Nguyễn Trường Hưng – 1150070013 – TMĐT – bàn 21

BÀI THỰC HÀNH BUỔI 4

**Lab 10 - 11. Ứng dụng truyện cười**

Các bước thực hiện:

**Bước 1: Tạo dự án mới**

**Bước 2: Chuẩn bị tài nguyên drawable, string, themes, colors**

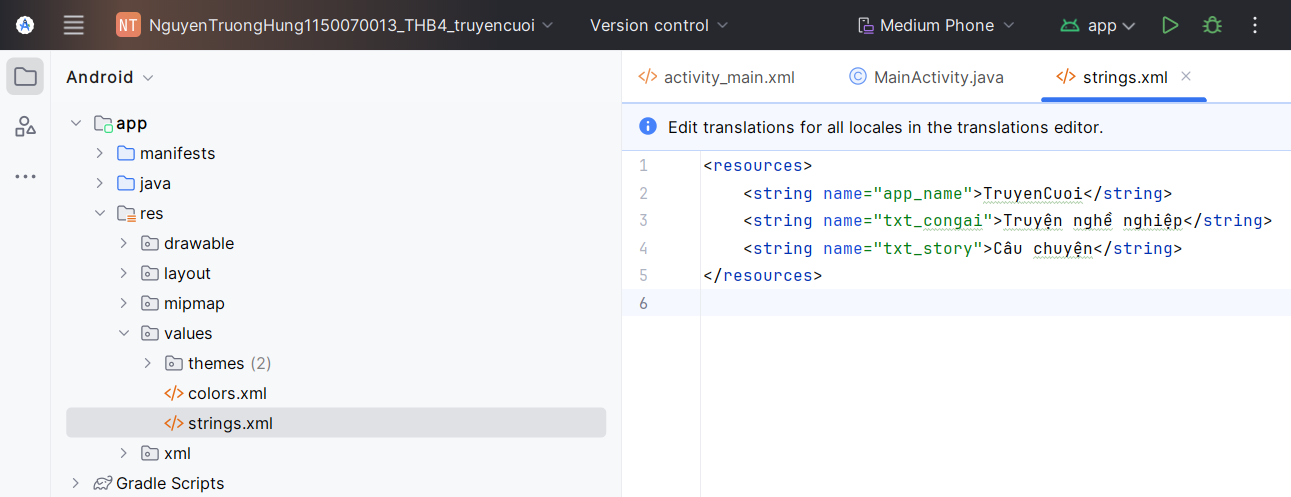
**res/drawable:**

Chèn các icon vào vào drawable

A screenshot of a computer

AI-generated content may be incorrect.

**res/values/strings.xml:**



<resources>  
 <string name="app\_name">TruyenCuoi</string>  
 <string name="txt\_congai">Truyện nghề nghiệp</string>  
 <string name="txt\_story">Câu chuyện</string>  
</resources>

**res/values/colors.xml:**

**A screenshot of a computer

AI-generated content may be incorrect.**

*<?*xml version="1.0" encoding="utf-8"*?>*<resources>  
 <color name="purple\_200">#FFBB86FC</color>  
 <color name="purple\_500">#FF6200EE</color>  
 <color name="purple\_700">#FF3700B3</color>  
 <color name="teal\_200">#FF03DAC5</color>  
 <color name="teal\_700">#FF018786</color>  
 <color name="black">#FF000000</color>  
 <color name="white">#FFFFFFFF</color>  
 <color name="greenMid">#478942</color>  
 <color name="greenLight">#62BC5B</color>  
 <color name="greenSuperLight">#EFFFEE</color>  
</resources>

**res/values/themes.xml:**

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<resources xmlns:tools="http://schemas.android.com/tools">  
 <style name="Theme.Demo" parent="Theme.MaterialComponents.DayNight.NoActionBar">  
 <item name="colorPrimary">@color/purple\_500</item>  
 <item name="colorPrimaryVariant">@color/purple\_700</item>  
 <item name="colorOnPrimary">@color/white</item>  
 <item name="colorSecondary">@color/teal\_200</item>  
 <item name="colorSecondaryVariant">@color/teal\_700</item>  
 <item name="colorOnSecondary">@color/black</item>  
 <item name="android:statusBarColor" tools:targetApi="l">?attr/colorPrimaryVariant</item>  
 </style>  
</resources>

**Bước 3: Thiết kế giao diện, tạo layout cho các trang**

* **Tạo res/layout/m000\_frg\_splash.xml:**

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*<?*xml version="1.0" encoding="utf-8"*?>*<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="@color/greenMid">  
  
 <ImageView  
 android:layout\_width="200dp"  
 android:layout\_height="100dp"  
 android:layout\_gravity="center"  
 android:src="@drawable/ic\_splash"  
 tools:ignore="ContentDescription" />  
</FrameLayout>

* **Sửa res/layout/activity\_main.xml:**

A screenshot of a computer

AI-generated content may be incorrect.

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:id="@+id/ln\_main"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="horizontal"  
 tools:context=".MainActivity">  
  
</LinearLayout>

* **Tạo res/layout/item\_topic.xml:**

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AI-generated content may be incorrect.

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:background="@color/white"  
 android:layout\_marginBottom="10dp"  
 tools:ignore="UseCompoundDrawables">  
  
 <ImageView  
 android:id="@+id/iv\_topic"  
 android:layout\_width="180dp"  
 android:layout\_height="82dp"  
 android:src="@drawable/ic\_nghenghiep"  
 tools:ignore="ContentDescription" />  
  
 <TextView  
 android:id="@+id/tv\_topic"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_marginStart="10dp"  
 android:fontFamily="sans-serif"  
 android:gravity="center\_vertical"  
 android:text="@string/txt\_nghenghiep"  
 android:textColor="@color/greenMid"  
 android:textSize="20sp" />  
</LinearLayout>

* **Tạo res/layout/m001\_frg\_topic.xml**

A screenshot of a computer

AI-generated content may be incorrect.

