

NEWS APP

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MainActivity

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

    mToolbar = findViewById(R.id.toolbar);
    setSupportActionBar(mToolbar);

    mhome = findViewById(R.id.home);
    mscience = findViewById(R.id.science);
    msports = findViewById(R.id.sports);
    mtechnology = findViewById(R.id.technology);

    mentertainment = findViewById(R.id.entertainment);
    mhealth = findViewById(R.id.health);
    ViewPager viewPager = findViewById(R.id.fragmentcontainer);
    tabLayout = findViewById(R.id.include);
    pagerAdapter = new PagerAdapter(getSupportFragmentManager(), tabLayout.getTabCount());

    // Set the adapter on the ViewPager
    viewPager.setAdapter(pagerAdapter);

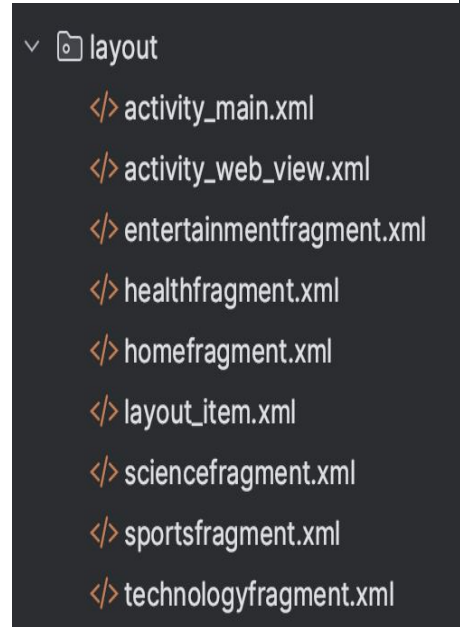
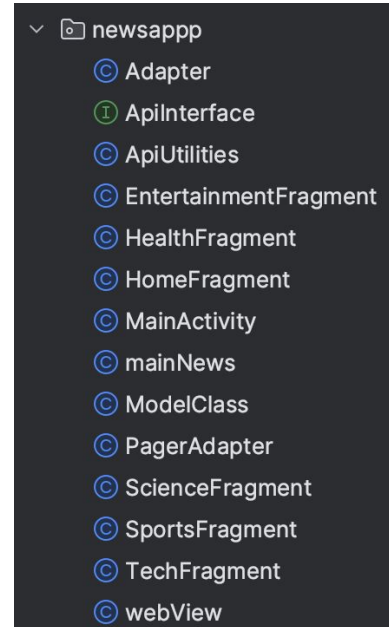
    tabLayout.addOnTabSelectedListener(new TabLayout.OnTabSelectedListener() {
        @Override
        public void onTabSelected(TabLayout.Tab tab) {
            System.out.println(tab.getPosition());

            if(tab.getPosition()==0 || tab.getPosition()==1 || tab.getPosition()==2 || tab.getPosition()==3 || tab.getPosition()==4 || tab.getPosition() ==5)
            {
                viewPager.setCurrentItem(tab.getPosition());
                Log.e("Tag", "Data Parsing", "msg", "Error parsing data1");
                System.out.println(tab.getPosition());
                System.out.println(viewPager.getCurrentItem());
                System.out.println(tab.getPosition());
                System.out.println(pagerAdapter);
                if (pagerAdapter != null) {
                    Log.e("Tag", "Data Parsing", "msg", "Error parsing data2");
                    pagerAdapter.notifyDataSetChanged();
                }
            }
        }

        @Override
        public void onTabUnselected(TabLayout.Tab tab) {
        }
    });
}
```

MainActivity

This file describes the recycler view and it shows information here only. Tab layout is also defined here even the options we choose will be done from here only. And then it pops up the specific tab to show if we scroll. List of activities is as follows:



HomeFragment

```
package com.example.newsapp;

import ...

public class HomeFragment extends Fragment {

    5 usages
    public static String country;

    2 usages
    private Button indiaButton;

    2 usages
    private TextView textView2;
    3 usages
    private Spinner locationSpinner;

    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {

        View v = inflater.inflate(R.layout.homefragment, container, attachToRoot false);

        // Initialize location spinner
        locationSpinner = v.findViewById(R.id.locationSpinner);
        textView2 = v.findViewById(R.id.textView2);
        // Find the button by its ID
        indiaButton = v.findViewById(R.id.indiaButton);

