WEB APPLICATION

AIM & ALGORITHM

AIM :

Design a android web application program to create a Web-View to display web content

ALGORITHM:

Step 1: Create a new project in Android Studio. Go to File -□New Project and fill all required details to create a new project.

Step 2: Create the XML layout file with a WebView component that will be used to display the web content.

Step 3: In the Java file, initialize the WebView component and configure its settings such as enabling JavaScript and setting a WebViewClient.

Step 4: Add the code to res/layout/activity_main.xml.

Step 5: Use the WebView's loadUrl method to load a specific URL into the WebView

Step 6: Add the Code to src/MainActivity.java

Step 7: Override the onBackPressed method to handle the navigation within the WebView.

Step 8: Add the code to androidManifest.xml

ACTIVITY_MAIN.XML

```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:orientation="vertical">
```

```xml
    <!-- Navigation Bar -->
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:padding="8dp"
        android:background="@android:color/darker_gray">

        <EditText
            android:id="@+id/urlInput"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:hint="Enter URL"
            android:inputType="textUri"
            android:text="https://www.example.com" />

        <Button
            android:id="@+id/goButton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Go" />

        <Button
            android:id="@+id/backButton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Back" />

        <Button
            android:id="@+id/forwardButton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Forward" />

    </LinearLayout>

    <!-- WebView -->
    <WebView
        android:id="@+id/webView"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

</LinearLayout>
```

MAINACTIVITY.JAVA

```java
package com.example.studentwebapp;

import android.os.Bundle;
import android.view.View;
import android.webkit.WebSettings;
import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.widget.Button;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private WebView webView;
    private EditText urlInput;
    private Button goButton, backButton, forwardButton;

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

        // Initialize UI components
        webView = findViewById(R.id.webView);
        urlInput = findViewById(R.id.urlInput);
        goButton = findViewById(R.id.goButton);
        backButton = findViewById(R.id.backButton);
        forwardButton = findViewById(R.id.forwardButton);

        // Configure WebView settings
        WebSettings webSettings = webView.getSettings();
        webSettings.setJavaScriptEnabled(true); // Enable JavaScript for
interactive websites
        webSettings.setBuiltInZoomControls(true); // Enable zoom controls
        webSettings.setDisplayZoomControls(false); // Hide zoom buttons

        // Set WebViewClient to handle page navigation within the WebView
        webView.setWebViewClient(new WebViewClient());

        // Load initial URL
        webView.loadUrl(urlInput.getText().toString());

        // Go button click listener
        goButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```java
                String url = urlInput.getText().toString();
                if (!url.startsWith("http://") && !url.startsWith("https://")) {
                    url = "https://" + url;
                }
                webView.loadUrl(url);
            }
        });

        // Back button click listener
        backButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (webView.canGoBack()) {
                    webView.goBack();
                }
            }
        });

        // Forward button click listener
        forwardButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (webView.canGoForward()) {
                    webView.goForward();
                }
            }
        });
    }

    @Override
    public void onBackPressed() {
        if (webView.canGoBack()) {
            webView.goBack();
        } else {
            super.onBackPressed();
        }
    }
}
```

ANDROIDMAINFEST.XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.studentwebapp">

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

```xml
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.AppCompat.Light.DarkActionBar">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

OUTPUT

Example Domain

This domain is for use in illustrative examples in documents. You may use this domain in literature without prior coordination or asking for permission.

More information...