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="@color/greenMid"  
 android:orientation="vertical">  
  
 <include layout="@layout/actionbar\_home" />  
  
 <ScrollView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent">  
  
 <LinearLayout  
 android:id="@+id/ln\_topic"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical"  
 android:padding="10dp" />  
 </ScrollView>  
</LinearLayout>

* **Tạo res/layout/item\_story.xml:**

A screenshot of a computer

AI-generated content may be incorrect.

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:background="@color/white"  
 android:orientation="vertical"  
 tools:ignore="UseCompoundDrawables">  
  
 <TableRow  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <ImageView  
 android:layout\_width="60dp"  
 android:layout\_height="60dp"  
 android:padding="10dp"  
 android:rotation="45"  
 android:src="@drawable/ic\_face"  
 app:tint="@color/greenMid"  
 tools:ignore="ContentDescription" />=  
  
 <TextView  
 android:id="@+id/tv\_story"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_marginStart="10dp"  
 android:fontFamily="sans-serif-light"  
 android:gravity="center\_vertical"  
 android:text="@string/txt\_story"  
 android:textColor="@color/greenMid"  
 android:textSize="20sp" />  
 </TableRow>  
  
 <View  
 android:layout\_width="match\_parent"  
 android:layout\_height="0.5dp"  
 android:background="#e5e5e5" />  
</LinearLayout>

* **Tạo res/layout/m002\_frg\_story.xml:**

A screenshot of a computer

AI-generated content may be incorrect.

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="@color/greenMid"  
 android:orientation="vertical">  
  
 <include layout="@layout/actionbar\_home" />  
  
 <androidx.recyclerview.widget.RecyclerView  
 android:id="@+id/rv\_story"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:listitem="@layout/item\_story" />  
</LinearLayout>

* **Tạo res/layout/item\_detail\_story.xml:**

A screenshot of a computer

AI-generated content may be incorrect.

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:padding="10dp">  
  
 <TextView  
 android:id="@+id/tv\_name"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="20dp"  
 android:gravity="center"  
 android:padding="10dp"  
 android:text="Tiêu đề truyện"  
 android:textColor="@color/greenMid"  
 android:textSize="24sp"  
 android:textStyle="bold" />  
  
 <ScrollView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical">  
  
 <TextView  
 android:id="@+id/tv\_content"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:fontFamily="sans-serif-light"  
 android:gravity="center\_vertical"  
 android:lineSpacingExtra="5dp"  
 android:padding="10dp"  
 android:text="Nội dung truyện"  
 android:textColor="@color/black"  
 android:textSize="18sp" />  
 </LinearLayout>  
 </ScrollView>  
</LinearLayout>

* **Tạo res/layout/m003\_frg\_detail\_story.xml:**

A screenshot of a computer

AI-generated content may be incorrect.

**Bước 4: Chuẩn bị dữ liệu trong assets**

* Tạo thư mục assets và icon, data
* Trong assets, tạo thư mục photo và thư mục story.

A screenshot of a computer

AI-generated content may be incorrect.

* Định dạng file nghe\_nghiep.txt

Chèn các mẫu chuyện vào file

A screenshot of a computer

AI-generated content may be incorrect.

**Bước 5: Xử lý logic**

* Tạo class StoryEntity.java:

A screenshot of a computer

AI-generated content may be incorrect.

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
public class StoryEntity {  
 private final String topicName;  
 private final String name;  
 private final String content;  
  
 public StoryEntity(String topicName, String name, String content) {  
 this.topicName = topicName;  
 this.name = name;  
 this.content = content;  
 }  
  
 public String getTopicName() {  
 return topicName;  
 }  
  
 public String getName() {  
 return name;  
 }  
  
 public String getContent() {  
 return content;  
 }  
}

* **Tạo M000SplashFrg.java**

A screenshot of a computer

AI-generated content may be incorrect.

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.os.Bundle;  
import android.os.Handler;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
import androidx.fragment.app.Fragment;  
  
public class M000SplashFrg extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
 initViews();  
 return inflater.inflate(R.layout.*m000\_frg\_splash*, container, false);  
 }  
  
 private void initViews() {  
 new Handler().postDelayed(this::gotoM001Screen, 2000);  
 }  
  
 private void gotoM001Screen() {  
 ((MainActivity) getActivity()).gotoM001Screen();  
 }  
}

* Sửa lại MainActivity.java
* package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  import android.os.Bundle;  
    
  import androidx.appcompat.app.AppCompatActivity;  
  import androidx.fragment.app.Fragment;  
    
  import java.util.ArrayList;  
    
  public class MainActivity extends AppCompatActivity {  
    
   private String topicName;  
    
   @Override  
   protected void onCreate(Bundle savedInstanceState) {  
   super.onCreate(savedInstanceState);  
   setContentView(R.layout.*activity\_main*);  
   showFrg(new M000SplashFrg());  
   }  
    
   private void showFrg(Fragment frg) {  
   getSupportFragmentManager()  
   .beginTransaction()  
   .replace(R.id.*ln\_main*, frg, null)  
   .commit();  
   }  
    
   public void gotoM001Screen() {  
   getSupportFragmentManager()  
   .beginTransaction()  
   .replace(R.id.*ln\_main*, new M001TopicFrg(), null)  
   .commit();  
   }  
    
   public void gotoM002Screen(String topicName) {  
   this.topicName = topicName;  
   M002StoryFrg frg = new M002StoryFrg();  
   frg.setTopicName(topicName);  
   showFrg(frg);  
   }  
    
   public void backToM001Screen() {  
   gotoM001Screen();  
   }  
    
   public void gotoM003Screen(ArrayList<StoryEntity> listStory, StoryEntity story) {  
   M003DetailStoryFrg frg = new M003DetailStoryFrg();  
   frg.setData(topicName, listStory, story);  
   showFrg(frg);  
   }  
  }
* **Tạo M001TopicFrg.java**

A screenshot of a computer

AI-generated content may be incorrect.

