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Experiment No : 6

Aim : To create an app to push notification using Android Studio.

Theory :

- **Push Notification**

⇒ Push notifications are a communication channel used by mobile applications to interact with users.

- These notifications are sent by the server to the mobile device and appear in the notification bar, providing users with timely and relavant information.
- Push notification serve as a tool for apps to engage users even when the app is not actively in use.

- **Components of Push Notifications :**

i) **Server**

⇒ The server is responsible for sending push notifications to intended devices.

- It holds the logic to determine when and what notifications should be sent.
- Servers often use cloud services, such as Firebase Cloud Messaging (FCM) or Google Cloud Messaging (GCM), to send push notifications.

2) Client :

⇒ The mobile app needs to register with a push notification service to receive notifications.

- It handles the reception and display of push notifications.
- The app may also include logic to determine the behaviour when a notification is received, such as opening a specific screen or performing a particular action.

3) Push Notification Service :

⇒ This is a platform specific service that facilitates the delivery of notifications from the server to the mobile device.

- Examples include FCM for android and Apple Push Notification Service (APNs) for ios.
- These services ensure that notifications reach the intended devices efficiently.

- Conclusion :

⇒ The program to create an app to push notifications in android was implement successfully.

Pass (A)

Code:

(activity_main.xml)

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingLeft="16dp"
    android:paddingTop="16dp"
    android:paddingRight="16dp"
    android:paddingBottom="16dp"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/alertButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show Alert"
        android:layout_centerInParent="true"
        android:onClick="showAlert" />
</RelativeLayout>
```

(MainActivity.java)

```
package com.example.mcc_exp6;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

        Button alertButton = findViewById(R.id.alertButton);
        alertButton.setOnClickListener(new View.OnClickListener() {
```

```
            @Override
            public void onClick(View view) {
                showAlert();
            }
        });
    }

    private void showAlert() {
        AlertDialog.Builder builder = new AlertDialog.Builder(this);
        builder.setTitle("Alert")
                .setMessage("You've received a message!")
                .setPositiveButton("OK", null);

        AlertDialog alertDialog = builder.create();
        alertDialog.show();
    }
}
```

Output: