = "Icon button"
                        android:scaleType = "centerInside"
            android:padding = "8dp"
                />

        </GridLayout>

</GridLayout>
```

activity3.xml

```
<?xml version = "1.0" encoding = "utf-8"?>

<GridLayout
        xmlns:android =
"http://schemas.android.com/apk/res/android"
    android:layout_width = "fill_parent"
    android:layout_height = "fill_parent"
        android:rowCount = "2"
        android:columnCount = "1"
        android:orientation = "horizontal"
        android:layout_gravity = "fill"
>

        <LinearLayout
                xmlns:android =
"http://schemas.android.com/apk/res/android"
                android:layout_width =
"match_parent"
                android:layout_height = "0dp"
                android:orientation =
"vertical"
                android:gravity = "center"
                android:layout_rowWeight = "9"
        >

                <ScrollView
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                >

                        <LinearLayout

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:gravity
= "center"

        android:background = "@drawable/bg"

        android:orientation = "vertical"
                                android:padding
= "16dp"
                        >

                                <TextView

        android:id = "@+id/add_remove_movie"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Add / Remove Movie"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"

        android:gravity = "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"

        android:shadowDx = "2"

        android:shadowDy = "2"

        android:shadowRadius = "3"
                                />

                                <LinearLayout

        android:id =
"@+id/add_remove_movie_layout"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:gravity = "center"

        android:orientation = "vertical"

        android:padding = "16dp"
                                />

                                <TextView

        android:id =
"@+id/add_remove_bookable_movie"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Add / Remove Bookable
Movie"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"
```

```
       android:textStyle = "bold"

       android:paddingStart = "16dp"

       android:paddingEnd = "16dp"

       android:paddingTop = "8dp"

       android:paddingBottom = "8dp"

       android:gravity = "center"

       android:layout_marginBottom = "12dp"

       android:letterSpacing = "0.05"

       android:shadowColor =
"@android:color/black"

       android:shadowDx = "2"

       android:shadowDy = "2"

       android:shadowRadius = "3"
                             />

                             <LinearLayout

       android:id =
"@+id/add_remove_bookable_movie_layout"

       android:layout_width = "match_parent"

       android:layout_height = "wrap_content"

       android:gravity = "center"

       android:orientation = "vertical"

       android:padding = "16dp"
                             />

                      </LinearLayout>
               </ScrollView>
       </LinearLayout>

       <GridLayout
               xmlns:android =
"http://schemas.android.com/apk/res/android"
               android:layout_height = "0dp"
               android:layout_width =
"match_parent"
               android:layout_rowWeight = "1"
               android:background = "#ACD5C2"
               android:rowCount = "1"
               android:columnCount = "3"
               android:orientation =
"horizontal"
               android:layout_gravity = "fill"
       >

               <ImageButton
                      android:id =
"@+id/icon_button1"
                      android:layout_height =
"match_parent"
```

```
                      android:layout_width =
"0dp"

       android:layout_columnWeight = "1"
                      android:src =
"@drawable/icon1"
                      android:background =
"?android:attr/selectableItemBackgroundBorderl
ess"

       android:contentDescription = "Icon
button"
                      android:scaleType =
"centerInside"
           android:padding = "8dp"
              />

              <ImageButton
                      android:id =
"@+id/icon_button2"
                      android:layout_height =
"match_parent"
                      android:layout_width =
"0dp"

       android:layout_columnWeight = "1"
                      android:src =
"@drawable/icon2"
                      android:background =
"?android:attr/selectableItemBackgroundBorderl
ess"

       android:contentDescription = "Icon
button"
                      android:scaleType =
"centerInside"
           android:padding = "8dp"
              />

              <ImageButton
                      android:id =
"@+id/icon_button3"
                      android:layout_height =
"match_parent"
                      android:layout_width =
"0dp"

       android:layout_columnWeight = "1"
                      android:src =
"@drawable/icon3"
                      android:background =
"?android:attr/selectableItemBackgroundBorderl
ess"

       android:contentDescription = "Icon
button"
                      android:scaleType =
"centerInside"
           android:padding = "8dp"
              />

       </GridLayout>

</GridLayout>
```

add_bookable_movie.xml

```
<RelativeLayout
        xmlns:android =
"http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:padding = "16dp"
        android:background = "@drawable/bg"
>

        <ScrollView
                android:layout_width =
"match_parent"
                android:layout_height =
"match_parent"
        >

                <LinearLayout
                        xmlns:android =
"http://schemas.android.com/apk/res/android"
                        android:id =
"@+id/LinearLayout"
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                        android:orientation =
"vertical"
                        android:gravity =
"center"
                        android:padding =
"16dp"
                        android:background =
"@drawable/bg"
                >

                        <LinearLayout
                                xmlns:android =
"http://schemas.android.com/apk/res/android"
                                android:id =
"@+id/InnerLinearLayout1"

        android:layout_width = "match_parent"

        android:layout_height = "match_parent"

        android:orientation = "vertical"
                                android:gravity
= "center"
                                android:padding
= "16dp"
                        >

                                <TextView

        android:id = "@+id/add_bookable_movie"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Add Bookable Movie"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"

        android:gravity = "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"

        android:shadowDx = "2"

        android:shadowDy = "2"

        android:shadowRadius = "3"
                                />

                                <EditText

        android:id = "@+id/editMovieName"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:hint = "Enter the title"

        android:textColor = "#000000"

        android:singleLine = "true"

        android:inputType = "text"

        android:textSize = "18sp"

        android:layout_marginBottom = "16dp"

        android:padding = "10dp"
                                />

                                <EditText

        android:id = "@+id/editMovieTitlePath"
        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:hint = "Enter the movie's
title image path. Eg :
/storage/emulated/0/img.jpg"

        android:textColor = "#000000"

        android:layout_marginBottom = "16dp"

        android:inputType = "text"

        android:textSize = "18sp"

        android:singleLine = "true"

        android:padding = "10dp"
                                />

                        </LinearLayout>

                        <LinearLayout
                                xmlns:android =
"http://schemas.android.com/apk/res/android"
                                android:id =
"@+id/InnerLinearLayout2"

        android:layout_width = "match_parent"

        android:layout_height = "match_parent"

        android:orientation = "vertical"
                                android:gravity
= "center"
                                android:padding
= "16dp"
                        >

                                <TextView

        android:id = "@+id/add_cinema"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:text = "Add Cinema"

        android:textColor =
"@android:color/white"

        android:textSize = "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"

        android:gravity = "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"
```

```
        android:shadowColor =
"@android:color/black"

        android:shadowDx = "2"

        android:shadowDy = "2"

        android:shadowRadius = "3"
                                />

                                <EditText

        android:id = "@+id/editName"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:hint = "Enter the Cinema's
name"

        android:textColor = "#000000"

        android:singleLine = "true"

        android:inputType = "text"

        android:textSize = "18sp"

        android:layout_marginBottom = "16dp"

        android:padding = "10dp"
                                />

                                <EditText

        android:id = "@+id/editNumSeats"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"

        android:hint = "Enter the number of
seats in the cinema"

        android:textColor = "#000000"

        android:layout_marginBottom = "16dp"

        android:inputType = "phone"

        android:textSize = "18sp"

        android:singleLine = "true"

        android:padding = "10dp"
                                />

                        </LinearLayout>

                        <LinearLayout
                                xmlns:android =
"http://schemas.android.com/apk/res/android"
                                android:id =
"@+id/InnerLinearLayout3"

        android:layout_width = "match_parent"

        android:layout_height = "match_parent"

        android:orientation = "vertical"
```

```
                              android:gravity
= "center"
                              android:padding
= "16dp"
                      >

                              <TextView

       android:id = "@+id/add_runtime"

       android:layout_width = "match_parent"

       android:layout_height = "wrap_content"

       android:text = "Add Runtime"

       android:textColor =
"@android:color/white"

       android:textSize = "30sp"

       android:textStyle = "bold"

       android:paddingStart = "16dp"

       android:paddingEnd = "16dp"

       android:paddingTop = "8dp"

       android:paddingBottom = "8dp"

       android:gravity = "center"

       android:layout_marginBottom = "12dp"

       android:letterSpacing = "0.05"

       android:shadowColor =
"@android:color/black"

       android:shadowDx = "2"

       android:shadowDy = "2"

       android:shadowRadius = "3"
                              />

                              <EditText

       android:id = "@+id/editStartDateTime"
```

```
       android:layout_width = "match_parent"

       android:layout_height = "wrap_content"

       android:hint = "When does it start?
[Format : yyyy-MM-dd HH:mm]"

       android:textColor = "#000000"

       android:singleLine = "true"

       android:inputType = "text"

       android:textSize = "18sp"

       android:layout_marginBottom = "16dp"

       android:padding = "10dp"
                              />

                              <EditText

       android:id = "@+id/editEndDateTime"

       android:layout_width = "match_parent"

       android:layout_height = "wrap_content"

       android:hint = "When does it end?
[Format : yyyy-MM-dd HH:mm]"

       android:textColor = "#000000"

       android:layout_marginBottom = "16dp"

       android:inputType = "text"

       android:textSize = "18sp"

       android:singleLine = "true"

       android:padding = "10dp"
                              />

                      </LinearLayout>
              </LinearLayout>
       </ScrollView>
</RelativeLayout>
```

add_movie.xml

```
<RelativeLayout
       xmlns:android =
"http://schemas.android.com/apk/res/android"
       android:id = "@+id/RelativeLayout"
       android:layout_width = "match_parent"
       android:layout_height = "match_parent"
       android:padding = "16dp"
       android:background = "@drawable/bg"
>

       <ScrollView
```

```
              android:layout_width =
"match_parent"
              android:layout_height =
"match_parent"
       >

              <LinearLayout
                      xmlns:android =
"http://schemas.android.com/apk/res/android"
                      android:id =
"@+id/LinearLayout"
```

```
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                        android:orientation =
"vertical"
                        android:gravity =
"center"
                        android:padding =
"16dp"
                        android:background =
"@drawable/bg"
                >

                        <TextView
                                android:id =
"@+id/add_movie"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:text =
"Add Movie"

        android:textColor =
"@android:color/white"
                                android:textSize
= "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"
                                android:gravity
= "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"
                                android:shadowDx
= "2"
                                android:shadowDy
= "2"

        android:shadowRadius = "3"
                        />

                        <EditText
                                android:id =
"@+id/editTitle"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the title"

        android:textColor = "#000000"

        android:singleLine = "true"

        android:inputType = "text"
                                android:textSize
= "18sp"
```

```

        android:layout_marginBottom = "16dp"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editImagePath"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the movie's poster path. Eg :
/storage/emulated/0/img.jpg"

        android:textColor = "#000000"

        android:layout_marginBottom = "16dp"

        android:inputType = "text"
                                android:textSize
= "18sp"

        android:singleLine = "true"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editTitleImagePath"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the movie's title image path. Eg :
/storage/emulated/0/img.jpg"

        android:singleLine = "true"

        android:layout_marginBottom = "16dp"

        android:textColor = "#000000"

        android:inputType = "text"
                                android:textSize
= "18sp"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editTrailerId"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the movie's trailer Id (youtube). Eg :
LKFuXETZUsI [OPTIONAL]"

        android:singleLine = "true"

        android:layout_marginBottom = "16dp"

        android:textColor = "#000000"

        android:inputType = "text"
```

```
                                android:textSize
= "18sp"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editMovieEmbedCode"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the movie's embed code (HTML).
[OPTIONAL]"

        android:singleLine = "true"

        android:layout_marginBottom = "16dp"

        android:textColor = "#000000"

        android:inputType = "text"
                                android:textSize
= "18sp"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editMovieURL"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the movie's URL. [OPTIONAL]"

        android:singleLine = "true"

        android:layout_marginBottom = "16dp"

        android:textColor = "#000000"

        android:inputType = "text"
                                android:textSize
= "18sp"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editMovieLocalPath"

        android:layout_width = "match_parent"
```

```

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the movie's local path. Eg :
/storage/emulated/0/vid.mp4 [OPTIONAL]"

        android:singleLine = "true"

        android:layout_marginBottom = "16dp"

        android:textColor = "#000000"

        android:inputType = "text"
                                android:textSize
= "18sp"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editMovieDescription"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the movie's description [OPTIONAL]"

        android:singleLine = "true"

        android:layout_marginBottom = "16dp"

        android:textColor = "#000000"

        android:inputType = "text"
                                android:textSize
= "18sp"
                                android:padding
= "10dp"
                        />

                        <Spinner
                                android:id =
"@+id/movieCategory"

        android:layout_width = "wrap_content"

        android:layout_marginBottom = "16dp"

        android:layout_height = "wrap_content"
                                android:gravity
= "center"
                        />

                </LinearLayout>
        </ScrollView>
</RelativeLayout>
```

enter_details.xml

```
<RelativeLayout
        xmlns:android =
"http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:padding = "16dp"
        android:background = "@drawable/bg"
>

        <ScrollView
                android:layout_width =
"match_parent"
                android:layout_height =
"match_parent"
        >

                <LinearLayout
                        xmlns:android =
"http://schemas.android.com/apk/res/android"
                        android:id =
"@+id/LinearLayout"
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                        android:orientation =
"vertical"
                        android:gravity =
"center"
                        android:padding =
"16dp"
                        android:background =
"@drawable/bg"
                >

                        <TextView
                                android:id =
"@+id/details_label"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:text =
"Enter Details"

        android:textColor =
"@android:color/white"
                                android:textSize
= "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"
```

```
                                android:gravity
= "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"
                                android:shadowDx
= "2"
                                android:shadowDy
= "2"

        android:shadowRadius = "3"
                        />

                        <EditText
                                android:id =
"@+id/editName"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter your name"

        android:textColor = "#000000"

        android:singleLine = "true"

        android:inputType = "text"
                                android:textSize
= "18sp"

        android:layout_marginBottom = "16dp"
                                android:padding
= "10dp"
                        />

                        <EditText
                                android:id =
"@+id/editPhoneNum"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter your phone no."

        android:textColor = "#000000"

        android:layout_marginBottom = "16dp"

        android:inputType = "phone"
                                android:textSize
= "18sp"

        android:singleLine = "true"
                                android:padding
= "10dp"
```

```
                       />

                       <EditText
                              android:id =
"@+id/editEmail"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                              android:hint =
"Enter your email address"

        android:singleLine = "true"

        android:layout_marginBottom = "16dp"

        android:textColor = "#000000"

        android:inputType = "textEmailAddress"
                              android:textSize
= "18sp"
                              android:padding
= "10dp"
                       />

                       <Spinner
```

```
                              android:id =
"@+id/cinemaSpinner"

        android:layout_width = "wrap_content"

        android:layout_marginBottom = "16dp"

        android:layout_height = "wrap_content"
                              android:gravity
= "center"
                       />

                       <Spinner
                              android:id =
"@+id/runtimeSpinner"

        android:layout_width = "wrap_content"

        android:layout_height = "wrap_content"
                              android:gravity
= "center"
                       />

               </LinearLayout>
        </ScrollView>
</RelativeLayout>
```

movie_url_view.xml

```
<?xml version = "1.0" encoding = "utf-8"?>

<RelativeLayout
        xmlns:android = "http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:padding = "16dp"
        android:background = "@drawable/bg"
>

        <VideoView
                android:id = "@+id/videoView"
                android:layout_width = "match_parent"
                android:layout_height = "match_parent"
                android:layout_centerInParent = "true"
        />

</RelativeLayout>
```

movie_webview.xml

```
<RelativeLayout
        xmlns:android = "http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
>

        <WebView
                android:id = "@+id/webView"
                android:layout_width = "match_parent"
                android:layout_height = "match_parent"
                android:layout_centerInParent = "true"
        />

</RelativeLayout>
```

preview.xml

```
<RelativeLayout
    xmlns:android =
"http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
    android:layout_width = "match_parent"
    android:layout_height = "match_parent"
>

    <ImageView
        android:id = "@+id/background_image"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:scaleType = "centerCrop"
        android:layout_alignParentTop = "true"
        android:layout_alignParentStart =
"true"
        />

    <LinearLayout
        android:id = "@+id/LinearLayout"
        android:layout_width = "wrap_content"
        android:layout_height = "wrap_content"
        android:orientation = "vertical"
        android:layout_alignParentBottom =
"true"
        android:layout_alignParentStart =
"true"
        android:layout_margin = "16dp"
        />

        <LinearLayout
                android:id =
"@+id/WatchMoviesLayout"
               android:layout_width = "400dp"
        android:layout_height = "500dp"
               android:orientation =
"vertical"

        android:layout_alignParentBottom =
"true"
        android:layout_alignParentEnd = "true"
               android:layout_margin = "16dp"
               android:gravity = "center"
               android:background =
"#30000000"
        >

               <TextView
                       android:id =
"@+id/watch_movie"
                       android:text = "Watch
Movie"
                       android:textColor =
"@android:color/white"
                       android:textSize =
"20sp"
                       android:textStyle =
"bold"
                       android:layout_width =
"match_parent"
                       android:layout_height =
"wrap_content"
                       android:letterSpacing =
"0.1"
                       android:gravity =
"center"
               />
```

```
                <GridLayout
                        android:layout_width =
"match_parent"
                        android:layout_height =
"fill_parent"
                        android:orientation =
"vertical"
                        android:rowCount = "3"
                        android:columnCount =
"1"
                >