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.graphics.BitmapFactory;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.ImageView;  
import android.widget.LinearLayout;  
import android.widget.TextView;  
  
import androidx.fragment.app.Fragment;  
  
public class M001TopicFrg extends Fragment implements View.OnClickListener {  
  
 private Context mContext;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
 View rootView = inflater.inflate(R.layout.*m001\_frg\_topic*, container, false);  
 initViews(rootView);  
 return rootView;  
 }  
  
 @Override  
 public void onAttach(Context context) {  
 super.onAttach(context);  
 mContext = context;  
 }  
  
 private void initViews(View v) {  
 LinearLayout lnMain = v.findViewById(R.id.*ln\_topic*);  
 lnMain.removeAllViews();  
 try {  
 String[] listItem = mContext.getAssets().list("photo");  
 if (listItem == null) {  
 return;  
 }  
 for (String fileName : listItem) {  
 String name = fileName.substring(0, fileName.indexOf("."));  
 View vTopic = LayoutInflater.*from*(mContext).inflate(R.layout.*item\_topic*, null);  
 ImageView ivTopic = vTopic.findViewById(R.id.*iv\_topic*);  
 TextView tvTopic = vTopic.findViewById(R.id.*tv\_topic*);  
  
 ivTopic.setImageBitmap(BitmapFactory.*decodeStream*(  
 mContext.getAssets().open("photo/" + fileName)));  
 tvTopic.setText(name);  
  
 lnMain.addView(vTopic);  
 LinearLayout.LayoutParams params = (LinearLayout.LayoutParams) vTopic.getLayoutParams();  
 params.bottomMargin = 40;  
 vTopic.setLayoutParams(params);  
 vTopic.setTag(name);  
 vTopic.setOnClickListener(this);  
 }  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
  
 @Override  
 public void onClick(View v) {  
 ((MainActivity) getActivity()).gotoM002Screen((String) v.getTag());  
 }  
}

* **Tạo StoryAdapter.java:**

**A screenshot of a computer

AI-generated content may be incorrect.**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.TextView;  
  
import androidx.recyclerview.widget.RecyclerView;  
  
import java.util.ArrayList;  
  
public class StoryAdapter extends RecyclerView.Adapter<StoryAdapter.StoryHolder> {  
  
 private final ArrayList<StoryEntity> listStory;  
 private final Context mContext;  
  
 public StoryAdapter(ArrayList<StoryEntity> listStory, Context mContext) {  
 this.listStory = listStory;  
 this.mContext = mContext;  
 }  
  
 @Override  
 public StoryHolder onCreateViewHolder(ViewGroup parent, int viewType) {  
 View view = LayoutInflater.*from*(mContext).inflate(R.layout.*item\_story*, parent, false);  
 return new StoryHolder(view);  
 }  
  
 @Override  
 public void onBindViewHolder(StoryAdapter.StoryHolder holder, int position) {  
 StoryEntity item = listStory.get(position);  
 holder.tvName.setTag(item);  
 holder.tvName.setText(item.getName());  
 }  
  
 @Override  
 public int getItemCount() {  
 return listStory.size();  
 }  
  
 public class StoryHolder extends RecyclerView.ViewHolder {  
 TextView tvName;  
  
 public StoryHolder(View itemView) {  
 super(itemView);  
 tvName = itemView.findViewById(R.id.*tv\_story*);  
 itemView.setOnClickListener(v -> {  
 ((MainActivity) mContext).gotoM003Screen(listStory, (StoryEntity) tvName.getTag());  
 });  
 }  
 }  
}

* **Tạo DetailStoryAdapter.java:**

A screenshot of a computer

AI-generated content may be incorrect.

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.TextView;  
  
import androidx.viewpager.widget.PagerAdapter;  
  
import java.util.List;  
  
public class DetailStoryAdapter extends PagerAdapter {  
  
 private final List<StoryEntity> listStory;  
 private final Context mContext;  
  
 public DetailStoryAdapter(List<StoryEntity> listStory, Context mContext) {  
 this.listStory = listStory;  
 this.mContext = mContext;  
 }  
  
 @Override  
 public Object instantiateItem(ViewGroup container, int position) {  
 View view = LayoutInflater.*from*(mContext).inflate(R.layout.*item\_detail\_story*, container, false);  
 StoryEntity item = listStory.get(position);  
 TextView tvName = view.findViewById(R.id.*tv\_name*);  
 TextView tvContent = view.findViewById(R.id.*tv\_content*);  
 tvName.setTag(item);  
 tvName.setText(item.getName());  
 tvContent.setText(item.getContent());  
 container.addView(view);  
 return view;  
 }  
  
 @Override  
 public int getCount() {  
 return listStory.size();  
 }  
  
 @Override  
 public boolean isViewFromObject(View view, Object object) {  
 return view.equals(object);  
 }  
  
 @Override  
 public void destroyItem(ViewGroup container, int position, Object object) {  
 container.removeView((View) object);  
 }  
}

* **Tạo M002StoryFrg.java (màn danh sách truyện trong 1 topic):**

**A screenshot of a computer

AI-generated content may be incorrect.**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.TextView;  
  
import androidx.fragment.app.Fragment;  
import androidx.recyclerview.widget.LinearLayoutManager;  
import androidx.recyclerview.widget.RecyclerView;  
  
import java.io.BufferedReader;  
import java.io.IOException;  
import java.io.InputStreamReader;  
import java.util.ArrayList;  
  
public class M002StoryFrg extends Fragment {  
  
 private Context mContext;  
 private String topicName;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
 View rootView = inflater.inflate(R.layout.*m002\_frg\_story*, container, false);  
 initViews(rootView);  
 return rootView;  
 }  
  
