

Practical No. 04

Exercise - Create android application to demonstrate notifications and alert box

activity_main.xml

```
<?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"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="CLICK ON NOTIFY BUTTON TO SEND NOTIFICATION"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintHorizontal_bias="0.496"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.294"
        android:textAlignment="center"/>
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="316dp"
        android:text="Notify"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_notification_view.xml

```
<?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"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent">
<TextView
    android:id="@+id/textView2"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
    android:text="Detailed Message"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.24"
    tools:ignore="MissingConstraints"
/>
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="8dp"
    android:layout_marginBottom="8dp"
```

```

        android:textAlignment="center"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView2"
        app:layout_constraintVertical_bias="0.217"></TextView>
</androidx.constraintlayout.widget.ConstraintLayout>

```

NotificationView.java

```

package com.example.notificationdemo;
import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
public class NotificationView extends AppCompatActivity {
    TextView textView;
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_notification_view);
        textView = findViewById(R.id.text_view);
        String message = getIntent().getStringExtra("message");
        textView.setText(message);
    }
}

```

MainActivity.java

```

package com.example.notificationdemo;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.NotificationCompat;
import static androidx.core.app.NotificationCompat.DEFAULT_SOUND;
import static androidx.core.app.NotificationCompat.DEFAULT_VIBRATE;
import android.app.NotificationChannel;
import android.os.Build;
import android.widget.Button;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
    Button button;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button = findViewById(R.id.button);
        button.setOnClickListener(v -> addNotification());
    }

    private void addNotification() {
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O) {
            String channelId = "1"; // Use the same ID as in your notification
            CharSequence channelName = "My Notification Channel";
            int importance = NotificationManager.IMPORTANCE_DEFAULT;
            NotificationChannel channel = new NotificationChannel(channelId,
channelName, importance);

            NotificationManager notificationManager =
getSystemService(NotificationManager.class);
            notificationManager.createNotificationChannel(channel);

```

```

    }
    Intent notificationIntent = new Intent(this, NotificationView.class);
    notificationIntent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP
| Intent.FLAG_ACTIVITY_NEW_TASK | Intent.FLAG_ACTIVITY_CLEAR_TASK);

    notificationIntent.putExtra("message", "This is a notification" + "content.Your
account has been credited with XXXX amount. Enjoy!");

    PendingIntent pendingIntent = PendingIntent.getActivity(this, 0,
notificationIntent, PendingIntent.FLAG_IMMUTABLE | PendingIntent.FLAG_UPDATE_CURRENT);

    NotificationCompat.Builder builder = new
NotificationCompat.Builder(this, "1").setSmallIcon(R.drawable.baseline_message_24)
        .setContentTitle("Archana")
        .setContentText("Confidential notification from xyz")
        .setAutoCancel(true)
        .setContentIntent(pendingIntent)
        .setDefaults(DEFAULT_SOUND | DEFAULT_VIBRATE)
        .setCategory(NotificationCompat.CATEGORY_MESSAGE)
        .setPriority(NotificationCompat.PRIORITY_MAX);

    NotificationManager manager =
(NotificationManager) getSystemService(Context.NOTIFICATION_SERVICE);
    manager.notify(1, builder.build());
}
}

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
    <uses-permission android:name="android.permission.POST_NOTIFICATIONS" />

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

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.NotificationDemo"
        tools:targetApi="31">
        <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>
        <activity android:name=".NotificationView"
            android:label="NotificationView"
            android:parentActivityName=".MainActivity"
            android:launchMode="singleTask"
            android:taskAffinity=""
            android:excludeFromRecents="true">

            <meta-data
                android:name="android.support.PARENT_ACTIVITY"
                android:value=".MainActivity"/>
        </activity>
    </application>

</manifest>

```

Output:-

