Alarm Clock generation Using Java in Android Studio

Main Activity:-

```java
package com.example.alarm;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.app.AlarmManager;
import android.app.PendingIntent;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;
import java.util.Date;

public class MainActivity extends AppCompatActivity {
    static final int ALARM_CODE=100;
    TextView currenttime,gtam,gtpm,settim,tvsettim;
    EditText gthour,gtmin;
    String settime1=new String();
    String ampm=new String();
    int tm;
     Integer str1,str2;

    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        currenttime=findViewById(R.id.currenttime);
        gtam=findViewById(R.id.tvam);
        gtpm=findViewById(R.id.tvpm);
        gthour=findViewById(R.id.edittexthour);
        gtmin=findViewById(R.id.edittextmin);
        settim=findViewById(R.id.settime);
        tvsettim=findViewById(R.id.tvsettime);
        AlarmManager alarmManager=(AlarmManager)
getSystemService(ALARM_SERVICE);
        ampm="am";
        Date d=new Date();
        SimpleDateFormat sdf=new SimpleDateFormat("hh:mm a");
        String currentDateTimeString = sdf.format(d);
        currenttime.setText(currentDateTimeString);
        gtam.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
```

```java
                    ampm="am";
            }
        });
        gtpm.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                ampm="pm";
            }
        });
        try {


            tvsettim.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View view) {
                    settime1 =
String.valueOf(gthour.getText())+":"+String.valueOf(gtmin.getText())+"
"+ampm;
                    Toast.makeText(MainActivity.this, " "+settime1,
Toast.LENGTH_SHORT).show();
                    settim.setText(settime1);

tm=Integer.parseInt(String.valueOf(gthour.getText())+String.valueOf(gtmin.get
Text()));
                    Toast.makeText(MainActivity.this, " "+tm,
Toast.LENGTH_SHORT).show();

str1=Integer.parseInt(currentDateTimeString.substring(0,2)+currentDateTimeStr
ing.substring(3,5));

                    Toast.makeText(MainActivity.this, ""+str1,
Toast.LENGTH_SHORT).show();
                    if(tm>str1)
                    {
                        str2=tm-str1;
                        str2=str2*60;
                    }
                    else {
                        str2=str1-tm;
                        str2=str2*60;
                    }
                    long  triggerTime=System.currentTimeMillis()+(str2*1000);
                    Intent ibroadcast =new
Intent(MainActivity.this,Myreceiver.class);
                    PendingIntent
pendingIntent=PendingIntent.getBroadcast(MainActivity.this,ALARM_CODE,ibroadc
ast,PendingIntent.FLAG_UPDATE_CURRENT);

alarmManager.set(AlarmManager.RTC_WAKEUP,triggerTime,pendingIntent);

                }
            });

        }
        catch (Exception e)
        {
            Toast.makeText(this, "exception raised in coversion",
```

```
Toast.LENGTH_SHORT).show();
        }

    }
}
```

My Receiver java fie:-

```java
package com.example.alarm;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.media.MediaPlayer;
import android.provider.Settings;

public class Myreceiver extends BroadcastReceiver {
    MediaPlayer m1;
    @Override
    public void onReceive(Context context, Intent intent) {
        m1=MediaPlayer.create(context, Settings.System.DEFAULT_RINGTONE_URI);
        m1.setLooping(true);
        m1.start();
    }
}
```

xml file:-

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:orientation="vertical"
    android:background="#1B1F37"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:text="Current Time"
        android:textColor="@color/white"
        android:gravity="center"
        android:textSize="30dp"
        android:textAlignment="center"/>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="120dp"
```

