

Ex.No: 11  
Date :

## Write a mobile application that creates alarm clock

### AIM:

To implement an application that creates alarm clock.

### PROCEDURE:

1. Open Eclipse IDE.
2. Create the project Ex\_No\_11.
3. Go to package explorer in the left hand side. Select the project Ex\_No\_11.
4. Go to res folder and select layout. Double click the activity\_main.xml file.
5. Now you can see the Graphical layout window.
6. Drag and drop the following components:
  - a. DatePicker
  - b. TimePicker
  - c. Button with labeled as SET ALARM
7. Again go to package explorer in the left hand side. Select the project Ex\_No\_11.
8. Go to src folder. Double click the MainActivity.java file.
9. In java file write the activities done by the application such as notify the alarm.
10. Get the following permission in AndroidManifest.xml file:

```
<uses-permission android:name="android.permission.WAKE_LOCK"/>
```
11. Add Alarm class as a receiver in AndroidManifest.xml file.
12. Finally run the android application.

### PROGRAMS:

activity\_main.xml:

```
<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:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.ex_no_11.MainActivity" >

    <DatePicker android:id="@+id/datePicker1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentTop="true" />

    <TimePicker
        android:id="@+id/timePicker1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
        android:layout_alignLeft="@+id/datePicker1"
        android:layout_alignParentBottom="true"
        android:layout_alignParentRight="true"
        android:layout_marginBottom="71dp"
    />
```

```
<Button                android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/timePicker1"
    android:layout_alignParentBottom="true"
    android:layout_alignParentRight="true"
    android:layout_marginBottom="14dp"
    android:text="SET ALARM"
    tools:ignore="HardcodedText" />
```

```
</RelativeLayout>
```

*MainActivity.java:*

```
package com.example.ex_no_11; import
java.util.Calendar;
```

```

import
    android.support.v7.app.ActionBarActivity;
import    android.app.AlarmManager;    import
android.app.Notification;    import
android.app.NotificationManager;    import
android.app.PendingIntent;    import
android.content.Context;    import
android.content.Intent;    import
android.os.Bundle;    import    android.view.View;
import    android.view.View.OnClickListener;
import    android.widget.Button;    import
android.widget.DatePicker;    import
android.widget.TimePicker;    import
android.widget.Toast;
public class MainActivity extends ActionBarActivity
{
    private static MainActivity inst;    public
    static MainActivity instance() { // TODO Auto-
        generated method stub    return inst;
    }    public    void
    onStart()
    {
        super.onStart();
        inst=this;
    }
    NotificationManager nm;    Notification
    n;
    @SuppressWarnings("deprecation")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final TimePicker tp=(TimePicker)findViewById(R.id.timePicker1);

        final DatePicker dp=(DatePicker)findViewById(R.id.datePicker1);    Button
        b=(Button)findViewById(R.id.button1);
        nm=(NotificationManager)getSystemService(Context.NOTIFICATION_SERVICE);
        n=new
        Notification(R.drawable.ic_launcher,"ALARM",System.currentTimeMillis());
        tp.setIs24HourView(false);
        Calendar now=Calendar.getInstance();
        dp.init(now.get(Calendar.YEAR), now.get(Calendar.MONTH),
        now.get(Calendar.DAY_OF_MONTH),null);
        tp.setCurrentHour(now.get(Calendar.HOUR_OF_DAY));
        tp.setCurrentMinute(now.get(Calendar.MINUTE));
        b.setOnClickListener(
            new
            OnClickListener()
            {
                @Override
                public void onClick(View arg0) {
                    // TODO Auto-generated method stub

                    Calendar
                    current=Calendar.getInstance();    Calendar
                    alarm=Calendar.getInstance();
                    alarm.set(dp.getYear(), dp.getMonth(),
                    dp.getDayOfMonth(), tp.getCurrentHour(), tp.getCurrentMinute(), 00);
                    if(alarm.compareTo(current)<=0)
                        Toast.makeText(getApplicationContext(), "Invalid
                        Date and Time !!!", Toast.LENGTH_LONG).show();    else
                    {
                        Intent i=new
                        Intent(MainActivity.this,Alarm.class);

                        PendingIntent
                        pi=PendingIntent.getBroadcast(MainActivity.this, 123, i, 0);
                        AlarmManager
                        am=(AlarmManager)getSystemService(ALARM_SERVICE);

```

```

alarm.getTimeInMillis(), pi);
        am.set(AlarmManager.RTC_WAKEUP,
        Toast.makeText(getApplicationContext(), "Alarm is
        Set ON !!!", Toast.LENGTH_LONG).show());
    }
    });
}
@SuppressWarnings("deprecation")
public void update_notification(String no, String msg) {
    // TODO Auto-generated method stub
    n.setLatestEventInfo(getBaseContext(), no, msg, null); nm.notify(1337,
    n);
}
}

