Task1:

package com.example.myapplication;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 int x = 0;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 }  
  
 public void ClickMe(View view) {  
  
 Thread t = new Thread(new Runnable() {  
 @Override  
 public void run() {  
 for(int i = 0; i<10; i++)  
 {  
 x=x+1;  
 }  
 }  
 });  
 t.start();  
  
 TextView view1 = findViewById(R.id.*text*);  
 view1.setText("Value of x: " +x);  
 }  
}

output:-

0

10

Error (Wrong way)

package com.example.myapplication;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 int x = 0;  
  
 TextView view1;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 public void ClickMe(View view) {  
 view1 = findViewById(R.id.*text*);  
 Thread t = new Thread(new Runnable() {  
 @Override  
 public void run() {  
 for(int i = 0; i<10; i++)  
 {  
 x=x+1;  
 }  
 view1.setText("Value of x: " +x);  
 }  
 });  
 t.start();  
  
 *// TextView view1 = findViewById(R.id.text);* }  
}

Task2:

package com.example.myapplication;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 int x = 0;  
  
 TextView view1;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 public void ClickMe(View view) {  
 view1 = findViewById(R.id.*text*);  
 Thread t = new Thread(new Runnable() {  
 @Override  
 public void run() {  
 for(int i = 0; i<10; i++)  
 {  
 x=x+1;  
 }  
 view1.post(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 });  
 }  
 });  
 t.start();  
  
 *// TextView view1 = findViewById(R.id.text);* }  
}

output:-

10

20

30

Task3:-

package com.example.myapplication;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 int x = 0;  
  
 TextView view1;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 public void ClickMe(View view) {  
 view1 = findViewById(R.id.*text*);  
 Thread t = new Thread(new Runnable() {  
 @Override  
 public void run() {  
 for(int i = 0; i<10; i++)  
 {  
 x=x+1;  
 }  
 */\* view1.post(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 }); \*/* runOnUiThread(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 });  
 }  
 });  
 t.start();  
  
 *// TextView view1 = findViewById(R.id.text);* }  
}

Task4:-

package com.example.myapplication;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.os.Handler;  
import android.view.View;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 int x = 0;  
  
 TextView view1;  
 Handler handler;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 view1 = findViewById(R.id.*text*);  
 handler = new Handler();  
 }  
  
 public void ClickMe(View view) {  
  
 Thread t = new Thread(new Runnable() {  
 @Override  
 public void run() {  
 for(int i = 0; i<10; i++)  
 {  
 x=x+1;  
 }  
 */\* view1.post(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 }); \*/  
 /\*runOnUiThread(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 });\*/* handler.post(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 });  
 }  
 });  
 t.start();  
  
 *// TextView view1 = findViewById(R.id.text);* }  
}

Task5:

package com.example.myapplication;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.os.Handler;  
import android.view.View;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 int x = 0;  
  
 TextView view1;  
 Handler handler;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 view1 = findViewById(R.id.*text*);  
 handler = new Handler();  
 }  
  
 public void ClickMe(View view) {  
  
 Thread t = new Thread(new Runnable() {  
 @Override  
 public void run() {  
 for(int i = 0; i<10; i++)  
 {  
 x=x+1;  
 }  
 */\* view1.post(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 }); \*/  
 /\*runOnUiThread(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 });\*/* handler.post(new Runnable() {  
 @Override  
 public void run() {  
 view1.setText("Value of x : " + x);  
 }  
 });  
 try {  
 Thread.*sleep*(200);  
 } catch (InterruptedException e) {  
 e.printStackTrace();  
 }  
 }  
 });  
 t.start();  
  
 *// TextView view1 = findViewById(R.id.text);* }  
}

Task6:-

Mainapplicatiion.java:-

Notification pr click kr k application open ho

package com.example.myapplication;  
  
import androidx.annotation.RequiresApi;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.app.NotificationCompat;  
  
  
import android.app.Notification;  
import android.app.NotificationChannel;  
import android.app.NotificationManager;  
import android.app.PendingIntent;  
import android.content.Intent;  
import android.os.Build;  
import android.os.Bundle;  
import android.view.View;  
  
public class MainActivity extends AppCompatActivity {  
String CHANNEL\_ID = "ANDROID\_CHANNEL";  
String CHANNEL\_NAME = "ANDROID\_CHANNEL";  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 */\*Intent intent = new Intent(this, DownloadService.class);  
 if (Build.VERSION.SDK\_INT >= Build.VERSION\_CODES.O) {  
 startForegroundService(intent);  
 }\*/ // crash kr rai* }  
  
 public void clickMe(View view) {  
 *//Step1 - Create a reference of notification manager through notification servicer* NotificationManager nm = (NotificationManager) getSystemService(*NOTIFICATION\_SERVICE*);  
  