 @Override  
 public void onAttach(Context context) {  
 super.onAttach(context);  
 mContext = context;  
 }  
  
 private void initViews(View v) {  
 v.findViewById(R.id.iv\_back).setVisibility(View.*VISIBLE*);  
 v.findViewById(R.id.iv\_back).setOnClickListener(v1 -> backToM001Screen());  
 ((TextView) v.findViewById(R.id.*tv\_name*)).setText(topicName);  
  
 RecyclerView rv = v.findViewById(R.id.*rv\_story*);  
 ArrayList<StoryEntity> listStory = readStory();  
 StoryAdapter adapter = new StoryAdapter(listStory, mContext);  
 rv.setAdapter(adapter);  
 rv.setLayoutManager(new LinearLayoutManager(mContext));  
 }  
  
 private ArrayList<StoryEntity> readStory() {  
 ArrayList<StoryEntity> listStory = new ArrayList<>();  
 BufferedReader reader = null;  
 try {  
 reader = new BufferedReader(  
 new InputStreamReader(mContext.getAssets().open("story/" + topicName + ".txt"), "UTF-8"));  
 while (true) {  
 String title = reader.readLine();  
 if (title == null) break;  
 if (title.trim().isEmpty()) continue;  
 StringBuilder content = new StringBuilder();  
 String line;  
 while ((line = reader.readLine()) != null && !line.trim().isEmpty()) {  
 content.append(line).append("\n");  
 }  
 StoryEntity storyEntity = new StoryEntity(topicName, title, content.toString().trim());  
 listStory.add(storyEntity);  
 if (line == null) break;  
 }  
 } catch (IOException e) {  
 }  
 return listStory;  
 }  
  
 public void setTopicName(String topicName) {  
 this.topicName = topicName;  
 }  
  
 private void backToM001Screen() {  
 ((MainActivity) getActivity()).backToM001Screen();  
 }  
}

* **Tạo M003DetailStoryFrg.java:**

**A screenshot of a computer

AI-generated content may be incorrect.**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.TextView;  
  
import androidx.fragment.app.Fragment;  
import androidx.viewpager.widget.ViewPager;  
  
import java.util.ArrayList;  
  
public class M003DetailStoryFrg extends Fragment {  
  
 private Context mContext;  
 private ArrayList<StoryEntity> listStory;  
 private String topicName;  
 private StoryEntity currentStory;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
 View rootView = inflater.inflate(R.layout.*m003\_frg\_detail\_story*, container, false);  
 initViews(rootView);  
 return rootView;  
 }  
  
 @Override  
 public void onAttach(Context context) {  
 super.onAttach(context);  
 mContext = context;  
 }  
  
 private void initViews(View v) {  
 View ivBack = v.findViewById(R.id.*iv\_back*);  
 ivBack.setVisibility(View.*VISIBLE*);  
 ivBack.setOnClickListener(view -> backToM002Screen());  
 ((TextView) v.findViewById(R.id.*tv\_name*)).setText(topicName);  
  
 ViewPager vp = v.findViewById(R.id.*vp\_story*);  
 DetailStoryAdapter adapter = new DetailStoryAdapter(listStory, mContext);  
 vp.setAdapter(adapter);  
 vp.setCurrentItem(listStory.indexOf(currentStory), true);  
 }  
  
 private void backToM002Screen() {  
 ((MainActivity) getActivity()).gotoM002Screen(topicName);  
 }  
  
 public void setData(String topicName, ArrayList<StoryEntity> listStory, StoryEntity currentStory) {  
 this.topicName = topicName;  
 this.listStory = listStory;  
 this.currentStory = currentStory;  
 }  
}

**Bước 6: Khởi chạy app**

Kết quả khi vừa khởi chạy app:

A green and yellow comic book

AI-generated content may be incorrect.

Trang chính:

A green square with white dots

AI-generated content may be incorrect.

Khi nhấp vào chủ đề truyện Nghề nghiệp:

A screenshot of a chat

AI-generated content may be incorrect.

Màn hình câu chuyên:

A screenshot of a phone

AI-generated content may be incorrect.

**Bài tập làm thêm Tạo 1 ứng dụng 12 cung hoàng đạo**

Các bước thực hiện:

**Bước 1: Chuẩn bị tài nguyên, chuẩn bị icon & data cho 12 cung hoàng đạo**

**A screenshot of a computer

AI-generated content may be incorrect.**

**Bước 2. Tạo layout menu 12 cung – res/layout/m001\_frg\_menu.xml**

**A screen shot of a computer

AI-generated content may be incorrect.**

*<?*xml version="1.0" encoding="utf-8"*?>*<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#00194F">  
  
 <ImageView  
 android:id="@+id/iv\_circle"  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 android:src="@drawable/ic\_zd\_circle"  
 android:scaleType="fitCenter"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintBottom\_toTopOf="@+id/card\_zodiac"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintVertical\_bias="0.0" />  
  
 <ImageView  
 android:id="@+id/iv\_aries"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_aries"  
 app:layout\_constraintBottom\_toTopOf="@id/card\_zodiac"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.5"  
 app:layout\_constraintVertical\_bias="0.0"  
 app:layout\_constraintEnd\_toStartOf="@id/iv\_taurus" />  
  
 <ImageView  
 android:id="@+id/iv\_taurus"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_taurus"  
 app:layout\_constraintTop\_toTopOf="@id/iv\_aries"  
 app:layout\_constraintBottom\_toBottomOf="@id/iv\_aries"  
 app:layout\_constraintStart\_toEndOf="@id/iv\_aries"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.1" />  
  
 <ImageView  
 android:id="@+id/iv\_gemini"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_gemini"  
 app:layout\_constraintTop\_toBottomOf="@id/iv\_aries"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.1" />  
  
 <ImageView  
 android:id="@+id/iv\_cancer"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_cancer"  
 app:layout\_constraintTop\_toTopOf="@id/iv\_gemini"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.9" />  
  
 <ImageView  
 android:id="@+id/iv\_leo"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_leo"  
 app:layout\_constraintTop\_toBottomOf="@id/iv\_gemini"  
 app:layout\_constraintStart\_toStartOf="@id/iv\_gemini" />  
  
 <ImageView  
 android:id="@+id/iv\_virgo"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_virgo"  
 app:layout\_constraintTop\_toTopOf="@id/iv\_leo"  
 app:layout\_constraintEnd\_toEndOf="@id/iv\_cancer" />  
  
 <ImageView  
 android:id="@+id/iv\_libra"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_libra"  
 app:layout\_constraintTop\_toBottomOf="@id/iv\_leo"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintBottom\_toTopOf="@id/card\_zodiac"  
 app:layout\_constraintVertical\_bias="0.0" />  
  
 <ImageView  
 android:id="@+id/iv\_scorpio"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_scorpio"  
 app:layout\_constraintTop\_toTopOf="@id/iv\_libra"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintBottom\_toTopOf="@id/card\_zodiac"  
 app:layout\_constraintVertical\_bias="0.0" />  
  
 <ImageView  
 android:id="@+id/iv\_sagittarius"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_sagittarius"  
 app:layout\_constraintBottom\_toTopOf="@id/card\_zodiac"  
 app:layout\_constraintStart\_toStartOf="@id/iv\_libra" />  
  
 <ImageView  
 android:id="@+id/iv\_capricorn"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_capricorn"  
 app:layout\_constraintBottom\_toTopOf="@id/card\_zodiac"  
 app:layout\_constraintEnd\_toEndOf="@id/iv\_scorpio" />  
  
 <ImageView  
 android:id="@+id/iv\_aquarius"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_aquarius"  
 app:layout\_constraintBottom\_toTopOf="@id/card\_zodiac"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.3" />  
  
 <ImageView  
 android:id="@+id/iv\_pisces"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:src="@drawable/ic\_zd\_pisces"  
 app:layout\_constraintBottom\_toTopOf="@id/card\_zodiac"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.7" />  
  
 <LinearLayout  
 android:id="@+id/card\_zodiac"  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 android:orientation="vertical"  
 android:padding="12dp"  
 android:background="#002772"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/iv\_circle">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
  
 <ImageView  
 android:id="@+id/iv\_current"  
 android:layout\_width="72dp"  
 android:layout\_height="72dp"  
 android:src="@drawable/ic\_zd\_aries" />  
  
 <LinearLayout  
 android:layout\_width="0dp"  
 android:layout\_height="match\_parent"  
 android:layout\_marginStart="12dp"  
 android:orientation="vertical"  
 android:layout\_weight="1">  
  
 <TextView  
 android:id="@+id/tv\_name"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Bạch Dương - Aries (21/3 - 19/4)"  
 android:textColor="@android:color/white"  
 android:textSize="16sp"  
 android:textStyle="bold" />  
  
 <TextView  
 android:id="@+id/tv\_short"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="4dp"  
 android:textColor="@android:color/white"  
 android:textSize="14sp"  
 android:maxLines="2" />  
 </LinearLayout>  
 </LinearLayout>  
  
 <Button  
 android:id="@+id/btn\_more"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="12dp"  
 android:text="XEM THÊM"  
 android:textAllCaps="true" />  
 </LinearLayout>  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**Bước 3. Tạo layout chi tiết 1 cung**

**res/layout/m002\_frg\_detail.xml:**

**A screenshot of a computer

AI-generated content may be incorrect.**

*<?*xml version="1.0" encoding="utf-8"*?>*<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#00194F">  
  
 <Button  
 android:id="@+id/btn\_back"  
 android:layout\_width="88dp"  
 android:layout\_height="40dp"  
 android:text="QUAY LẠI"  
 android:textAllCaps="true"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintMarginTop="12dp"  
 app:layout\_constraintMarginEnd="12dp" />  
  
 <TextView  
 android:id="@+id/tv\_title"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:text="Bọ Cạp - Scorpio (24/10 - 21/11)"  
 android:textColor="@android:color/white"  
 android:textSize="18sp"  
 android:textStyle="bold"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toStartOf="@id/btn\_back"  
 app:layout\_constraintMarginStart="12dp"  
 app:layout\_constraintMarginTop="18dp" />  
  
 <ImageView  
 android:id="@+id/iv\_icon"  
 android:layout\_width="120dp"  
 android:layout\_height="120dp"  
 android:src="@drawable/ic\_zd\_scorpio"  
 app:layout\_constraintTop\_toBottomOf="@id/tv\_title"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintMarginTop="16dp" />  
  
 <ScrollView  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 app:layout\_constraintTop\_toBottomOf="@id/iv\_icon"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintMarginTop="12dp"  
 app:layout\_constraintMarginStart="12dp"  
 app:layout\_constraintMarginEnd="12dp"  
 app:layout\_constraintMarginBottom="12dp">  
  
 <TextView  
 android:id="@+id/tv\_content"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textColor="@android:color/white"  
 android:textSize="16sp"  
 android:lineSpacingExtra="4dp" />  
 </ScrollView>  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**Bước 4. Tạo class model Zodiac.java**