                        <ImageButton
                                android:id =
"@+id/icon_button1"

        android:layout_width = "match_parent"

        android:layout_height = "0dp"

        android:layout_rowWeight = "1"
                                android:src =
"@drawable/embed_movie"

        android:scaleType = "fitCenter"

        android:background = "@null"
                        />

                        <ImageButton
                                android:id =
"@+id/icon_button2"

        android:layout_width = "match_parent"

        android:layout_height = "0dp"

        android:layout_rowWeight = "1"
                                android:src =
"@drawable/movie_url"

        android:scaleType = "fitCenter"

        android:background = "@null"
                        />

                        <ImageButton
                                android:id =
"@+id/icon_button3"

        android:layout_width = "match_parent"

        android:layout_height = "0dp"

        android:layout_rowWeight = "1"
                                android:src =
"@drawable/local_path"

        android:scaleType = "fitCenter"

        android:background = "@null"
                        />

                </GridLayout>
        </LinearLayout>
</RelativeLayout>
```

remove_bookable_movie.xml

```
<RelativeLayout
        xmlns:android =
"http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:padding = "16dp"
        android:background = "@drawable/bg"
>

        <ScrollView
                android:layout_width =
"match_parent"
                android:layout_height =
"match_parent"
        >

                <LinearLayout
                        xmlns:android =
"http://schemas.android.com/apk/res/android"
                        android:id =
"@+id/LinearLayout"
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                        android:orientation =
"vertical"
                        android:gravity =
"center"
                        android:padding =
"16dp"
                        android:background =
"@drawable/bg"
                >

                        <TextView
                                android:id =
"@+id/remove_bookable_movie"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:text =
"Remove Bookable Movie"

        android:textColor =
"@android:color/white"
                                android:textSize
= "30sp"

        android:textStyle = "bold"
        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"
                        android:gravity
= "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"
                        android:shadowDx
= "2"
                        android:shadowDy
= "2"

        android:shadowRadius = "3"
                />

                <EditText
                        android:id =
"@+id/editTitle"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                        android:hint =
"Enter the title"

        android:textColor = "#000000"

        android:singleLine = "true"

        android:inputType = "text"
                        android:textSize
= "18sp"

        android:layout_marginBottom = "16dp"
                        android:padding
= "10dp"
                />

                </LinearLayout>
        </ScrollView>
</RelativeLayout>
```

remove_movie.xml

```
<RelativeLayout
        xmlns:android =
"http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:padding = "16dp"
        android:background = "@drawable/bg"
>

        <ScrollView
                android:layout_width =
"match_parent"
                android:layout_height =
"match_parent"
        >

                <LinearLayout
                        xmlns:android =
"http://schemas.android.com/apk/res/android"
                        android:id =
"@+id/LinearLayout"
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                        android:orientation =
"vertical"
                        android:gravity =
"center"
                        android:padding =
"16dp"
                        android:background =
"@drawable/bg"
                >

                        <TextView
                                android:id =
"@+id/remove_movie"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:text =
"Remove Movie"

        android:textColor =
"@android:color/white"
                                android:textSize
= "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"
                                android:gravity
= "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"
```

```
                                android:shadowDx
= "2"
                                android:shadowDy
= "2"

        android:shadowRadius = "3"
                        />

                        <EditText
                                android:id =
"@+id/editTitle"

        android:layout_width = "match_parent"

        android:layout_height = "wrap_content"
                                android:hint =
"Enter the title"

        android:textColor = "#000000"

        android:singleLine = "true"

        android:inputType = "text"
                                android:textSize
= "18sp"

        android:layout_marginBottom = "16dp"
                                android:padding
= "10dp"
                        />

                </LinearLayout>
        </ScrollView>
</RelativeLayout>
```

select_seat.xml

```
<RelativeLayout
        xmlns:android =
"http://schemas.android.com/apk/res/android"
        android:id = "@+id/RelativeLayout"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:padding = "16dp"
        android:background = "@drawable/bg"
>

        <ScrollView
                android:layout_width =
"match_parent"
                android:layout_height =
"match_parent"
        >

                <LinearLayout
                        xmlns:android =
"http://schemas.android.com/apk/res/android"
                        android:id =
"@+id/linearlayout"
                        android:layout_width =
"match_parent"
                        android:layout_height =
"match_parent"
                        android:orientation =
"vertical"
                        android:gravity =
"center"
                        android:padding =
"16dp"
                        android:background =
"@drawable/bg"
                >

                        <TextView
                                android:id =
"@+id/seat_label"

        android:layout_width = "match_parent"
```

```
        android:layout_height = "wrap_content"
                                android:text =
"Select Seat"

        android:textColor =
"@android:color/white"
                                android:textSize
= "30sp"

        android:textStyle = "bold"

        android:paddingStart = "16dp"

        android:paddingEnd = "16dp"

        android:paddingTop = "8dp"

        android:paddingBottom = "8dp"
                                android:gravity
= "center"

        android:layout_marginBottom = "12dp"

        android:letterSpacing = "0.05"

        android:shadowColor =
"@android:color/black"
                                android:shadowDx
= "2"
                                android:shadowDy
= "2"

        android:shadowRadius = "3"
                        />

                </LinearLayout>
        </ScrollView>
</RelativeLayout>
```

ticket.xml

```
<LinearLayout
        xmlns:android = "http://schemas.android.com/apk/res/android"
        android:layout_width = "match_parent"
        android:layout_height = "match_parent"
        android:orientation = "vertical"
        android:gravity = "center"
        android:padding = "16dp"
        android:background = "@drawable/ticket_bg"
>

        <TextView
                android:layout_width = "match_parent"
                android:layout_height = "wrap_content"
                android:text = "TICKET"
                android:textColor = "@android:color/white"
                android:textSize = "30sp"
                android:textStyle = "bold"
                android:paddingStart = "16dp"
                android:paddingEnd = "16dp"
                android:paddingTop = "8dp"
                android:paddingBottom = "8dp"
                android:gravity = "center"
                android:layout_marginBottom = "12dp"
                android:letterSpacing = "0.05"
                android:shadowColor = "@android:color/black"
                android:shadowDx = "2"
                android:shadowDy = "2"
                android:shadowRadius = "3"
        />

        <TextView
                android:id = "@+id/ticket_details"
                android:layout_width = "match_parent"
                android:layout_height = "wrap_content"
                android:textColor = "@android:color/white"
                android:textSize = "20sp"
                android:textStyle = "bold"
                android:paddingStart = "16dp"
                android:paddingEnd = "16dp"
                android:paddingTop = "8dp"
                android:paddingBottom = "8dp"
                android:gravity = "center"
        />

</LinearLayout>
```

rounded_textview.xml

```
<?xml version = "1.0" encoding = "utf-8"?>

<shape
        xmlns:android = "http://schemas.android.com/apk/res/android"
```

```
>
    <solid
               android:color = "#ACD5C2"
       />

    <corners
               android:radius = "16dp"
       />

    <padding
        android:left = "8dp"
        android:top = "8dp"
        android:right = "8dp"
        android:bottom = "8dp"
    />