        // Set an OnClickListener for the button
        indiaButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Set the country variable to "India"
                country = "in";
                Toast.makeText(getContext(), text: "Country set to India", Toast.LENGTH_SHORT).show();
            }
        });
        textView2.setText("Please select a location amongst these:");
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(getContext(),
            R.array.locations_array, android.R.layout.simple_spinner_item);
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        locationSpinner.setAdapter(adapter);
        locationSpinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {...});

        return v;
    }
}
```

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <Spinner
        android:id="@+id/locationSpinner"
        android:layout_width="168dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="120dp"
        android:layout_marginTop="228dp"
        android:layout_marginEnd="123dp"
        android:layout_marginBottom="479dp" />

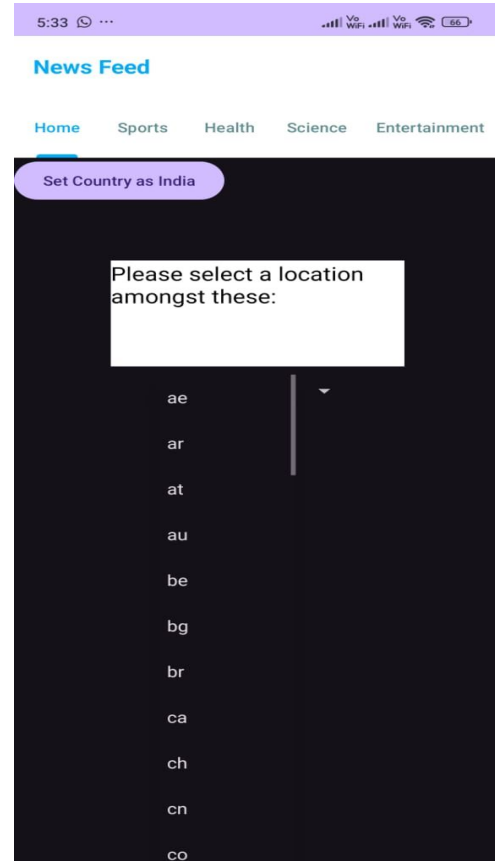
    <TextView
        android:id="@+id/textView2"
        android:layout_width="250dp"
        android:layout_height="101dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="81dp"
        android:layout_marginTop="108dp"
        android:layout_marginEnd="80dp"
        android:layout_marginBottom="522dp"
        android:background="@color/white"
        android:text="@string/please_select_location_amongst_these"
        android:textColor="#000000"
        android:textSize="20sp" />

    <Button
        android:id="@+id/indiaButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Set Country as India" />

</RelativeLayout>
```

HomeFragment

This activity is the home activity which shows the home page. This is also giving access to choose location using a button and the scroll view. This is taking help of the homefragment.xml.



SportsFragment

```
package com.example.newsapp;

import androidx.appcompat.app.AppCompatActivity;

public class SportsFragment extends Fragment {

    1 usage
    String api = "83ba88673b6146dcb6e13fc814647adf";
    3 usages
    ArrayList<ModelClass> modelClassArrayList;
    3 usages
    Adapter adapter;
    2 usages
    String country = HomeFragment.country;
    2 usages
    private String category = "sports";

    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
        country = HomeFragment.country;
        View v = inflater.inflate(R.layout.sports_fragment, container, attachToRoot false);
        modelClassArrayList = new ArrayList<>();
        RecyclerView recyclerViewSports = v.findViewById(R.id.recyclerviewofsports);
        recyclerViewSports.setLayoutManager(new LinearLayoutManager(getContext()));
        adapter = new Adapter(getContext(), modelClassArrayList);
        recyclerViewSports.setAdapter(adapter);

        findNews();
        return v;
    }

    1 usage
    private void findNews() {
        Log.d("SportsFragment", "msg: " + "Fetching news for category: " + category);
        ApiUtilities.getApiInterface().getNews(country, category, api).enqueue(new Callback<mainNews>() {
            public void onResponse(Call<mainNews> call, Response<mainNews> response) {
                if (response.isSuccessful() && response.body() != null) {
                    modelClassArrayList.addAll(response.body().getArticles());
                    adapter.notifyDataSetChanged();
                    Log.d("SportsFragment", "msg: " + "News fetched and updated");
                } else {
                    Log.e("SportsFragment", "msg: " + "Response not successful: HTTP " + response.code());
                }
            }
        });

        @Override
        public void onFailure(Call<mainNews> call, Throwable t) {
            Log.e("SportsFragment", "msg: " + "Failed to fetch news", t);
        }
    }
}
```

