**Ex.No : 12**
**Date :**

# MINI PROJECTMOBILE APPLICATION THAT CREATES WEATHER APP

## OBJECTIVE:

To develop an Android Application that creates Blood Bank

## PROCEDURE

Step 1: Create an android project using android studio.
Step 2: Design
Open the actual Project folder (app) in Android Studio IDE.
Click res directory -> layout -> activity_main.xml -> Design.
Insert the GUI components to Design view in activity_main.xml.
Enter the id for each component.
Step 3: Open AndroidManifest.xml and add the code to provide access permission.
Step 4: Open res/values/styles.xml and add the code.
Step 5: Open Java ->MainActivity.java and add the code.
Step 6: Run the project and the output will be displayed in Emulator.

## PROGRAM:

### Activity main.xml :

```
<?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"
    android:padding="16dp">

    <TextView
        android:id="@+id/tvLocation"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Location"
        android:textSize="24sp" />

    <TextView
        android:id="@+id/tvTemperature"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/tvLocation"
        android:text="Temperature"
        android:textSize="32sp" />

    <TextView
        android:id="@+id/tvWeatherCondition"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

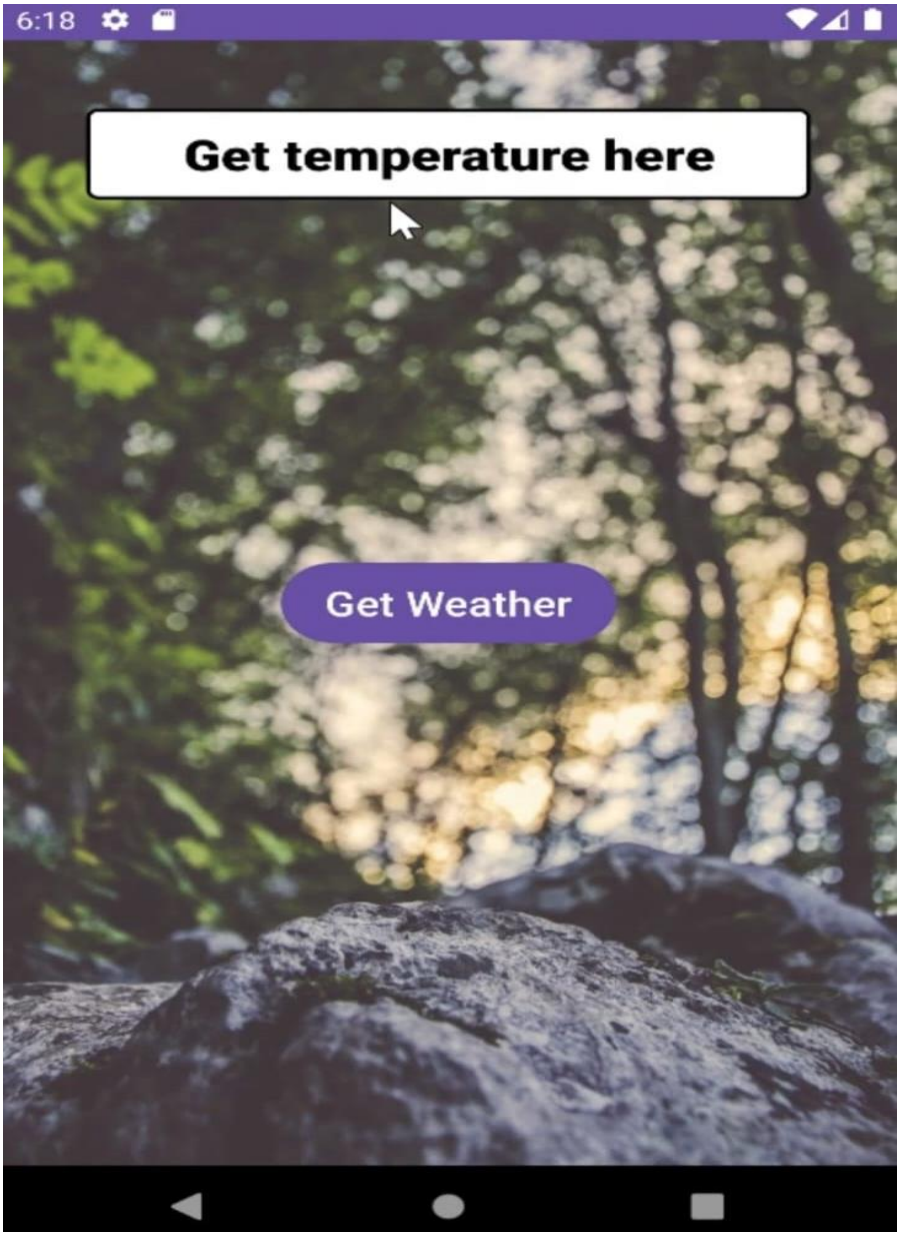
```
        android:layout_below="@id/tvTemperature"
        android:text="Condition"
</RelativeLayout>
```

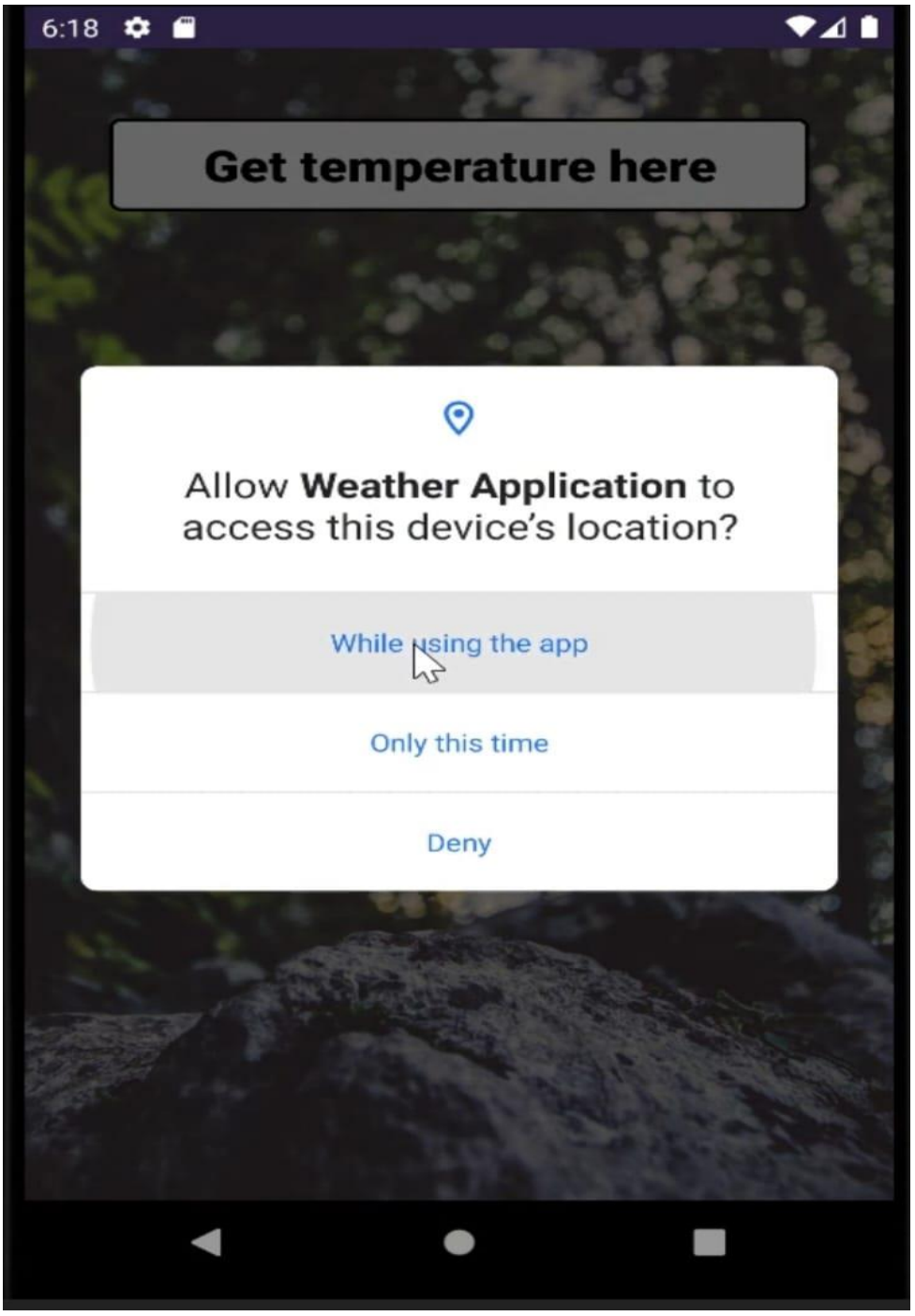
**Main Activity.java :**