    <stroke
        android:width = "7dp"
        android:color = "#83B09B"
    />
</shape>
```

VARIABLE DESCRIPTION

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
resMovieTitlePath, resTitleImagePath	int	Stores the numerical path of the movie title image located in the res directory
movieName	String	Stores the name of the movie
movieTitlePath	String	Stores the external path of the movie title image
cinemas	List<Cinema>	Stores the cinemas which run the movie
animatedMovies	List<Movie>	Stores the animated movies
horrorMovies	List<Movie>	Stores the horror movies
popularMovies	List<Movie>	Stores the popular movies
developersChoiceMovies	List<Movie>	Stores the movies chosen by the developer(i.e. Omanshu)
displayMetrics, dM	DisplayMetrics	An object of the DisplayMetrics class used to collect the width and height of the screen

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
width	int	Stores the width of the screen in pixels
height	int	Stores the height of the screen in pixels
customFont	Typeface	An object of the Typeface class which creates a custom font (i.e. nasalization.ttf)
removeTextView, addTextView, movieView, bookableMovieView, movieTextView, textView, seatTextView	TextView	An object of the TextView class which stores text view used to display text in the app
intent	Intent	An object of the Intent class used to switch between activities and transfer data between them
relativeLayout	RelativeLayout	An object of the RelativeLayout class used to store widgets
linearLayout, linearLayout2	LinearLayout	An object of the LinearLayout class used to store widgets
editTitle, editImagePath, editTitleImagePath, editTrailerId, editCode, editURL, editLocalPath, editDescription, editTitlePath, editNumSeats, editStart, editEnd, editName, editPhoneNum, editEmail	EditText	An object of the EditText class used to take text inputs from the user (title, image path, title image path, trailer Id, embed code, movie URL, movie local path, description, title path, number of seats, start time, end time, name of he user, phone number, email address of the user)

VARIABLE(S)	**DATA TYPE**	**PURPOSE**
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
title	String	Stores the title of the movie
dataManager	DataManager	An object of the custom class "DataManager" used to share data and objects between activities
webView	WebView	An object of the WebView class used to display WebViews
webSettings	WebSettings	An object of the WebSettings class used to manipulate the settings of WebView
movieEmbedCode	String	Stores the HTML code of the movie (through the streaming service, Eg : GDrive) used in the WebView
movieURL	String	Stores the URL of the movie(through the streaming service) used in the VideoView
videoView	VideoView	An object of the VideoView class used to play videos and movies
uri	Uri	An object of the Uri class used to parse the video and image paths of String data type
mediaController	MediaController	An object of the MediaController class used to give functionalities to the ViewView

VARIABLE(S)	**DATA TYPE**	**PURPOSE**
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
movieTrailerId	String	Stores the YouTube video Id of the trailer (of the movie)
trailerEmbedCode	String	Stores the HTML code of the YouTube trailer used in the WebView
moviePath	String	Stores the external movie path located in the device storage
resImagePath	int	Stores the external movie poster path located in the res directory
description	String	Stores the description of the movie
localPath	String	Stores the external path of the movie located in the device storage
buttonParams, addButtonParams	LayoutParams	An object of the LayoutParams class used to modify Buttons and ImageButtons
imageButton	ImageButton	An object used to create or access ImageButton widget
categorySpinner	Spinner	An object of the Spinner class used to create a Spinner of various movie categories
selectedCategory	String	Stores the movie category selected by the user
categoriesAdapter	ArrayAdapter<String>	An adapter used to create the categories using a String array
imagePath	String	Stores the image path of the movie
titleImagePath, path	String	Stores the title image path of the movie

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
trailerId	String	Stores the movie trailer Id(YouTube Id)
code	String	Stores the movie embed code
url	String	Stores the movie URL
description	String	Stores the decription of the movie
category	int	Stores the selected movie category in integer format
newMovie	Movie	An object of the custom class "Movie" used to stores the newly added movie
name	String	Stores the name of the Cinema
seatRowCol, rowCol	int[]	Stores data in this format -> [No. of rows, No. of Columns]
runtimes	List<Runtime>	A list of the custom class "Runtime"
formatter	DateTimeFormatter	Used to format DateTime data
start, startDateTime	LocalDateTime	Stores the date and time when the runtime begins
end, endDateTime	LocalDateTime	Stores the date and time when the runtime ends
rt	Runtime	Stores the Runtime objects contained in the runtimes variable
startRt	LocalDateTime	Stores the date and time when the runtime "rt" begins
endRt	LocalDateTime	Stores the date and time when the runtime "rt" ends
runtime	Runtime	Stores the newly created Runtime object

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
i	int	Used to control the outer loop
j	int	Used to control the inner nested loop
listOfFactors	List<int[]>	Stores the factors pair in a list
num	int	Stores the number given to the "getMinRowCol()" function
factors	int[]	Stores the factors pair
outArr	int[]	Stores the final factors pair
diff	int	Stores the difference between the factors pair
movies	List<Movie>	Stores the movies in a list
bookableMovies	List<BookableMovie>	Stores the bookable movies in a list
cinema1, cinema2	Cinema	Cinema objects contained in the bookable movies
movie1, movie2, movie3, movie4	BookableMovie	BookableMovie objects contained in the "bookableMovies" list
text	String	Stores the text displayed in the ticket
