Exercise 11 - Web Page display

Objective

Develop an android application to display a static web page with contents that uses all formatting HTML tags. Also should load the web page from the specified URL.

Algorithm

1. Initialize the Project:
   - Open Android Studio and create a new Android Project.

2. Design UI:
   - Design the main activity layout with a WebView to display the web page.

3. Load HTML Content:
   - Load static HTML content with various formatting tags (e.g., `<p>`, `<b>`, `<i>`, etc.) into the WebView.

4. Load Web Page from URL:
   - Implement the functionality to load a web page from a specified URL into the WebView.

5. Handle WebView Settings:
   - Configure WebView settings to enable JavaScript, if required, and allow content rendering.

Features used

Main Features:
- Use of WebView to display HTML content.
- Inclusion of static HTML content with various formatting tags.
- Implementation of loading a web page from a specified URL.

- Configuration of WebView settings for proper content rendering.

Source Code

activity_main.xml

```
<?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="match_parent"
android:padding="10dp"
tools:context=".MainActivity">
<LinearLayout
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical">
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal">
<TextView
android:id="@+id/textView"
android:layout_width="60dp"
android:layout_height="wrap_content"
android:paddingBottom="10dp"
android:paddingLeft="15dp"
android:textStyle="bold"
android:text="URL:" />
<EditText
android:id="@+id/url"
android:layout_width="237dp"
android:layout_height="wrap_content"
android:layout_weight="1"
android:ems="10"
android:inputType="text" />
<Button
android:id="@+id/load"
android:layout_width="wrap_content"
```

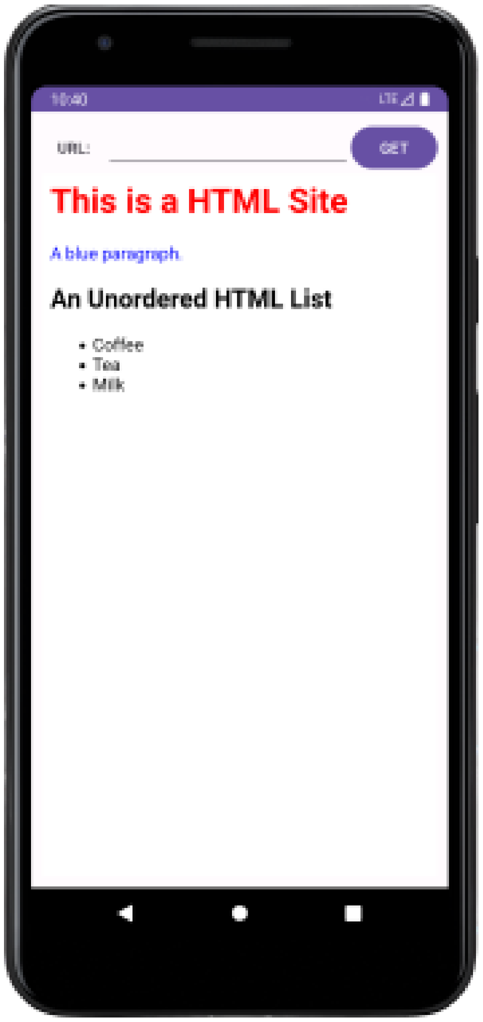
```
android:layout_height="wrap_content"
android:layout_weight="1"
android:text="GET" />
</LinearLayout>
<WebView
android:id="@+id/webView"
android:layout_width="match_parent"
android:layout_height="match_parent">
</WebView>
</LinearLayout>
</LinearLayout>
```

MainActivity.java:

```
package com.example.hybridapp;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.TargetApi;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.webkit.WebResourceError; import
android.webkit.WebResourceRequest; import android.webkit.WebSettings;
import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
private WebView webView;
private EditText url;
private Button getButton;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
webView = findViewById(R.id.webView);
url = findViewById(R.id.url);
getButton = findViewById(R.id.load);
webView.getSettings().setJavaScriptEnabled(true);
// Load static HTML content
String staticHtml = "<html>\n" +
"<body>\n" +
"\n" +
"<h1 style=\"color:red; font-family:sans-serif\">This is a HTML Site</h1>\n"
+
"\n" +
"<p style=\"color:blue;\">A blue paragraph.</p>\n" +
"\n" +
"<h2>An Unordered HTML List</h2>\n" +
"\n" +
"<ul>\n" +
" <li>Coffee</li>\n" +
" <li>Tea</li>\n" +
" <li>Milk</li>\n" +
"</ul>\n" +
"\n" +
"</body>\n" +
"</html>";
webView.loadData(staticHtml, "text/html", "UTF-8");
webView.setWebViewClient(new WebViewClient()
{
@Override
public boolean shouldOverrideUrlLoading(WebView view, String url) {
//view.loadUrl(url);
System.out.println("hello");
return false;
}
});
getButton.setOnClickListener(new View.OnClickListener() { @Override
public void onClick(View v) {
webView.loadUrl("https://" + url.getText().toString()); }
});
}
}
```

Output Screenshots

Default site:



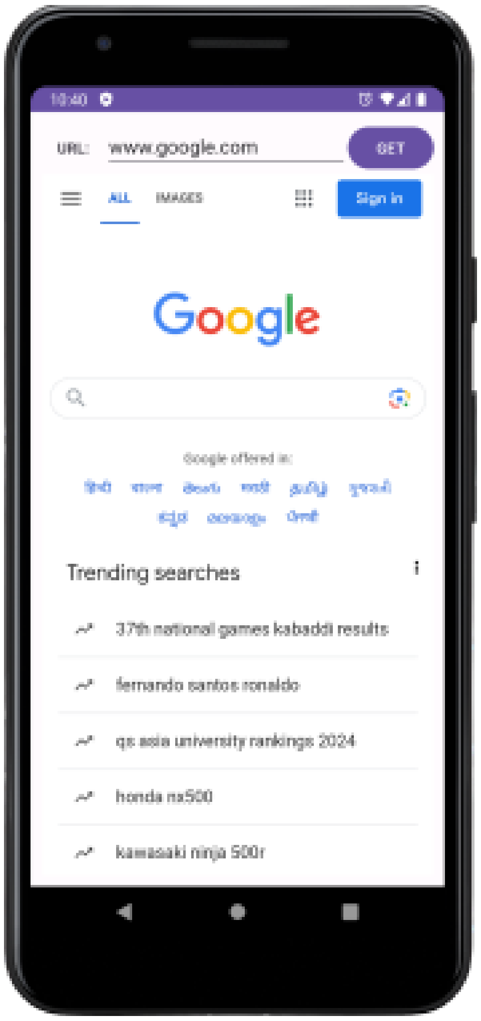
This is a HTML Site

A blue paragraph.

An Unordered HTML List

- Coffee
- Tea
- Milk

Specified URL:


URL: www.google.com

Trending searches

- 37th national games kabaddi results
- fernando santos ronaldo
- qs asia university rankings 2024
- honda nx500
- kawasaki ninja 500r

Result

Thus a WebView application was implemented

Best Practices

1. Followed proper naming convention and used camel case for variable names.
2. Meaningful comments are included
3. User-friendly navigation
4. Providing different fonts to show separation and emphasis for titles.
5. Colors are used with valid contrast for readability
6. Usage of Data Binding.

Learning outcomes

- I learned how to insert WebView into android app.
- I learned how to include a webpage using static HTML code.
- I learned how to display a webpage in android app.
- Implemented application for loading website using specified URL.