

Date:

Aim:

To develop an Android Application that makes use of Notification Manager.

Procedure:**Creating a New project:**

Open Android Studio and then click on **File -> New -> New project**.

Then type the Application name as **“exno5”** and click Next.

Then **select the Minimum SDK** as shown below and click Next.

Then **select the Empty Activity** and click Next.

Finally click **Finish**.

It will take some time to build and load the project.

Designing layout for the Android Application:

Click on **app -> res -> layout -> activity_main.xml**.

Now click on Text.

Java Coding for the Android Application:

Click on **app -> java -> com.example.exno5 -> MainActivity**.

Code for Activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/andro
id" 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:orientation="vertical"
    android:gravity="center"
    "
    tools:context=".MainAc
tivity">

    <Button
        android:id="@+id/btnSim
pleNotification"
        android:layout_width="
wrap_content"
        android:layout_height="
wrap_content"
        android:text="Simple
Notification" />
```

```

<Button
    android:id="@+id/btn
NotificationIcon"
    android:layout_width
    ="wrap_content"
    android:layout_height
    ="wrap_content"
    android:text="Notification
    With Icon" />

<Button
    android:id="@+id/btnNoti
ficationImage"
    android:layout_width="
wrap_content"
    android:layout_height="
wrap_content"
    android:text="Notificati
on With Image" />

<Button
    android:id="@+id/btnNotificationWithG
roupConvo"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Notification With Group
    Conversation" />

<Button
    android:id="@+id/btnNotific
ationSemantic"
    android:layout_width="wra
p_content"
    android:layout_height="wr
ap_content"
    android:text="Notification
    Semantic Action" />

</LinearLayout>

```

Code for MainActivity.java:

```
packagecom.example.exno5;
```

```

import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.net.Uri;
import androidx.core.app.NotificationCompat;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.Person;
import androidx.core.graphics.drawable.IconCompat;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast; import java.util.Date;
public class MainActivity extends AppCompatActivity implements View.OnClickListener {

```

```

    NotificationManager
    notificationManager;
    NotificationCompat.B
    uilder builder;
    NotificationChannel
    channel;

```

```

    CharSequence charSequence =

```

```

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

```

```

    Button btnSimpleNotification =
        findViewById(R.id.btnSimpleNotification); Button
    btnNotificationIcon =
        findViewById(R.id.btnNotificationIcon); Button
    btnNotificationImage =
        findViewById(R.id.btnNotificationImage);
    Button btnNotificationWithGroupConvo =
        findViewById(R.id.btnNotificationWithGroupConvo); Button
    btnNotificationSemantic = findViewById(R.id.btnNotificationSemantic);

```

```

    charSequence = btnNotificationIcon.getText();

```

```

    btnSimpleNotification.setOnClickListener(this);
    btnNotificationIcon.setOnClickListener(this);

```

```

btnNotificationImage.setOnClickListener(this);
btnNotificationWithGroupConvo.setOnClickListener(this);
btnNotificationSemantic.setOnClickListener(this);

notificationManager = (NotificationManager)
getSystemService(Context.NOTIFICATION_SERVICE); CharSequence name = "My
Notification";
String description = "yadda yadda";
int importance = NotificationManager.IMPORTANCE_DEFAULT;

channel = new NotificationChannel("1", name,
importance); channel.setDescription(description);

builder = new NotificationCompat.Builder(MainActivity.this, channel.getId())
    .setSmallIcon(R.mipmap.ic_launcher);

notificationManager.createNotificationChannel(channel);
}

```

```

@Override
public void onClick(View v) {

    switch (v.getId()) {
        case
            R.id.btnSimpleNotification:
                simpleNotification();
                break;
        case
            R.id.btnNotificationIcon:
                notificationWithIcon(); break;
        case
            R.id.btnNotificationImage:
                notificationWithImage();
                break;

        case R.id.btnNotificationWithGroupConvo:
            notificationWithGroupConvo();
            break;

        case
            R.id.btnNotification
            Semantic:
                notificationSema

```