```xml
            android:gravity="center">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="100dp"
            android:text="a"
            android:id="@+id/currenttime"
            android:textColor="@color/white"
            android:textAlignment="center"
            android:textSize="50dp"/>
    </LinearLayout>
    <TextView
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:text="Set Time here"
        android:textColor="@color/white"
        android:gravity="center"
        android:textSize="30dp"
        android:textAlignment="center"/>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="200dp"
        android:gravity="center"
        android:orientation="horizontal">
        <EditText
            android:layout_width="100dp"
            android:layout_height="100dp"
            android:hint="00"
            android:textColorHint="@color/white"
            android:textColor="@color/white"
            android:textAlignment="center"
            android:id="@+id/edittexthour"
            android:textSize="50dp"/>
        <TextView
            android:layout_width="30dp"
            android:layout_height="100dp"
            android:text=":"

            android:textColor="@color/white"
            android:textAlignment="center"
            android:gravity="center"
            android:textSize="40dp"/>
        <EditText
            android:layout_width="100dp"
            android:layout_height="100dp"
            android:hint="00"
            android:textColorHint="@color/white"
            android:textAlignment="center"
            android:textColor="@color/white"
            android:id="@+id/edittextmin"
            android:textSize="50dp"/>
        <LinearLayout
            android:layout_width="150dp"
            android:layout_height="match_parent"
            android:gravity="center"
            android:orientation="vertical">
            <TextView
                android:layout_width="match_parent"
```

```xml
                android:layout_height="100dp"
                android:text="AM"
                android:textSize="40dp"
                android:textAlignment="center"
                android:gravity="center"
                android:background="#1A2040"
                android:id="@+id/tvam"
                android:layout_marginBottom="15dp"
                android:textColor="@color/white"/>
            <TextView
                android:layout_width="match_parent"
                android:layout_height="100dp"
                android:text="PM"
                android:textSize="40dp"
                android:gravity="center"
                android:background="#1A2040"
                android:id="@+id/tvpm"
                android:textAlignment="center"
                android:textColor="@color/white"/>
        </LinearLayout>
    </LinearLayout>
    <TextView
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:text="time set to"
        android:id="@+id/tvsettime"
        android:textColor="@color/white"
        android:gravity="center"
        android:textSize="30dp"
        android:textAlignment="center"/>
    <TextView
        android:layout_width="match_parent"
        android:layout_height="100dp"
        android:text="time set to"
        android:textColor="@color/white"
        android:textSize="50dp"
        android:gravity="center"
        android:id="@+id/settime"
        android:textAlignment="center"/>
    <TextView
        android:layout_width="match_parent"
        android:layout_height="100dp"
        android:text="stop"
        android:textSize="50dp"

        android:background="#1A2040"
        android:gravity="center"
        android:textColor="@color/white"/>
</LinearLayout>
```
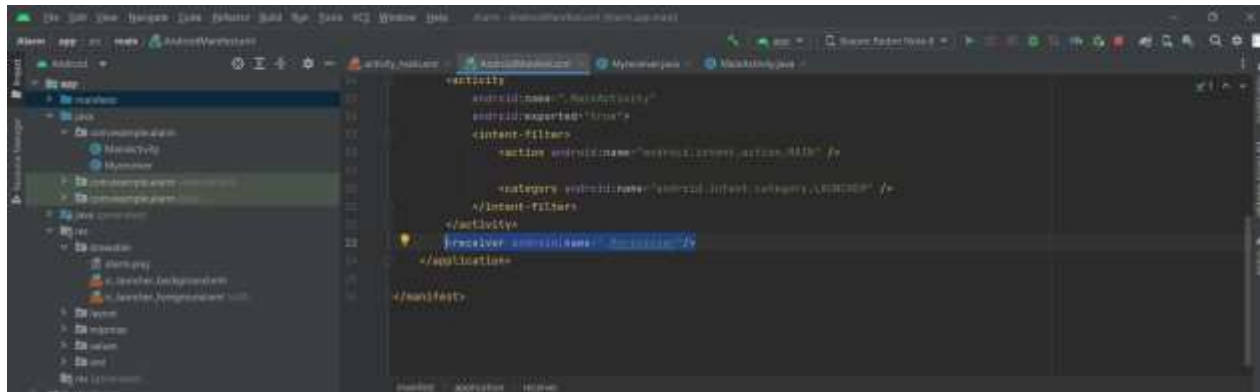
Changes In manifest file :-

```
<receiver android:name=".Myreceiver"/>
```


Outputs:-