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <androidx.recyclerview.widget.RecyclerView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/recyclerviewofsports"
        android:layout_margin="2dp"
        android:fitsSystemWindows="true"
        android:padding="2dp">
    </androidx.recyclerview.widget.RecyclerView>

</RelativeLayout>
```


SportsFragment

This is the activity which is displaying all the news of sports category. If you press on any particular news then it will open the respective news in a web file using WebView. This is taking help of the sportsfragment.xml.



HealthFragment

```
package com.example.newsappp;

import ...

public class HealthFragment extends Fragment {

    1 usage
    String api = "83ba88673b6146dcb6e13fc814647adf";
    3 usages
    ArrayList<ModelClass> modelClassArrayList;
    3 usages
    Adapter adapter;
    2 usages
    String country = "in";
    1 usage
    private String category = "health";

    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
        country = HomeFragment.country;
        View v = inflater.inflate(R.layout.healthfragment, container, attachToRoot: false);
        modelClassArrayList = new ArrayList<>();
        RecyclerView recyclerViewofhealth = v.findViewById(R.id.recyclerviewofhealth);
        recyclerViewofhealth.setLayoutManager(new LinearLayoutManager(getContext()));
        adapter = new Adapter(getContext(), modelClassArrayList);
        recyclerViewofhealth.setAdapter(adapter);

        Log.d(tag: "HealthFragment", msg: "Fragment Loaded");
        findNews();
        return v;
    }

    1 usage
    private void findNews() {
        Log.d(tag: "HealthFragment", msg: "Fetching news");
        ApiUtilities.getApiInterface().getNews(country, category, api).enqueue(new Callback<mainNews>() {
            public void onResponse(Call<mainNews> call, Response<mainNews> response) {
                if (response.isSuccessful() && response.body() != null) {
                    modelClassArrayList.addAll(response.body().getArticles());
                    adapter.notifyDataSetChanged();
                    Log.d(tag: "HealthFragment", msg: "News fetched and updated");
                } else {
                    Log.e(tag: "HealthFragment", msg: "Response not successful");
                }
            }
        });

        @Override
        public void onFailure(Call<mainNews> call, Throwable t) {
            Log.e(tag: "HealthFragment", msg: "Failed to fetch news", t);
        }
    }
};
}
```

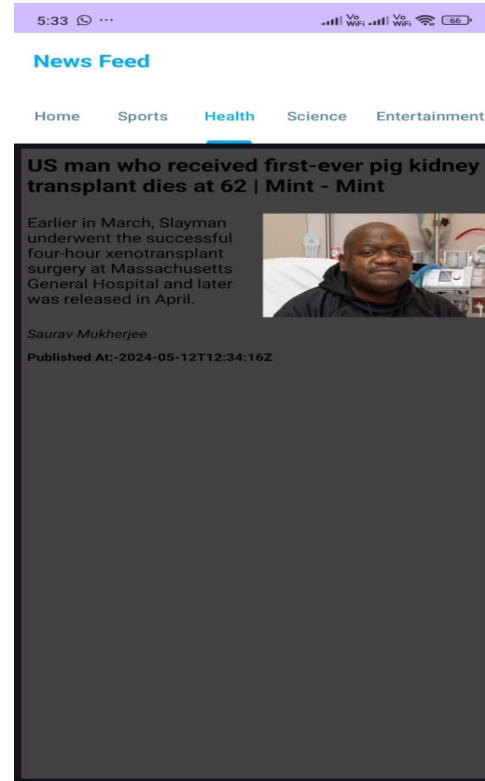
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <androidx.recyclerview.widget.RecyclerView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/recyclerviewofhealth"
        android:layout_margin="2dp"
        android:fitsSystemWindows="true"
        android:padding="2dp">
    </androidx.recyclerview.widget.RecyclerView>

</RelativeLayout>
```

HealthFragment

This is the activity which is displaying all the news of health category. If you press on any particular news then it will open the respective news in a web file using WebView. This is taking help of the healthfragment.xml.



ScienceFragment

```
package com.example.newsapp;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;
import androidx.ui.core.ViewBindingRegistry;
import androidx.ui.layout.*;
import androidx.ui.text.Text;
import androidx.ui.widget.Button;
import androidx.ui.widget.TextView;
import java.util.ArrayList;
import java.util.List;
import java.util.concurrent.TimeUnit;
import java.util.logging.Logger;
import java.util.regex.Pattern;
import java.util.zip.ZipEntry;
import java.util.zip.ZipFile;
import java.util.zip.ZipInputStream;
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;
import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;
import retrofit2.Retrofit;
import retrofit2.converter.gson.GsonConverterFactory;

public class ScienceFragment extends Fragment {

    1 usage
    String api = "83ba88673b6146dcbb6e13fc814647adf";
    3 usages
    ArrayList<ModelClass> modelClassArrayList;
    3 usages
    Adapter adapter;
    2 usages
    String country = "in";
    1 usage
    private String category = "science";

    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
        country = HomeFragment.country;
        View v = inflater.inflate(R.layout.sciencefragment, container, attachToRoot false);
        modelClassArrayList = new ArrayList<>();
        System.out.println("HELLO SCIENCE");
        RecyclerView recyclerViewOfScience = v.findViewById(R.id.recyclerViewofScience);
        recyclerViewOfScience.setLayoutManager(new LinearLayoutManager(getContext()));
        adapter = new Adapter(getContext(), modelClassArrayList);
        recyclerViewOfScience.setAdapter(adapter);

        findNews();
        return v;
    }

    1 usage
    private void findNews() {
        Log.d(TAG, "HealthFragment", MSG, "Fetching news");
        ApiUtilities.getApiInterface().getNews(country, category, api).enqueue(new Callback<mainNews>() {
            public void onResponse(Call<mainNews> call, Response<mainNews> response) {
                if (response.isSuccessful()) && response.body() != null) {
                    modelClassArrayList.addAll(response.body().getArticles());
                    adapter.notifyDataSetChanged();
                    Log.d(TAG, "ScienceFragment", MSG, "News fetched and updated");
                } else {
                    Log.e(TAG, "ScienceFragment", MSG, "Response not successful");
                }
            }
        });
    }

    @Override
    public void onFailure(Call<mainNews> call, Throwable t) {
        Log.e(TAG, "ScienceFragment", MSG, "Failed to fetch news", t);
    }
};
```

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/recyclerviewofscience"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginStart="2dp"
        android:layout_marginTop="2dp"
        android:layout_marginEnd="2dp"
        android:layout_marginBottom="2dp"
        android:fitsSystemWindows="true"
        android:padding="2dp" />

</RelativeLayout>
```



ScienceFragment

This is the activity which is displaying all the news of science category. If you press on any particular news then it will open the respective news in a web file using WebView. This is taking help of the sciencefragment.xml.



EntertainmentFragment

```
package com.example.newsappp;

import ...

public class EntertainmentFragment extends Fragment {

    1 usage
    String api = "83ba88673b6146dcb6e13fc814647adf"; // API key
    2 usage
    ArrayList<ModelClass> modelClassArrayList;
    3 usage
    Adapter adapter;
    2 usage
    String country;
    2 usage
    private String category = "entertainment";

    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
        country = HomeFragment.country;
        View v = inflater.inflate(R.layout.sportsfragment, container, attachToRoot false);
        modelClassArrayList = new ArrayList<>();
        RecyclerView recyclerViewSports = v.findViewById(R.id.recyclerviewofsports);
        recyclerViewSports.setLayoutManager(new LinearLayoutManager(getContext()));
        adapter = new Adapter(getContext(), modelClassArrayList);
        recyclerViewSports.setAdapter(adapter);

        findNews();
        return v;
    }

    1 usage
    private void findNews() {
        Log.d( tag, "SportsFragment", msg, "Fetching news for category: " + category);
        ApiUtilities.getApiInterface().getNews(country, category, api).enqueue(new Callback<mainNews>() {
            public void onResponse(Call<mainNews> call, Response<mainNews> response) {
                if (response.isSuccessful() && response.body() != null) {
                    modelClassArrayList.addAll(response.body().getArticles());
                    adapter.notifyDataSetChanged();
                    Log.d( tag, "entertainment", msg, "News fetched and updated");
                    System.out.println("HELLO ENTERTAINMENT");
                } else {
                    Log.e( tag, "entertainment", msg, "Response not successful: HTTP " + response.code());
                }
            }
        });

        @Override
        public void onFailure(Call<mainNews> call, Throwable t) {
            Log.e( tag, "entertainment", msg, "Failed to fetch news", t);
        }
    }
}
```



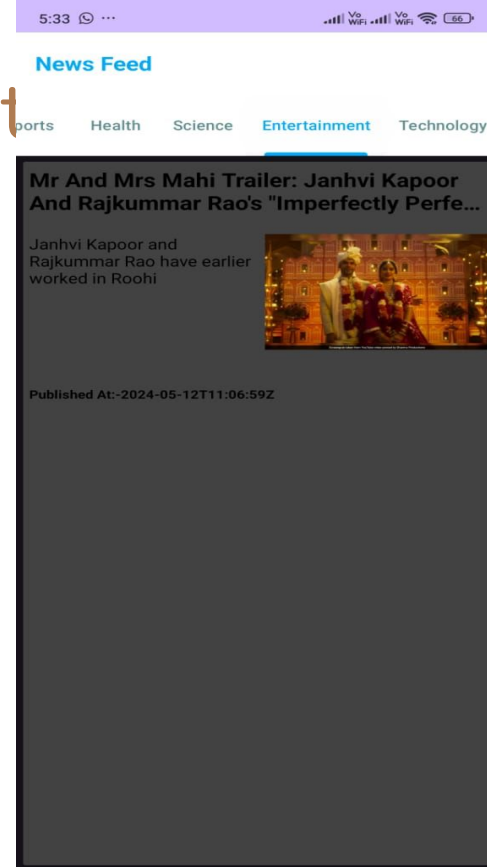
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <androidx.recyclerview.widget.RecyclerView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/recyclerviewofentertainment"
        android:layout_margin="2dp"
        android:fitsSystemWindows="true"
        android:padding="2dp">
    </androidx.recyclerview.widget.RecyclerView>

</RelativeLayout>
```

EntertainmentFragment

This is the activity which is displaying all the news of entertainment category. If you press on any particular news then it will open the respective news in a web file using WebView. This is taking help of the entertainmentfragment.xml.



TechnologyFragment

```
package com.example.newsapp;

import ...

public class TechFragment extends Fragment {
    1 usage
    String api = "83ba88673b6146dcb6e13fc814647adf";
    3 usages
    ArrayList<ModelClass> modelClassArrayList;
    3 usages
    Adapter adapter;
    2 usages
    String country = HomeFragment.country;
    1 usage
    private String category = "technology";

    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceState){
        country = HomeFragment.country;
        View v = inflater.inflate(R.layout.technologyfragment, container, attachToRoot false);
        modelClassArrayList = new ArrayList<>();
        RecyclerView recyclerView = v.findViewById(R.id.recyclerviewoftech);
        recyclerView.setLayoutManager(new LinearLayoutManager(getContext()));
        adapter = new Adapter(getContext(), modelClassArrayList);
        recyclerView.setAdapter(adapter);

        findNews();
        return v;
    }

    1 usage
    private void findNews() {
        Log.d(tag: "TechFragment", msg: "Fetching news");
        ApiUtilities.getApiInterface().getNews(country, category, api).enqueue(new Callback<mainNews>() {
            @Override
            public void onResponse(Call<mainNews> call, Response<mainNews> response) {
                if (response.isSuccessful() && response.body() != null) {
                    modelClassArrayList.addAll(response.body().getArticles());
                    adapter.notifyDataSetChanged();
                    Log.d(tag: "TechFragment", msg: "News fetched and updated");
                } else {
                    Log.e(tag: "TechFragment", msg: "Response not successful");
                }
            }

            @Override
            public void onFailure(Call<mainNews> call, Throwable t) {
                Log.e(tag: "TechFragment", msg: "Failed to fetch news", t);
            }
        });
    }
}
```

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <androidx.recyclerview.widget.RecyclerView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/recyclerviewoftech"
        android:layout_margin="2dp"
        android:fitsSystemWindows="true"
        android:padding="2dp">
    </androidx.recyclerview.widget.RecyclerView>

</RelativeLayout>
```

TechnologyFragment

This is the activity which is displaying all the news of technology category. If you press on any particular news then it will open the respective news in a web file using WebView. This is taking help of the technologyfragment.xml.



WebView

```
package com.example.newsapp;

import ...

public class webView extends AppCompatActivity {
    3 usages
    WebView webView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_web_view);
        androidx.appcompat.widget.Toolbar toolbar = findViewById(R.id.toolbar);
        webView = findViewById(R.id.webview);

        Intent intent = getIntent();
        String url = intent.getStringExtra(name: "url");
        webView.setWebViewClient(new WebViewClient());
        webView.loadUrl(url);
    }
}
```

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <androidx.cardview.widget.CardView
        android:id="@+id/cardview"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:padding="10dp"
        android:layout_margin="2dp"
        android:elevation="5dp">

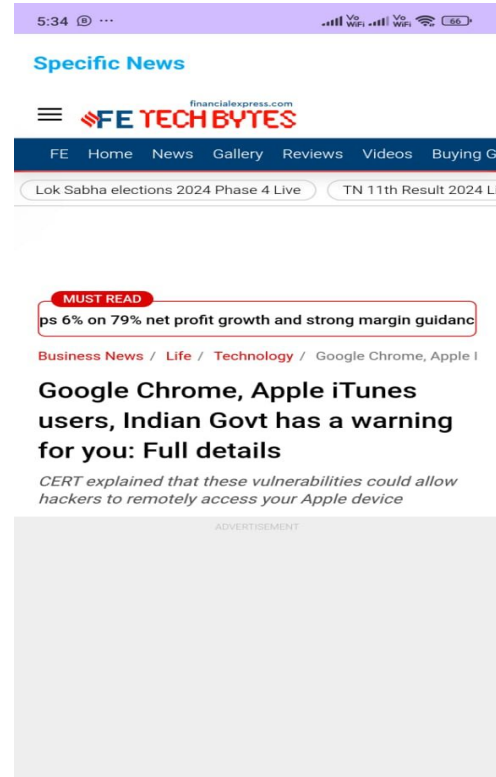
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical">
            <TextView
                android:layout_width="match_parent"
                android:layout_height="60dp"
                android:id="@+id/mainheading"
                android:padding="5dp"
                android:ellipsize="end"
                android:maxLines="2"
                android:textColor="@color/black"
                android:text="@+id/main_display_here_main_display_here"
                android:textSize="20sp"
                android:textStyle="bold" />

```

Rest of the code is same but it couldnt fit.

WebView

This is the activity which is helping us to show the news in the web file when someone clicks on the news to open it in the web file and it takes help of layout_item file to show the news.



Adapter Class

```
package com.example.newsapp;

import ...

12 usages
public class Adapter extends RecyclerView.Adapter<Adapter.ViewHolder> {

    6 usages
    Context context;
    9 usages
    ArrayList<ModelClass> modelClassArrayList;

    5 usages
    public Adapter(Context context, ArrayList<ModelClass> modelClassArrayList) {
        this.context = context;
        this.modelClassArrayList = modelClassArrayList;
    }

    @Override
    public ViewHolder onCreateViewHolder(ViewGroup parent, int viewType) {
        View view = LayoutInflater.from(parent.getContext()).inflate(R.layout.layout_item, parent, false);
        return new ViewHolder(view);
    }

    @Override
    public void onBindViewHolder(@NonNull Adapter.ViewHolder holder, @SuppressWarnings("unused") int position) {

        holder.cardview.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(context, webView.class);
                intent.putExtra("url", modelClassArrayList.get(position).getUrl());
                context.startActivity(intent);
            }
        });

        holder.mtime.setText("Published At:-" + modelClassArrayList.get(position).getPublishedAt());
        holder.mauthor.setText(modelClassArrayList.get(position).getAuthor());
        holder.mheading.setText(modelClassArrayList.get(position).getTitle());
        holder.mcontent.setText(modelClassArrayList.get(position).getDescription());
        Glide.with(context).load(modelClassArrayList.get(position).getImageUrl()).into(holder.imageView);
    }
}
```

This is the adapter class storing the information and the layout for the news showing etc.

Api Utilities and Api Interface

```
package com.example.newsapp;

import ...

5 usages
public class ApiUtilities {

    1 usage
    private static final String BASE_URL = "https://newsapi.org/v2/";
    6 usages
    private static Retrofit retrofit = null;

    1 usage
    public static Retrofit getRetrofit() {
        if (retrofit == null) {
            retrofit = new Retrofit.Builder()
                .baseUrl(BASE_URL)
                .addConverterFactory(GsonConverterFactory.create())
                .build();
        }
        return retrofit;
    }

    5 usages
    public static ApiInterface getApiInterface() {
        if (retrofit == null) {
            retrofit = getRetrofit();
        }

        return retrofit.create(ApiInterface.class);
    }
}
```

```
package com.example.newsapp;

import ...

2 usages
public interface ApiInterface {

    5 usages
    @GET("top-headlines")
    Call<mainNews> getNews(@Query("country") String country, @Query("category") String category, @Query("apiKey") String apiKey);
}
```

THANK YOU