button1, button2, button3	ImageButton	Stores the Image Button widgets of the bottom navigation bar
mov_final	BookableMovie	Stores the newly created BookableMovie object
addMovieButton	ImageButton	Stores the ImageButton widget used to add a movie

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
addMovieParams	LayoutParams	Stores the parameters of “addMovieButton”
addBookableMovieButton	ImageButton	Stores the ImageButton widget used to add a bookable movie
addBookableMovieParams	LayoutParams	Stores the parameters of “addBookableMovieButton”
removeMovieButton	ImageButton	Stores the ImageButton widget used to remove a movie
removeMovieParams	LayoutParams	Stores the parameters of “removeMovieButton”
removeBookableMovieButton	ImageButton	Stores the ImageButton widget used to remove a bookable movie
removeBookableMovieParams	LayoutParams	Stores the parameters of “removeBookableMovieButton”
addTextView1, addTextView2, addTextView3	TextView	Stores the text views contained in the “addBookableMovie” activity
addButton, addButton1, addButton2, addButton3	ImageButton	Stores the image buttons contained in the “addBookableMovie” activity
addButtonParams, addButtonParams1, addButtonParams2, addButtonParams2	LayoutParams	Stores the parameters of the image buttons contained in the “addBookableMovie” activity

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
seats	int[][]	Stores a double dimensional array containing the seats in the cinema
bgImage	ImageView	Stores the ImageView object containing the background image
buttonsLayout	LinearLayout	An object of LinearLayout class containing the ImageButtons for streaming the movie
buttonsParams	LayoutParams	Stores the parameters for the buttons containined in the "buttonsLayout"
trailerButton	ImageButton	An object of the ImageButton class used to display the trailer
trailerParams	LayoutParams	Stores the parameters for "trailerButton"
buttonIds	int[]	Stores the Ids of the buttons in the "buttonsLayout"
strIds	String[]	Stores the Ids of buttons contained in the "buttonsLayout" in String format
strData	String[]	Stores the data to be passed into the intent through the buttons contained in the "buttonsLayout"
classes	Class<?>[]	Stores the activity classes to be accessed through the buttons in the "buttonsLayout"
button	ImageButton	Accesses each button contained in the "buttonsLayout" inside a for loop

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
movieStr	String	Accesses each String data contained in the “strData” array
buttonArray	ImageButton[][]	Stores an ImageButton for each seat in the cinema
movie_index, cinema_index, runtime_index	int	Stores the index of the exact runtime to be accessed inside the cinema withih the movie class
selected_row	int	Stores the row in which the selected seat is located
selected_col	int	Stores the column in which the selected seat is located
backButton	ImageButton	Stores the ImageButton widget used to go to the previous activity
backButtonParams	LayoutParams	Stores the parameters for the “backButton”