```

        ntic();
        break;
    }
}
private void simpleNotification() {
    Person jd = new Person.Builder().setName("JournalDev ") .setImportant(true) .build();

    new NotificationCompat.MessagingStyle(jd)
        .addMessage("Check me out", new Date().getTime(), jd) .setBuilder(builder);

    notificationManager.notify(1, builder.build());
}
private void
notificationWithIcon
() { Person
    anupam = new
    Person.Builder()
        .setName("Anupam")
        .setIcon(IconCompat.createWithResource(this, R.drawable.index))
        .setImportant(true) .build();
    new NotificationCompat.MessagingStyle(anupam)
        .addMessage("Check out my latest article!", new Date().getTime(), anupam)
        .setBuilder(builder);
    notificationManager.notify(2, builder.build());
}
private void
notificationWithI
mage() { Person
    bot = new
    Person.Builder(
    )
        .setName("Bot") .setImportant(true)
        .setBot(true) .build();

    Uri uri =
    Uri.parse("android.resource://com.journaldev.androidpnotifications/drawable/"+R.drawa
    ble.bg);

    NotificationCompat.MessagingStyle.Message                message
                                                                =
                                                                new
    NotificationCompat.MessagingStyle.Message("Check out my latest article!", new
    Date().getTime(), bot); message.setData("image/*",uri);

    new NotificationCompat.MessagingStyle(bot)

```

```

        .addMessage(message) .setGroupConversation(true).setBuilder(builder);

notificationManager.notify(3, builder.build());
}
private void notificationWithGroupConvo()
{
    Person jd = new Person.Builder()
        .setName("JournalDev") .build();

    Person anupam = new Person.Builder()
        .setName("Anupam")
        .setIcon(IconCompat.createWithResource(this, R.drawable.samindexple_photo))
        .setImportant(true).build();

    Person bot = new Person.Builder()
        .setName("Bot").setBot(true) .build();

    Uri uri =
    Uri.parse("android.resource://com.journaldev.androidpnotifications/drawable/"+R.drawable.bg);

    NotificationCompat.MessagingStyle.Message message
        =
        new
    NotificationCompat.MessagingStyle.Message("", new Date().getTime(), bot);
    message.setData("image/*",uri);
    new NotificationCompat.MessagingStyle(bot)
        .addMessage("Hi. How are you?", new Date().getTime(), anupam)
        .addMessage(message)
        .addMessage("Does this image look good?", new Date().getTime(), bot)
        .addMessage("Looks good!", new Date().getTime(), jd)
        .setGroupConversation(true)
        .setConversationTitle("Sample Conversation")
        .setBuilder(builder);

notificationManager.n

otify(4, builder.build());

}
private void notificationSemantic()
{
    Person jd = new Person.Builder()
        .setName("JournalDev").build();

```

```

Person anupam = new Person.Builder()
    .setName("Anupam")
    .setIcon(IconCompat.createWithResource(this, R.drawable.index))
    .setImportant(true)
    .build();

```

```

Person bot = new Person.Builder()
    .setName("Bot")
    .setBot(true)
    .build();

```

```

Uri uri =

```

```

Uri.parse("android.resource://com.journaldev.androidpnotifications/drawable/"+R.drawa

```

```

ble.bg); Intent intent = new Intent(this, MainActivity.class);
intent.putExtra("hi", "Notifications were read");
PendingIntent pendingIntent = PendingIntent.getActivity(this, 0, intent, 0);

```

```

NotificationCompat.MessagingStyle.Message                message
                                                         =
                                                         new

```

```

NotificationCompat.MessagingStyle.Message("", new Date().getTime(), bot);
message.setData("image/*", uri);

```

```

NotificationCompat.Action
    replyAction = new
    NotificationCompat.
    Action.Builder(
        R.drawable.bg, "MARK READ", pendingIntent)
        .setSemanticAction(NotificationCompat.Action.SEMANTIC_ACTION_MARK_AS_READ)
        .build();

```

```

NotificationCompat.Builder
    separateBuilder = builder;
    separateBuilder.addAction(replyA
    ction);

```