 *// step2.1 - Create an intent to open application* Intent intent = new Intent(this, MainActivity.class);  
 PendingIntent pIntent = PendingIntent.*getActivity*(this,0,intent,0);  
  
  
 *// Step2.2 - Build a notification using notification builder* NotificationCompat.Builder builder = new NotificationCompat.Builder(this, CHANNEL\_ID)  
 .setContentTitle("Test Notification")  
 .setContentText("This is just a test notification, it has no other purpose")  
 *// .setAutoCancel(true)* .setSmallIcon(R.drawable.*notification\_icon\_foreground*)  
 .setContentIntent(pIntent);  
 Notification notification = builder.build();  
  
  
 *//step3 - Create a stable notification channel* if (android.os.Build.VERSION.*SDK\_INT* >= android.os.Build.VERSION\_CODES.*O*) {  
 NotificationChannel notificationChannel =  
 new NotificationChannel(CHANNEL\_ID, CHANNEL\_NAME, NotificationManager.*IMPORTANCE\_DEFAULT*);  
 nm.createNotificationChannel(notificationChannel);  
 }  
 *//step 4 -Notify the user, using the notification manager* nm.notify(1234, notification);  
 }  
}

Task7:-

package com.example.myapplication;  
  
import androidx.annotation.RequiresApi;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.app.NotificationCompat;  
  
  
import android.app.Notification;  
import android.app.NotificationChannel;  
import android.app.NotificationManager;  
import android.app.PendingIntent;  
import android.content.Intent;  
import android.os.Build;  
import android.os.Bundle;  
import android.view.View;  
  
public class MainActivity extends AppCompatActivity {  
String CHANNEL\_ID = "ANDROID\_CHANNEL";  
String CHANNEL\_NAME = "ANDROID\_CHANNEL";  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 */\*Intent intent = new Intent(this, DownloadService.class);  
 if (Build.VERSION.SDK\_INT >= Build.VERSION\_CODES.O) {  
 startForegroundService(intent);  
 }\*/ // crash kr rai* }  
  
 public void clickMe(View view) {  
 *//Step1 - Create a reference of notification manager through notification servicer* NotificationManager nm = (NotificationManager) getSystemService(*NOTIFICATION\_SERVICE*);  
  
 *// step2.1 - Create an intent to open application* Intent intent = new Intent(this, MainActivity.class);  
 PendingIntent pIntent = PendingIntent.*getActivity*(this,0,intent,0);  
*//Step2.3-Creating action* NotificationCompat.Action action =  
 new NotificationCompat.Action(R.drawable.*notification\_icon\_foreground*, "OPEN",null);  
  
 *// Step2.2 - Build a notification using notification builder* NotificationCompat.Builder builder = new NotificationCompat.Builder(this, CHANNEL\_ID)  
 .setContentTitle("Test Notification")  
 .setContentText("This is just a test notification, it has no other purpose")  
 *// .setAutoCancel(true)* .setSmallIcon(R.drawable.*notification\_icon\_foreground*)  
 .setContentIntent(pIntent)  
 .addAction(action);  
 Notification notification = builder.build();  
  
  
 *//step3 - Create a stable notification channel* if (android.os.Build.VERSION.*SDK\_INT* >= android.os.Build.VERSION\_CODES.*O*) {  
 NotificationChannel notificationChannel =  
 new NotificationChannel(CHANNEL\_ID, CHANNEL\_NAME, NotificationManager.*IMPORTANCE\_DEFAULT*);  
 nm.createNotificationChannel(notificationChannel);  
 }  
 *//step 4 -Notify the user, using the notification manager* nm.notify(1234, notification);  
 }  
}