data, data_new	String[]	Stores the data for the ticket
rows	int	Stores the number of rows in the cinema
cols	int	Stores the number of columns in the Cinema
gridLayout	GridLayout	An object of the “GridLayout” class which stores the ImageButtons representing the seats
currentRow	int	Stores the row number in the outer nested for loop
currentCol	int	Stores the column number in the inner nested for loop
bookButton	ImageButton	Used to book a seat in the cinema

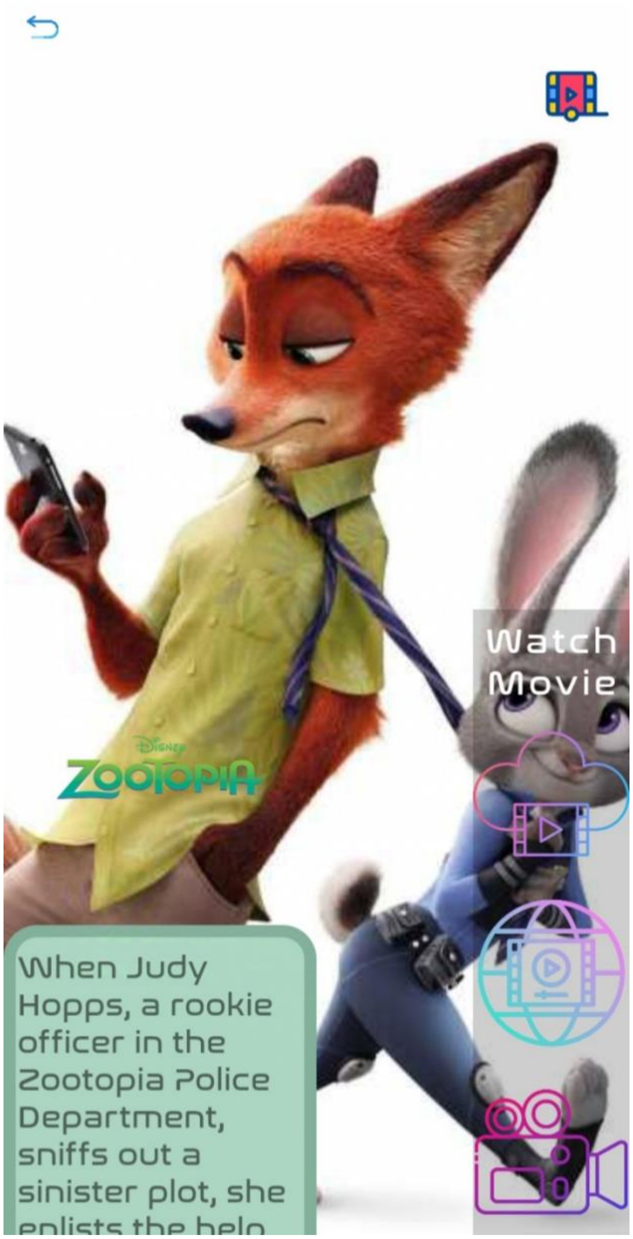
VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
bookButtonParams	LayoutParams	Stores the parameters for the "bookButton"
new_data	String[]	Stores the modified data for the ticket
actionBar	ActionBar	Stores the top action bar widget
textView1, textView2, textView3, textView4	TextView	Stores the TextView widget for each category
categories	streamingMovies	An object of the custom "streamingMovies" class used to get the movies in each category
mov	Movie	Stores each movie contained in each category of "categories"
animatedMovies, popularMovies, horrorMovies, developersChoiceMovies	List<Movie>	Stores a list containing movies in each category
moviesList	List<Movie>[]	Stores each category in a list
scrollView	int	Stores the HorizontalScrollView Id for a specific category
scrollViews	int[]	Stores the HorizontalScrollView Id for all categories
parentLayout	LinearLayout	Stores the LinearLayout widget containing a specific HorizontalScrollView
newLayout	LinearLayout	Stores a new LinearLayout for the newly added movie

VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
movieTitleView	ImageView	Stores the ImageView widget for displaying the title image
movieTitleParams	LayoutParams	Stores the parameters for the “movieTitleView”
moviePosterView	ImageView	Stores the ImageView widget for displaying the poster of the movie
moviePosterParams	LayoutParams	Stores the parameters for the “moviePosterView”
file	File	An object of the File class which accepts the external image path
imageUri	Uri	Converts the image path to uri format
bitmap	Bitmap	An object of the Bitmap class used to create a bitmap of the image
selectedCinema	String	Stores the name of the cinema selected by the user
selectedRuntime	String	Stores the runtime selected by the user
detailsTextView	TextView	Stores the TextView widget for the “EnterDetails” activity
movie	BookableMovie	Stores the movie for which the booking is to be done
cinemaSpinner	Spinner	Stores the Spinner widget containing the cinemas to be selected
cinemaNames	String[]	Stores the names of the cinemas
cinemaAdapter	ArrayAdapter<String>	Stores the Adapter for the “cinemaSpinner”

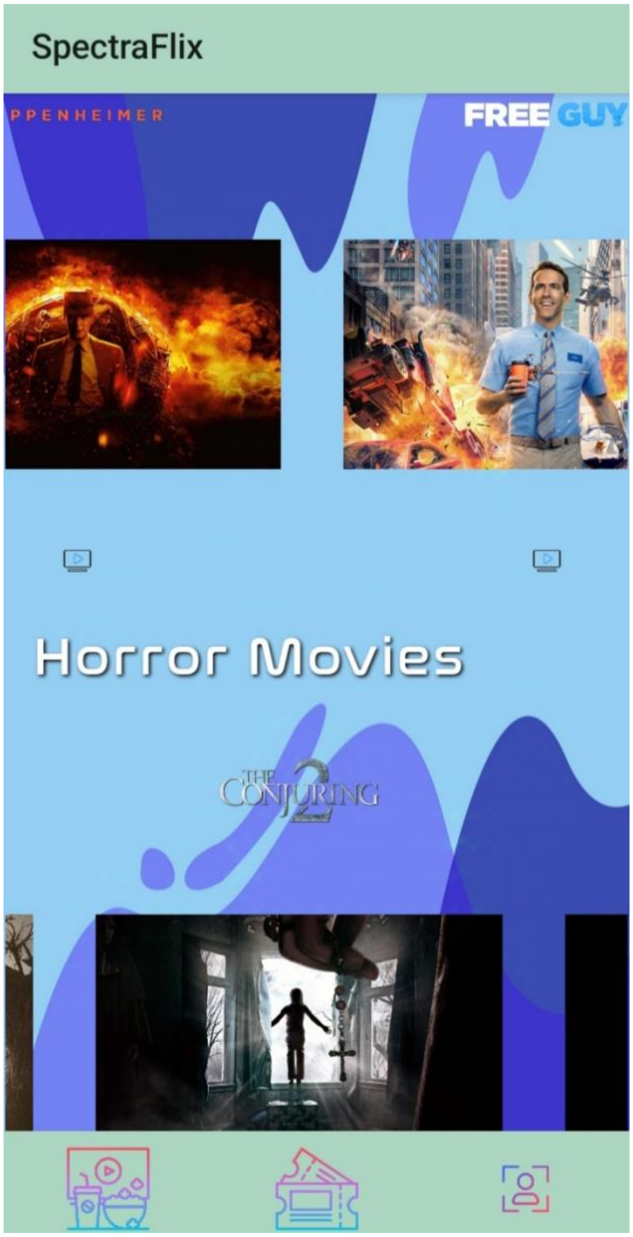
VARIABLE(S)	DATA TYPE	PURPOSE
[Some variables perform the same function and have the same data type and hence, they are grouped together]		
cinemas_final	List<Cinema>	Stores the list of the Cinemas
cinema_item	Cinema	Stores a Cinema object in a for loop
runtimes	List<Runtime>	Stores all the runtimes of a specific cinema