```

new NotificationCompat.MessagingStyle(bot)
    .addMessage("Hi. How are you?", new Date().getTime(), anupam)
    .addMessage(message)
    .addMessage("Does this image look good?", new Date().getTime(), bot)
    .addMessage("Looks good!", new Date().getTime(), jd)
    .setGroupConversation(true)
    .setConversationTitle("Sample Conversation")

```

```

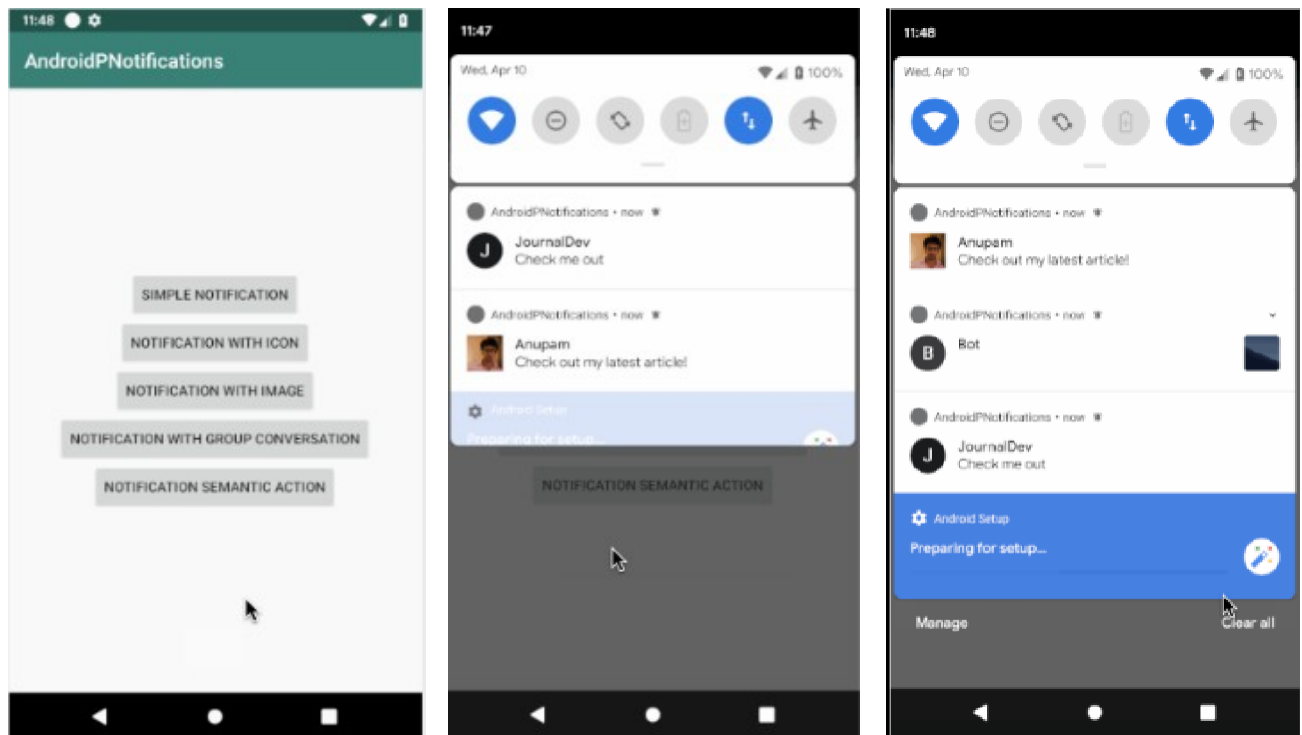
        .setBuilder(separateBuilder);

        notificationManager.notify(5, separateBuilder.build());
    }
    @Override
    protected void onResume() {
        super.onResume();

        if(getIntent()!=null && getIntent().getExtras()!=null)
        {
            String value = getIntent().getStringExtra("hi");
            Toast.makeText(getApplicationContext(),value,Toast.LENGTH_LONG).show();
        }
    }
}

```

Output:



Result: Thus Android Application that makes use of notification manager is developed and executed successfully.