**A screenshot of a computer

AI-generated content may be incorrect.**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import java.io.Serializable;  
  
public class Zodiac implements Serializable {  
 private final String name;  
 private final String date;  
 private final String shortDesc;  
 private final String longDesc;  
 private final int iconRes;  
  
 public Zodiac(String name, String date, String shortDesc, String longDesc, int iconRes) {  
 this.name = name;  
 this.date = date;  
 this.shortDesc = shortDesc;  
 this.longDesc = longDesc;  
 this.iconRes = iconRes;  
 }  
  
 public String getDisplayName() {  
 return name + " (" + date + ")";  
 }  
  
 public String getName() {  
 return name;  
 }  
  
 public String getDate() {  
 return date;  
 }  
  
 public String getShortDesc() {  
 return shortDesc;  
 }  
  
 public String getLongDesc() {  
 return longDesc;  
 }  
  
 public int getIconRes() {  
 return iconRes;  
 }  
}

**Bước 5. Tạo fragment menu cung hoàng đạo Z001MenuFrg.java**

**A screenshot of a computer

AI-generated content may be incorrect.**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.ImageView;  
import android.widget.TextView;  
  
import androidx.fragment.app.Fragment;  
  
public class Z001MenuFrg extends Fragment implements View.OnClickListener {  
  
 private Context mContext;  
 private Zodiac[] zodiacs;  
 private Zodiac currentZodiac;  
 private ImageView ivCurrent;  
 private TextView tvName;  
 private TextView tvShort;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
 View v = inflater.inflate(R.layout.*m001\_frg\_menu*, container, false);  
 initData();  
 initViews(v);  
 return v;  
 }  
  
 @Override  
 public void onAttach(Context context) {  
 super.onAttach(context);  
 mContext = context;  
 }  
  
 private void initData() {  
 zodiacs = new Zodiac[]{  
 new Zodiac("Bạch Dương - Aries", "21/3 - 19/4", "Năng động, nhiệt huyết, thích dẫn đầu.", "Bạch Dương là cung hoàng đạo mang năng lượng của sự khởi đầu. Bạn luôn sẵn sàng xông pha trong mọi công việc, thích thử thách và không ngại đương đầu với khó khăn. Tuy đôi khi hơi nóng nảy và bốc đồng nhưng bạn lại rất chân thành và thẳng thắn.", R.drawable.*ic\_zd\_aries*),  
 new Zodiac("Kim Ngưu - Taurus", "20/4 - 20/5", "Ổn định, thực tế, yêu thích sự an toàn.", "Kim Ngưu là người kiên nhẫn, chăm chỉ và có trách nhiệm. Bạn thích sự ổn định, yêu cái đẹp và có gu thưởng thức tinh tế. Đôi lúc bạn tỏ ra bướng bỉnh vì không muốn từ bỏ những điều mình cho là chắc chắn.", R.drawable.*ic\_zd\_taurus*),  
 new Zodiac("Song Tử - Gemini", "21/5 - 20/6", "Hoạt bát, linh hoạt, giao tiếp tốt.", "Song Tử nhanh nhẹn, hài hước và rất giỏi nói chuyện. Bạn có thể thích ứng nhanh với môi trường mới, luôn tò mò muốn học hỏi điều mới. Hạn chế là dễ chán, hay thay đổi và đôi khi thiếu quyết đoán.", R.drawable.*ic\_zd\_gemini*),  
 new Zodiac("Cự Giải - Cancer", "21/6 - 22/7", "Tình cảm, sâu sắc, yêu gia đình.", "Cự Giải sống nội tâm, giàu cảm xúc và luôn quan tâm chăm sóc những người mình yêu thương. Bạn đặt gia đình và các mối quan hệ lên hàng đầu. Tuy nhiên bạn cũng dễ bị tổn thương và có xu hướng giữ mọi chuyện trong lòng.", R.drawable.*ic\_zd\_cancer*),  
 new Zodiac("Sư Tử - Leo", "23/7 - 22/8", "Tự tin, nổi bật, thích được chú ý.", "Sư Tử là người lãnh đạo đầy khí chất. Bạn thích thể hiện bản thân, hào phóng và rất trung thành với bạn bè. Đôi lúc cái tôi lớn khiến bạn trở nên cố chấp và thích được khen ngợi.", R.drawable.*ic\_zd\_leo*),  
 new Zodiac("Xử Nữ - Virgo", "23/8 - 22/9", "Tỉ mỉ, cầu toàn, làm việc có kế hoạch.", "Xử Nữ có khả năng phân tích tốt, luôn muốn mọi thứ phải thật chỉn chu và hoàn hảo. Bạn làm việc có tổ chức, đáng tin cậy. Tuy nhiên bạn dễ lo lắng và hay tự tạo áp lực cho bản thân.", R.drawable.*ic\_zd\_virgo*),  
 new Zodiac("Thiên Bình - Libra", "23/9 - 22/10", "Hòa nhã, công bằng, yêu cái đẹp.", "Thiên Bình rất khéo léo trong giao tiếp, luôn muốn giữ hòa khí và sự cân bằng. Bạn có gu thẩm mỹ tốt, thích cái đẹp và nghệ thuật. Hạn chế là bạn khá do dự khi phải đưa ra lựa chọn.", R.drawable.*ic\_zd\_libra*),  
 new Zodiac("Bọ Cạp - Scorpio", "23/10 - 21/11", "Sâu sắc, bí ẩn, cảm xúc mạnh.", "Bọ Cạp là người giàu cảm xúc, có trực giác tốt và rất quyết liệt. Bạn yêu ghét rõ ràng, khi đã quyết tâm thì sẽ làm đến cùng. Nhưng bạn cũng dễ ghen tuông, khó tin tưởng người khác ngay từ đầu.", R.drawable.*ic\_zd\_scorpio*),  
 new Zodiac("Nhân Mã - Sagittarius", "22/11 - 21/12", "Tự do, lạc quan, thích khám phá.", "Nhân Mã luôn mang đến nguồn năng lượng tích cực. Bạn yêu thích dịch chuyển, thích thử những điều mới lạ. Đôi khi bạn hơi thiếu kiên nhẫn với những công việc lặp lại và khuôn khổ.", R.drawable.*ic\_zd\_sagittarius*),  
 new Zodiac("Ma Kết - Capricorn", "22/12 - 19/1", "Kỷ luật, tham vọng, nghiêm túc.", "Ma Kết tập trung vào mục tiêu dài hạn, chăm chỉ và có trách nhiệm. Bạn ít nói nhưng làm nhiều, không ngại khó khăn. Nhược điểm là đôi lúc quá nghiêm khắc với bản thân và người khác.", R.drawable.*ic\_zd\_capricorn*),  
 new Zodiac("Bảo Bình - Aquarius", "20/1 - 18/2", "Độc đáo, sáng tạo, khác biệt.", "Bảo Bình có suy nghĩ rất riêng, yêu tự do và luôn muốn làm điều gì đó khác thường. Bạn quan tâm đến cộng đồng và các ý tưởng nhân văn. Tuy nhiên đôi khi bạn trở nên khó đoán và hơi xa cách.", R.drawable.*ic\_zd\_aquarius*),  
 new Zodiac("Song Ngư - Pisces", "19/2 - 20/3", "Mơ mộng, nhạy cảm, giàu lòng trắc ẩn.", "Song Ngư là người lãng mạn, sống bằng cảm xúc và hay đồng cảm với người khác. Bạn có trí tưởng tượng phong phú, yêu nghệ thuật. Hạn chế là dễ bị cuốn vào cảm xúc, đôi khi thiếu thực tế.", R.drawable.*ic\_zd\_pisces*)  
 };  
 currentZodiac = zodiacs[0];  
 }  
  