runtimes_string	String[]	Stores the startDateTime of each runtime in "runtimes"
runtimeSpinner	Spinner	Stores the Spinner containing the runtimes to be selected
runtimeAdapter	ArrayAdapter<String>	Stores the Adapter for the "runtimeSpinner"
nextButton	ImageButton	Store the ImageButton which leads to the "SelectSeat" activity
nextButtonParams	LayoutParams	Stores the parameters for the "nextButton"
enteredName	String	Stores the name of the user
enteredPhoneNum	String	Stores the phone number of the user
enteredEmail	String	Stores the email address of the user
data	String[]	Stores the data for the ticket
numSeats	String	Stores the number of seats in the cinema in String format

Output

View Movies (For streaming and watching trailers)

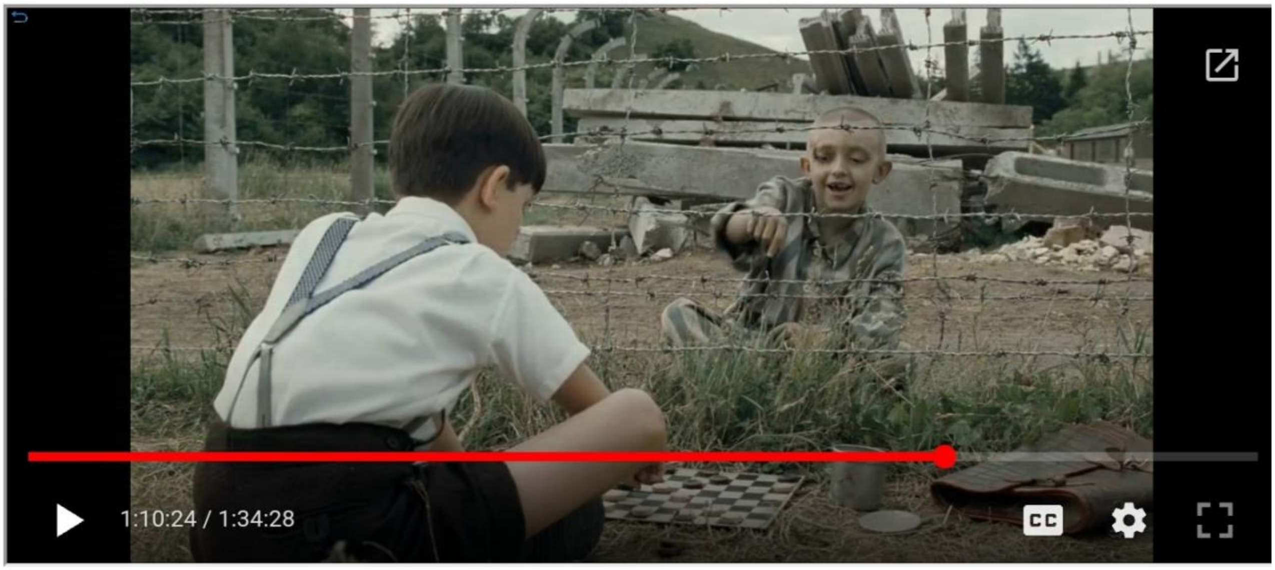


When Judy Hopps, a rookie officer in the Zootopia Police Department, sniffs out a sinister plot, she enlists the help

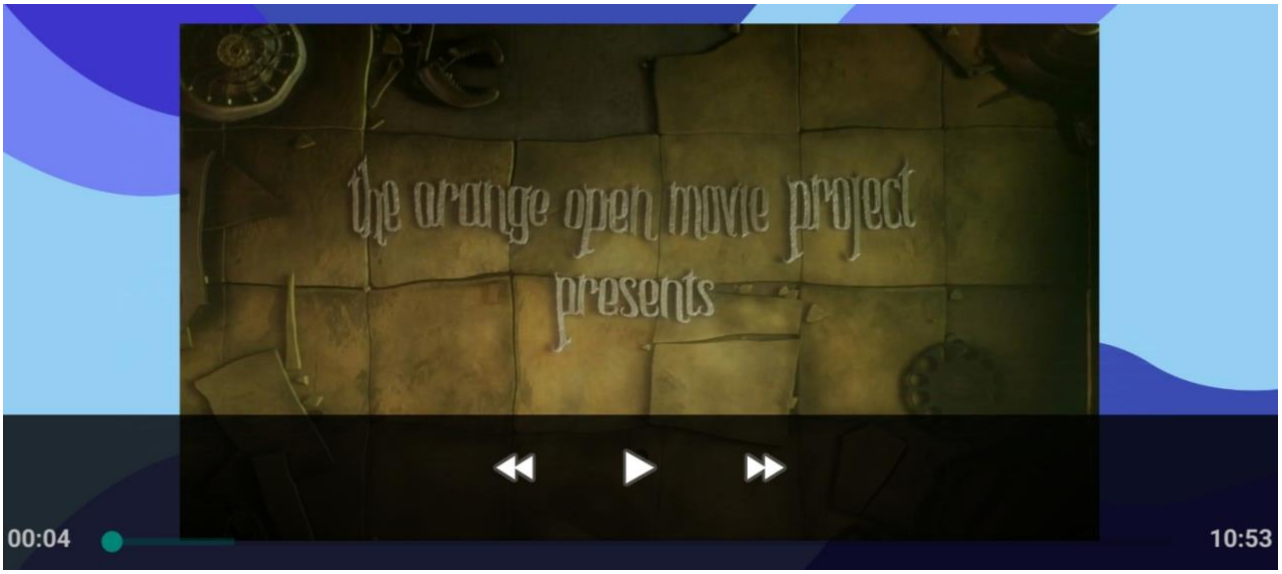


Preview Movie

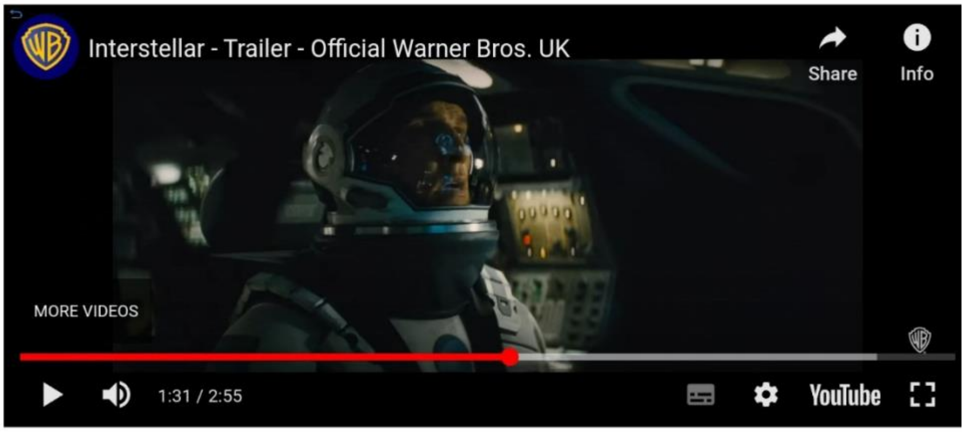
Watch
Movie(WebView)

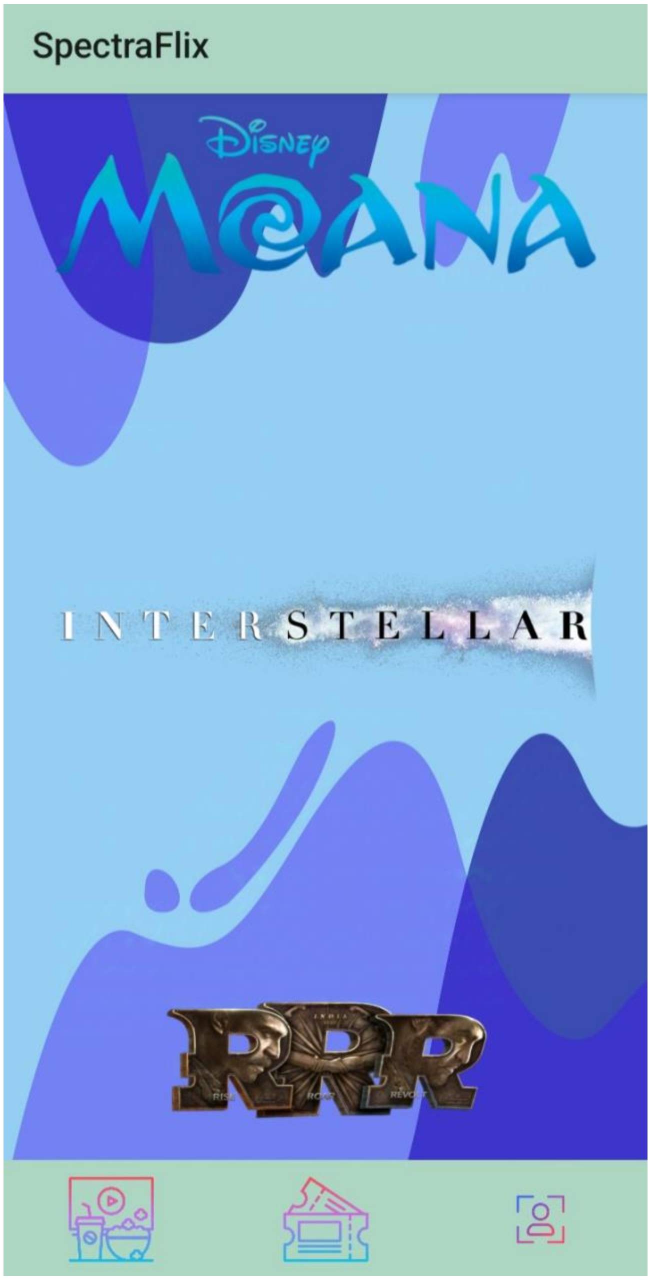


Watch Movie(URL)

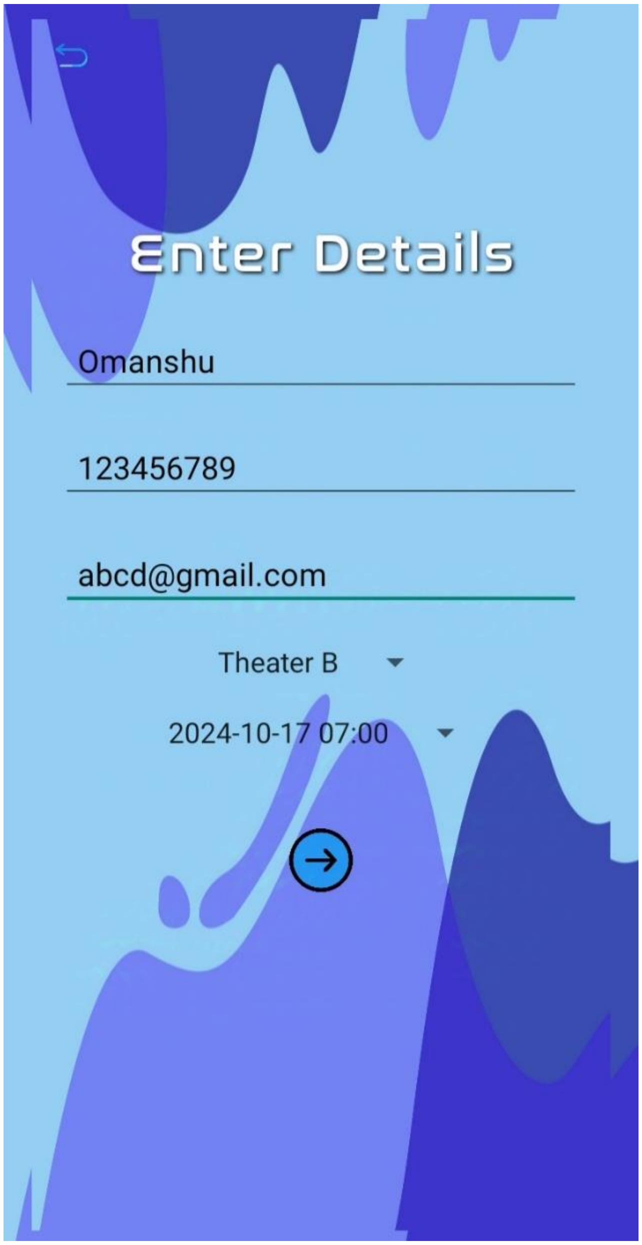


Watch Trailer (YouTube / WebView)





View Movies (For booking tickets)



Enter Details

Omanshu

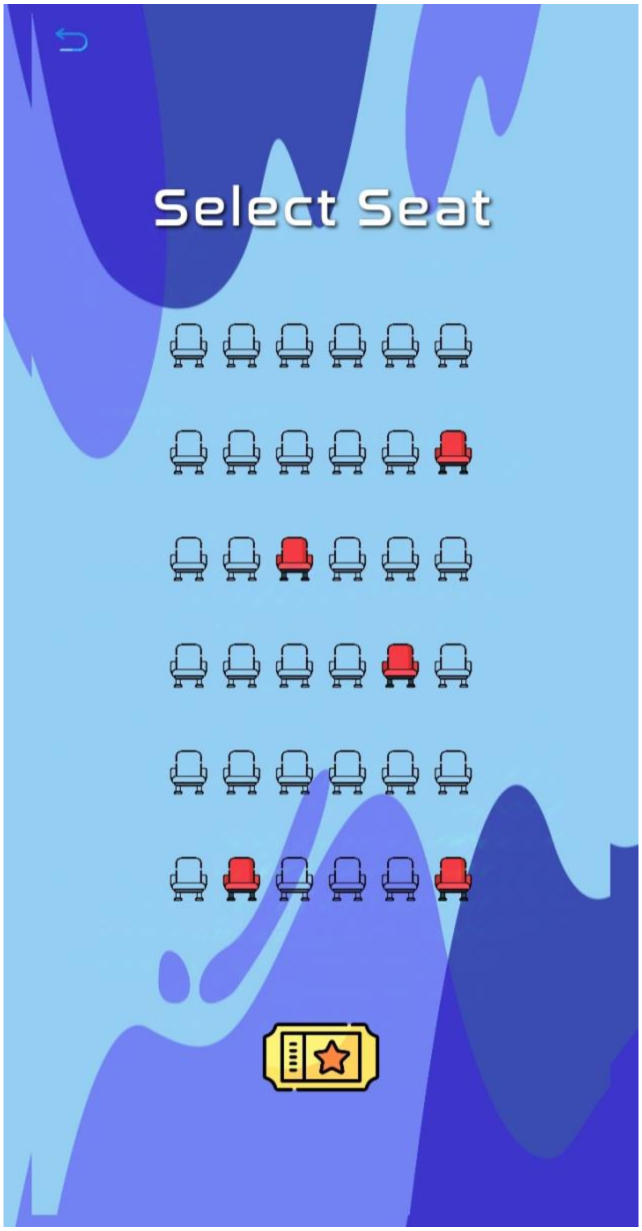
123456789

abcd@gmail.com

Theater B

2024-10-17 07:00

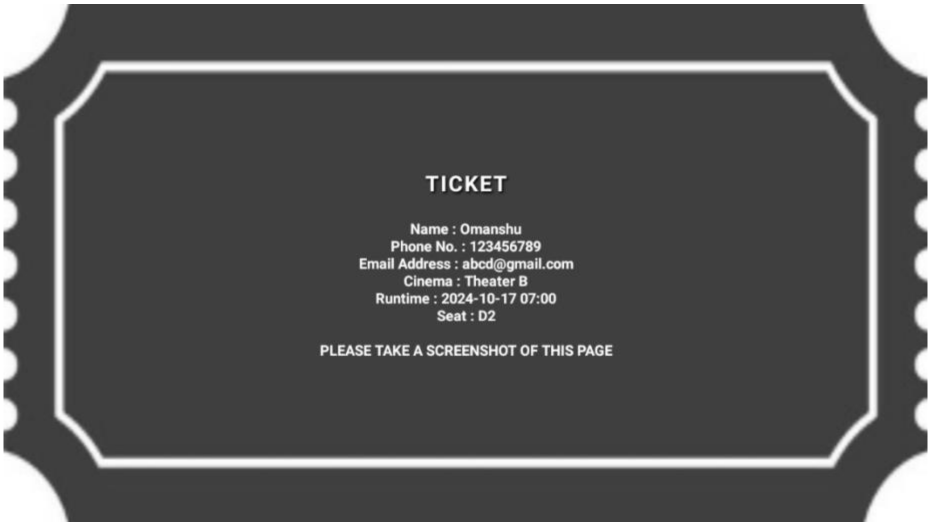
Enter Your Details And Select Cinema And Runtime



Select Seat

Select Your Desired Seat

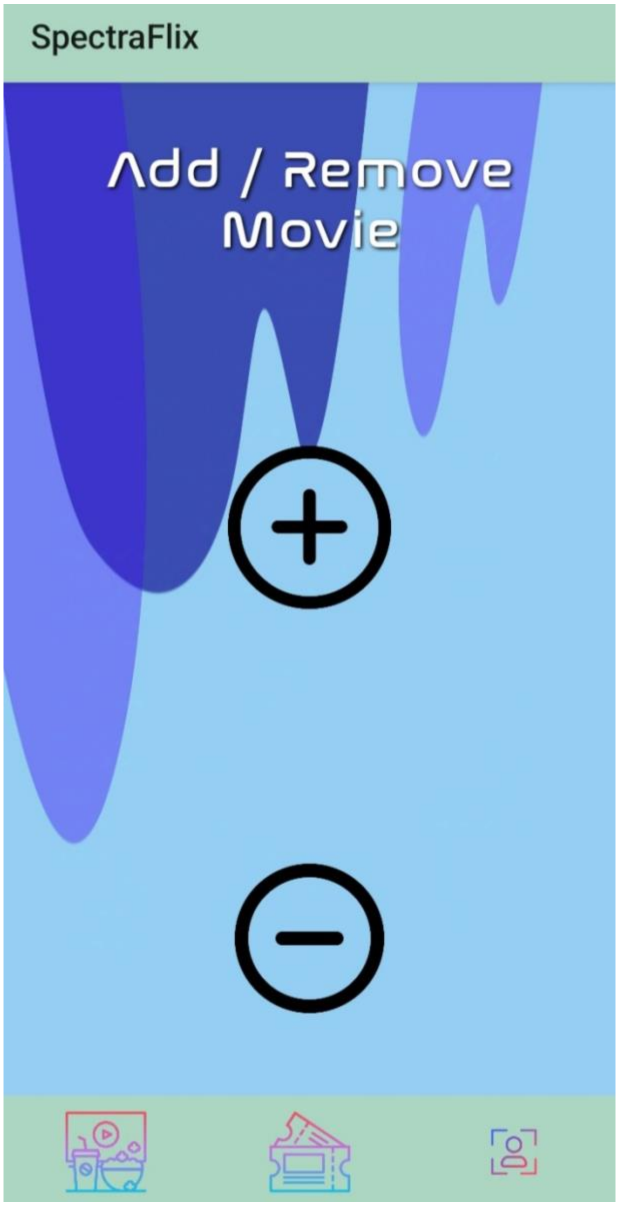
Print Ticket



TICKET

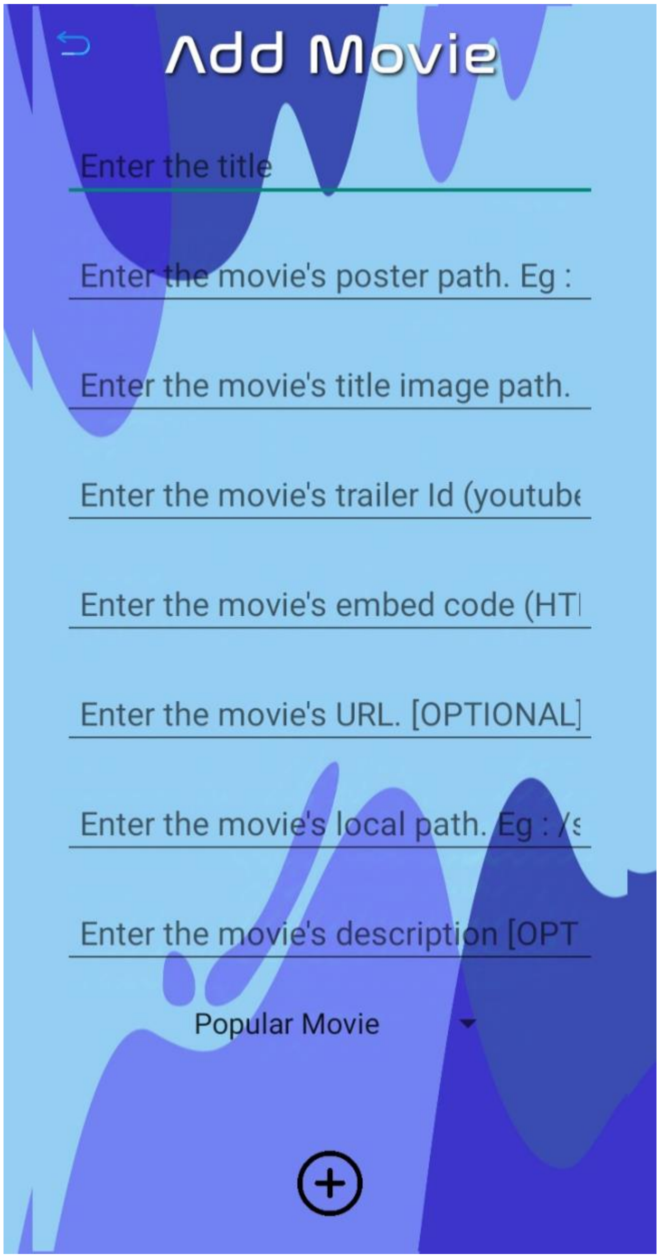
Name : Omanshu
Phone No. : 123456789
Email Address : abcd@gmail.com
Cinema : Theater B
Runtime : 2024-10-17 07:00
Seat : D2

PLEASE TAKE A SCREENSHOT OF THIS PAGE



Add / Remove Movie and Bookable Movie

Add Movie



Add Movie

Enter the title

Enter the movie's poster path. Eg :

Enter the movie's title image path.

Enter the movie's trailer Id (youtube

Enter the movie's embed code (HTI

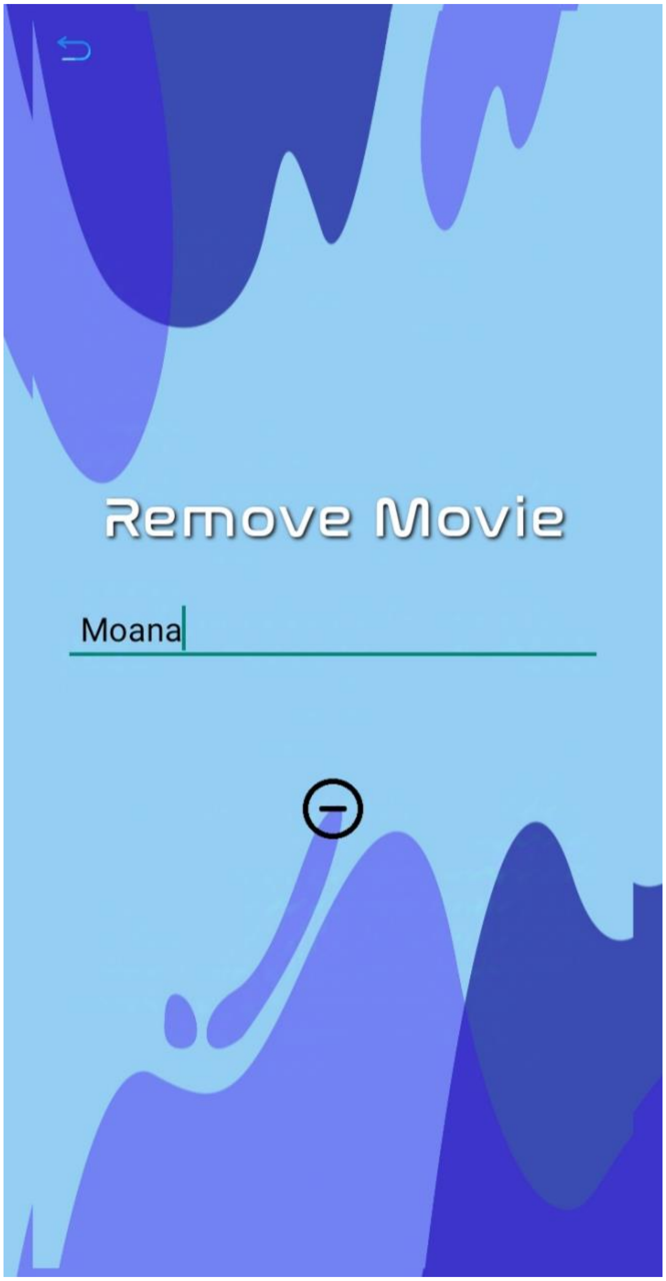
Enter the movie's URL. [OPTIONAL]

Enter the movie's local path. Eg : /s

Enter the movie's description [OPT

Popular Movie

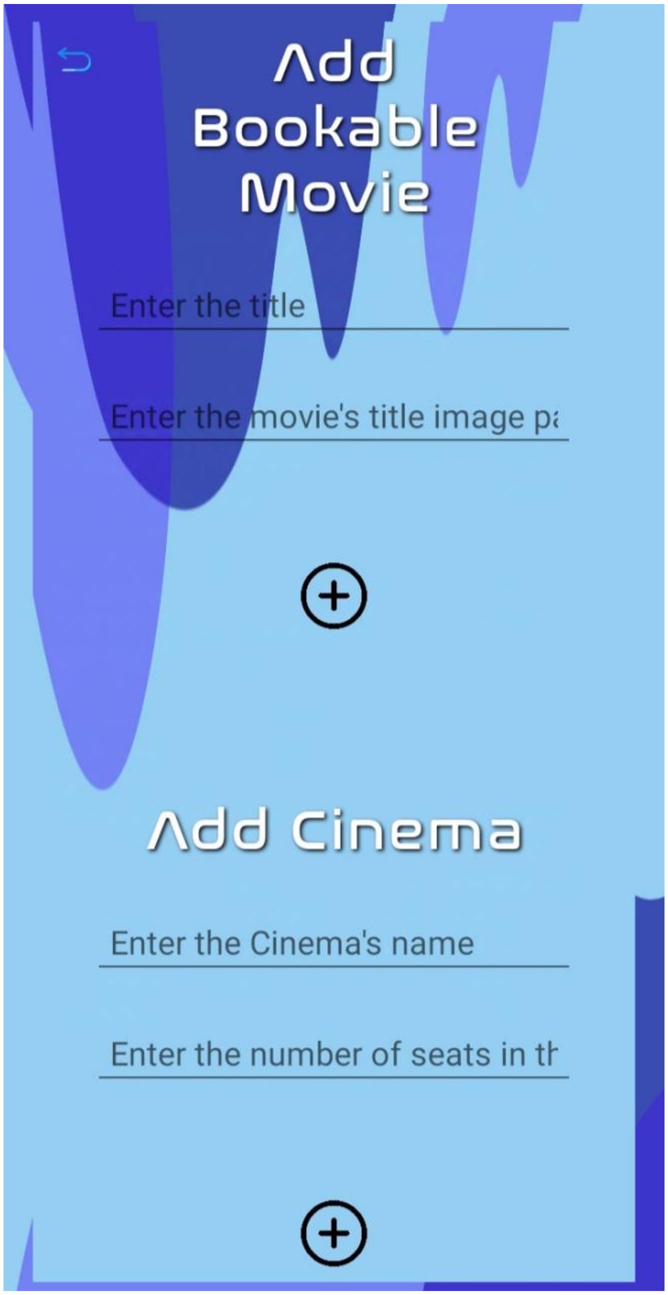
Remove Movie

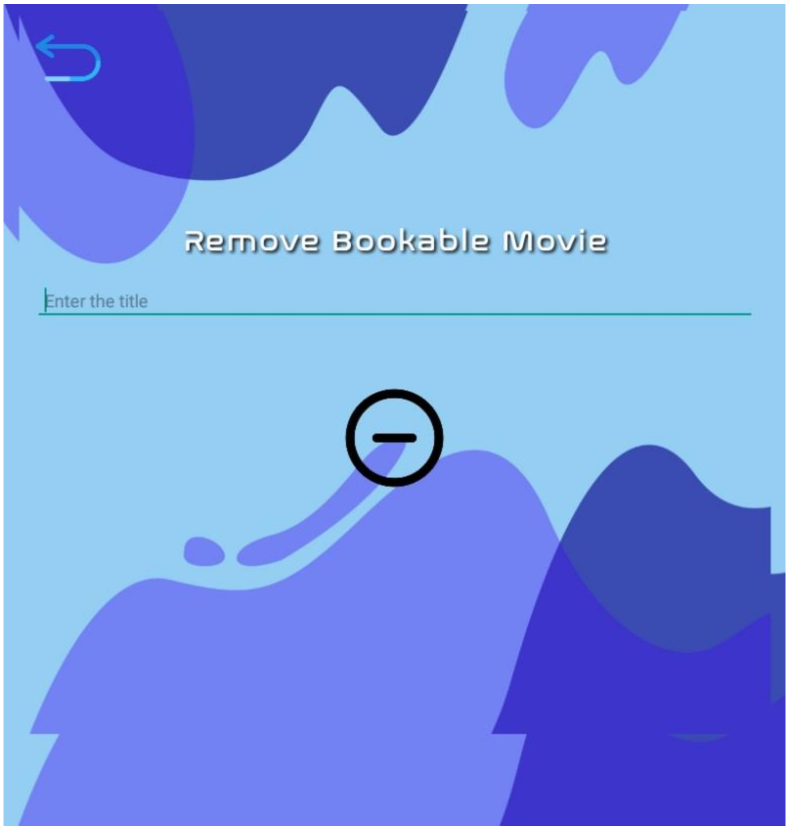


Remove Movie

Moana

Add Bookable Movie





Remove Bookable Movie

Conclusion

In conclusion, **SpectraFlix** is a comprehensive movie streaming and booking platform that delivers a seamless user experience. With its ability to stream movies from various sources, provide interactive trailer viewing, and offer an intuitive seat booking system, the app meets the diverse needs of modern movie enthusiasts.

Through the development of **SpectraFlix**, I have gained invaluable insights into Java programming, XML layout design, and the Android development module. I have learned how to integrate multiple features into a single cohesive app, ensuring both performance and user satisfaction. This project has not only sharpened my technical skills but also enhanced my ability to create user-friendly applications