EX:NO:09 ALARM REG.NO:210701290

DATE:12/04/2024

AIM:-

Write a mobile application to set the alarm using android Alarm Manager class.

PROCEDURE:-

Step 1: Create a new Android Project.

Step 2: Design the user Interface.

Step 3: Implement alarm setting functionality.

Step 4: Handle alarm receiver.

Step 5: Implement snooze functionality.

Step 6: Test the application.

Step 7: Handle edge cases.

Step 8: Optimize and refine.

PRGRAM CODE:-

AndroidManifest.xml:

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.alarmclock">
    <uses-permission
android:name="com.android.alarm.permission.SET_ALARM" />
    <application
        android:allowBackup="true"
```

```
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <receiver android:name=".AlarmReceiver" />
    </application>
</manifest>
```

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"
    tools:context=".MainActivity">
    <Button
        android:id="@+id/buttonSetAlarm"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Set Alarm"
        android:layout_centerInParent="true"
        android:onClick="setAlarm" />
</RelativeLayout>
```

MainActivity.kt:

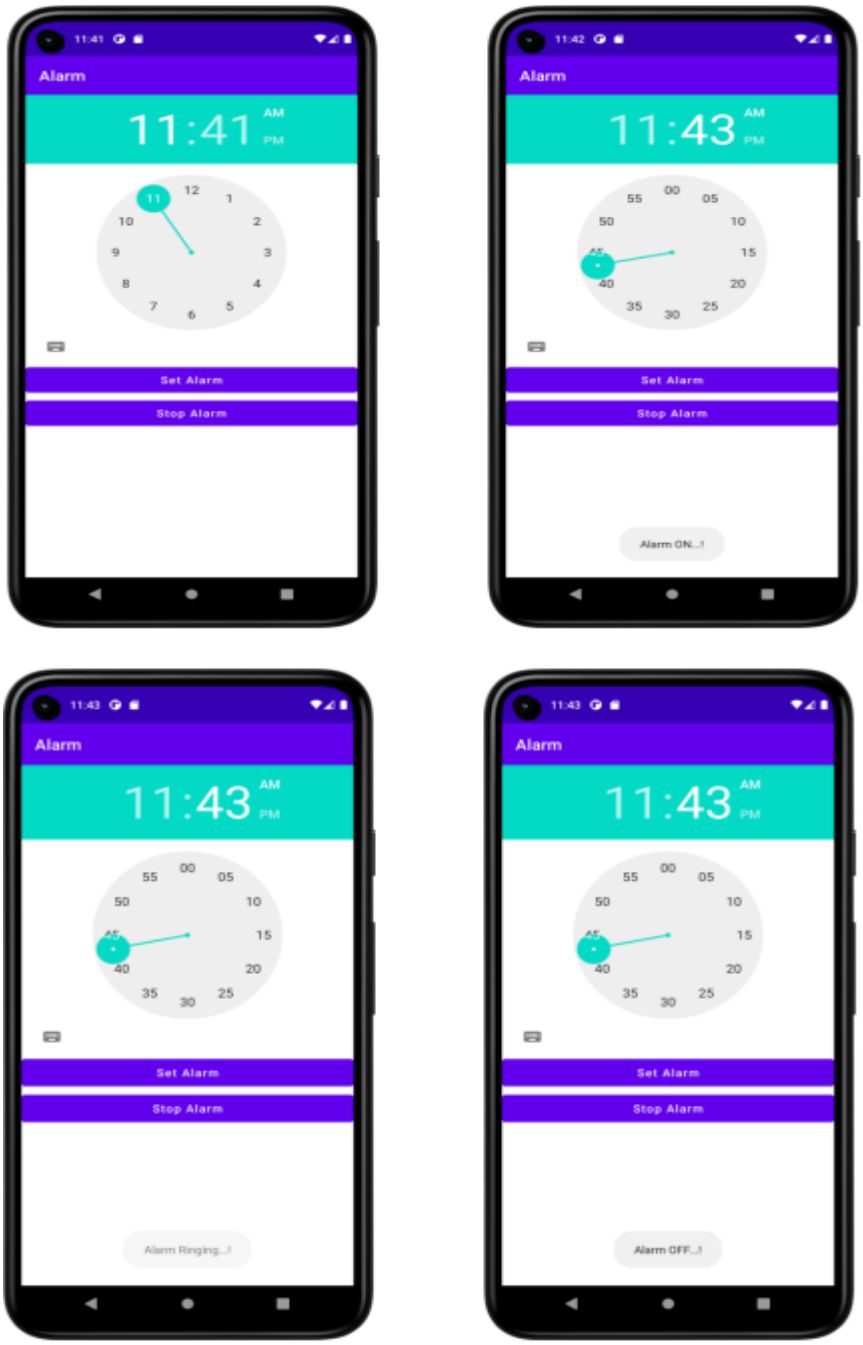
```
package com.example.alarmclock
import android.app.AlarmManager
import android.app.PendingIntent
import android.content.Context
import android.content.Intent
import android.os.Bundle
import android.widget.Toast
import androidx.appcompat.app.AppCompatActivity
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)}
    fun setAlarm(view: android.view.View) {
        val alarmManager = getSystemService(Context.ALARM_SERVICE) as
AlarmManager
        val alarmIntent = Intent(this, AlarmReceiver::class.java).let { intent ->
```

```
        PendingIntent.getBroadcast(this, 0, intent, 0)}
        val timeInterval = 10 * 60 * 1000 // 10 minutes in milliseconds
        alarmManager.setRepeating(
            AlarmManager.RTC_WAKEUP,
            System.currentTimeMillis() + timeInterval,
            timeInterval.toLong(),
            alarmIntent
        )
        Toast.makeText(this, "Alarm set successfully",
Toast.LENGTH_SHORT).show()
    }}
```

AlarmReceiver.kt:

```
package com.example.alarmclock
import android.content.BroadcastReceiver
import android.content.Context
import android.content.Intent
import android.widget.Toast
class AlarmReceiver : BroadcastReceiver() {
    override fun onReceive(context: Context, intent: Intent) {
        Toast.makeText(context, "Alarm! Snooze for 10 minutes",
Toast.LENGTH_SHORT).show()
    }
}
```

OUTPUT:-



RESULT:-

Thus to write a mobile application to set the alarm using android Alarm Manager class is implemented and executed successfully.