 private void initViews(View v) {  
 ivCurrent = v.findViewById(R.id.iv\_current);  
 tvName = v.findViewById(R.id.*tv\_name*);  
 tvShort = v.findViewById(R.id.tv\_short);  
 Button btnMore = v.findViewById(R.id.btn\_more);  
  
 v.findViewById(R.id.iv\_aries).setOnClickListener(this);  
 v.findViewById(R.id.iv\_taurus).setOnClickListener(this);  
 v.findViewById(R.id.iv\_gemini).setOnClickListener(this);  
 v.findViewById(R.id.iv\_cancer).setOnClickListener(this);  
 v.findViewById(R.id.iv\_leo).setOnClickListener(this);  
 v.findViewById(R.id.iv\_virgo).setOnClickListener(this);  
 v.findViewById(R.id.iv\_libra).setOnClickListener(this);  
 v.findViewById(R.id.iv\_scorpio).setOnClickListener(this);  
 v.findViewById(R.id.iv\_sagittarius).setOnClickListener(this);  
 v.findViewById(R.id.iv\_capricorn).setOnClickListener(this);  
 v.findViewById(R.id.iv\_aquarius).setOnClickListener(this);  
 v.findViewById(R.id.iv\_pisces).setOnClickListener(this);  
  
 btnMore.setOnClickListener(view -> gotoDetail());  
 bindCurrent();  
 }  
  
 private void bindCurrent() {  
 ivCurrent.setImageResource(currentZodiac.getIconRes());  
 tvName.setText(currentZodiac.getDisplayName());  
 tvShort.setText(currentZodiac.getShortDesc());  
 }  
  
 @Override  
 public void onClick(View v) {  
 int id = v.getId();  
 if (id == R.id.iv\_aries) currentZodiac = zodiacs[0];  
 else if (id == R.id.iv\_taurus) currentZodiac = zodiacs[1];  
 else if (id == R.id.iv\_gemini) currentZodiac = zodiacs[2];  
 else if (id == R.id.iv\_cancer) currentZodiac = zodiacs[3];  
 else if (id == R.id.iv\_leo) currentZodiac = zodiacs[4];  
 else if (id == R.id.iv\_virgo) currentZodiac = zodiacs[5];  
 else if (id == R.id.iv\_libra) currentZodiac = zodiacs[6];  
 else if (id == R.id.iv\_scorpio) currentZodiac = zodiacs[7];  
 else if (id == R.id.iv\_sagittarius) currentZodiac = zodiacs[8];  
 else if (id == R.id.iv\_capricorn) currentZodiac = zodiacs[9];  
 else if (id == R.id.iv\_aquarius) currentZodiac = zodiacs[10];  
 else if (id == R.id.iv\_pisces) currentZodiac = zodiacs[11];  
 bindCurrent();  
 }  
  
 private void gotoDetail() {  
 ((MainActivity) mContext).gotoZodiacDetail(currentZodiac);  
 }  
}

**Bước 6. Tạo fragment chi tiết cung hoàng đạo Z002DetailFrg.java**

**A screenshot of a computer

AI-generated content may be incorrect.**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.ImageView;  
import android.widget.TextView;  
  
import androidx.fragment.app.Fragment;  
  
public class Z002DetailFrg extends Fragment {  
  
 private Context mContext;  
 private Zodiac zodiac;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
 View v = inflater.inflate(R.layout.*m002\_frg\_detail*, container, false);  
 initViews(v);  
 return v;  
 }  
  