```
import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;
import retrofit2.Retrofit;
import retrofit2.converter.gson.GsonConverterFactory;

public class MainActivity extends AppCompatActivity {

    private TextView tvLocation, tvTemperature, tvWeatherCondition;
    private final String API_KEY = "YOUR_API_KEY";
    private final String BASE_URL = "https://api.openweathermap.org/data/2.5/";

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

        tvLocation = findViewById(R.id.tvLocation);
        tvTemperature = findViewById(R.id.tvTemperature);
        tvWeatherCondition = findViewById(R.id.tvWeatherCondition);

        getWeatherData("New York");
    }

    private void getWeatherData(String location) {
        Retrofit retrofit = new Retrofit.Builder()
                .baseUrl(BASE_URL)
                .addConverterFactory(GsonConverterFactory.create())
                .build();

        WeatherService service = retrofit.create(WeatherService.class);
        Call<WeatherResponse> call = service.getCurrentWeather(location, API_KEY, "metric");

        call.enqueue(new Callback<WeatherResponse>() {
            @Override
            public void onResponse(Call<WeatherResponse> call, Response<WeatherResponse> response) {
                if (response.isSuccessful()) {
                    WeatherResponse weatherResponse = response.body();
                    if (weatherResponse != null) {
                        tvLocation.setText(location);
                        tvTemperature.setText(weatherResponse.main.temp + "°C");
                        tvWeatherCondition.setText(weatherResponse.weather[0].main);
                    }
                }
            }

            @Override
            public void onFailure(Call<WeatherResponse> call, Throwable t) {
                tvLocation.setText("Error");
```

```
        }
      });
  }
}
```

**OUTPUT :**




6:18
Get temperature here
Allow Weather Application to access this device's location?
While using the app
Only this time
Deny

**CONCLUSION:**

Thus a android application were created and tested successfully.