```

*Alarm.java:*

```

package com.example.ex_no_11; import
android.content.BroadcastReceiver; import
android.content.Context; import
android.content.Intent; public class Alarm
extends BroadcastReceiver{ @Override
    public void onReceive(Context arg0, Intent arg1) {
        // TODO Auto-generated method stub
        MainActivity inst=MainActivity.instance();
        inst.update_notification("Alarm","Wake up ! Wake up !!"); }
}

```

*AndroidManifest.xml:*

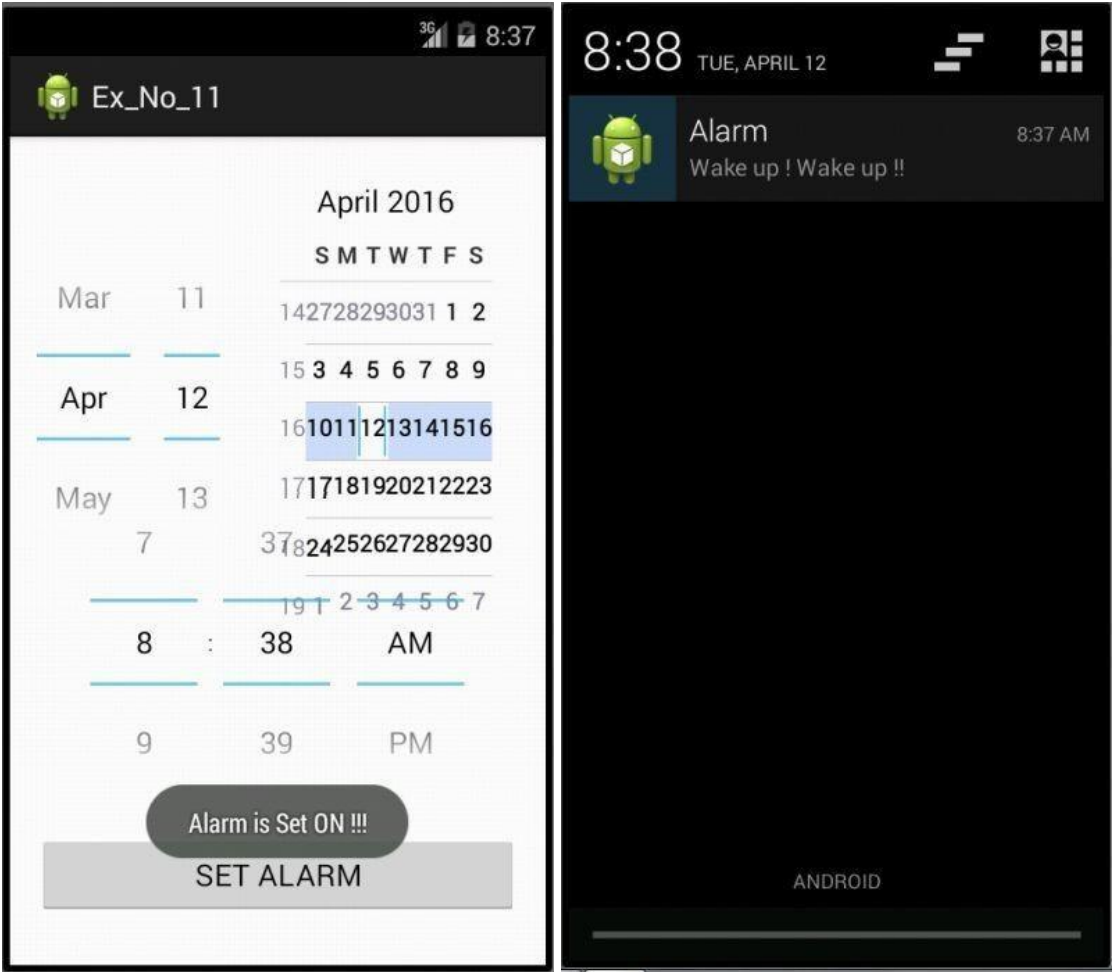
```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.ex_no_11" android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="21"
    />
    <uses-permission android:name="android.permission.WAKE_LOCK"/>
    <application android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name=".MainActivity"
            android:label="@string/app_name"
            " >
            <intent-filter>

```

```
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" /> </intent-
    filter>
</activity>
    <receiver android:name=".Alarm" />
</application>
</manifest>
```

OUTPUT:



**RESULT:**

Thus the application that creates an alert upon receiving a message has been developed and the  
out-put was verified.