 @Override  
 public void onAttach(Context context) {  
 super.onAttach(context);  
 mContext = context;  
 }  
  
 private void initViews(View v) {  
 ImageView ivIcon = v.findViewById(R.id.*iv\_icon*);  
 TextView tvTitle = v.findViewById(R.id.*tv\_title*);  
 TextView tvContent = v.findViewById(R.id.*tv\_content*);  
 Button btnBack = v.findViewById(R.id.*btn\_back*);  
  
 if (zodiac != null) {  
 ivIcon.setImageResource(zodiac.getIconRes());  
 tvTitle.setText(zodiac.getDisplayName());  
 tvContent.setText(zodiac.getLongDesc());  
 }  
  
 btnBack.setOnClickListener(view -> ((MainActivity) mContext).backToZodiacMenu());  
 }  
  
 public void setZodiac(Zodiac zodiac) {  
 this.zodiac = zodiac;  
 }  
}

**Bước 7. Sửa MainActivity để điều hướng thêm 2 màn mới**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.os.Bundle;  
  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.fragment.app.Fragment;  
  
import java.util.ArrayList;  
  
public class MainActivity extends AppCompatActivity {  
  
 private String topicName;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 showFrg(new M000SplashFrg());  
 }  
  
 private void showFrg(Fragment frg) {  
 getSupportFragmentManager()  
 .beginTransaction()  
 .replace(R.id.*ln\_main*, frg, null)  
 .commit();  
 }  
  
 public void gotoM001Screen() {  
 showFrg(new M001TopicFrg());  
 }  
  
 public void gotoM002Screen(String topicName) {  
 this.topicName = topicName;  
 M002StoryFrg frg = new M002StoryFrg();  
 frg.setTopicName(topicName);  
 showFrg(frg);  
 }  
  
 public void backToM001Screen() {  
 gotoM001Screen();  
 }  
  
 public void gotoM003Screen(ArrayList<StoryEntity> listStory, StoryEntity story) {  
 M003DetailStoryFrg frg = new M003DetailStoryFrg();  
 frg.setData(topicName, listStory, story);  
 showFrg(frg);  
 }  
  
 public void gotoZodiacMenu() {  
 showFrg(new Z001MenuFrg());  
 }  
  
 public void gotoZodiacDetail(Zodiac zodiac) {  
 Z002DetailFrg frg = new Z002DetailFrg();  
 frg.setZodiac(zodiac);  
 showFrg(frg);  
 }  
  
 public void backToZodiacMenu() {  
 gotoZodiacMenu();  
 }  
}

**Bước 8. Thêm nút ở màn “Truyện cười” để mở 12 cung hoàng đạo**

**Sửa layout m001\_frg\_topic.xml:**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="@color/greenMid"  
 android:orientation="vertical">  
  
 <include layout="@layout/actionbar\_home" />  
  
 <ScrollView  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1">  
  
 <LinearLayout  
 android:id="@+id/ln\_topic"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical"  
 android:padding="10dp" />  
 </ScrollView>  
  
 <Button  
 android:id="@+id/btn\_zodiac"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="ỨNG DỤNG 12 CUNG HOÀNG ĐẠO"  
 android:textAllCaps="true"  
 android:layout\_margin="10dp" />  
  
</LinearLayout>

**Sửa M001TopicFrg.java để bắt sự kiện nút**

package com.example.nguyentruonghung1150070013\_thb4\_truyencuoi;  
  
import android.content.Context;  
import android.graphics.BitmapFactory;  
import android.os.Bundle;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.ImageView;  
import android.widget.LinearLayout;  
import android.widget.TextView;  
  
import androidx.fragment.app.Fragment;  
  
public class M001TopicFrg extends Fragment implements View.OnClickListener {  
  
 private Context mContext;  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
 View rootView = inflater.inflate(R.layout.*m001\_frg\_topic*, container, false);  
 initViews(rootView);  
 return rootView;  
 }  
  
 @Override  
 public void onAttach(Context context) {  
 super.onAttach(context);  
 mContext = context;  
 }  
  
 private void initViews(View v) {  
 LinearLayout lnMain = v.findViewById(R.id.*ln\_topic*);  
 lnMain.removeAllViews();  
 try {  
 String[] listItem = mContext.getAssets().list("photo");  
 if (listItem != null) {  
 for (String fileName : listItem) {  
 String name = fileName.substring(0, fileName.indexOf("."));  
 View vTopic = LayoutInflater.*from*(mContext).inflate(R.layout.*item\_topic*, null);  
 ImageView ivTopic = vTopic.findViewById(R.id.*iv\_topic*);  
 TextView tvTopic = vTopic.findViewById(R.id.*tv\_topic*);  
  
 ivTopic.setImageBitmap(BitmapFactory.*decodeStream*(  
 mContext.getAssets().open("photo/" + fileName)));  
  
 if (name.equals("nghenghiep")) {  
 tvTopic.setText("Nghề nghiệp");  
 } else {  
 tvTopic.setText(name);  
 }  
  
 lnMain.addView(vTopic);  
 LinearLayout.LayoutParams params = (LinearLayout.LayoutParams) vTopic.getLayoutParams();  
 params.bottomMargin = 40;  
 vTopic.setLayoutParams(params);  
 vTopic.setTag(name);  
 vTopic.setOnClickListener(this);  
 }  
 }  
 } catch (Exception e) {  
 }  
  
 Button btnZodiac = v.findViewById(R.id.*btn\_zodiac*);  
 btnZodiac.setOnClickListener(view -> ((MainActivity) mContext).gotoZodiacMenu());  
 }  
  
 @Override  
 public void onClick(View v) {  
 ((MainActivity) getActivity()).gotoM002Screen((String) v.getTag());  
 }  
}

**Bước 9: Chạy app**

Kết quả:

A screenshot of a phone

AI-generated content may be incorrect.

Khi bấm xem thêm một cung hoàng đạo:

A screen shot of a cell phone

AI-generated content may be incorrect.

Link data set: <https://drive.google.com/file/d/1l7zcHXBt_XmIZB-joYEqkqczFzUf0oOw/view?usp=drive_link>