

## Aim :

Write a code for Calendar And Add features of Calendar Events in Android Studio.

## Theory :

**CalendarView** : In Android, Calendar View widget was added in API level 11(Android version 3.0) which means this view is only supported in the device that are running on Android 3.0 and higher version. It is used for displaying and selecting dates. The supported range of dates of this calendar is configurable

**SelectedDayChange**: In this method, we get the values of days, months and years that is selected by the user.

`android:maxDate` and `android:minDate` are used to set a custom range on the calendar. The dates specified are of the format MM/dd/yyyy.

To do the same in Java we use `setMaxDate()` and `setMinDate()` methods passing the `long` instance. The getters methods are available for the same.

To set the current date we do `setDate(long date)` on the `CalendarView` instance.

The `setDate` method has another form: `setDate(long date, boolean animate, boolean center)`.

By default the second and third parameters are true. When you select a new date it animates to it.

To change the date and week text style we use the attributes:

`android:dateTextAppearance` and `android:weekTextAppearance` or their equivalent setters in Java.

## Algorithm :

**Step 1:** Create a new project and you will have a layout XML file and java file. ...

**Step 2:** Open your xml file and add `CalendarView` and `TextView`.

**Step 3:** Now, open up the activity java file and define the `CalendarView` and `TextView`

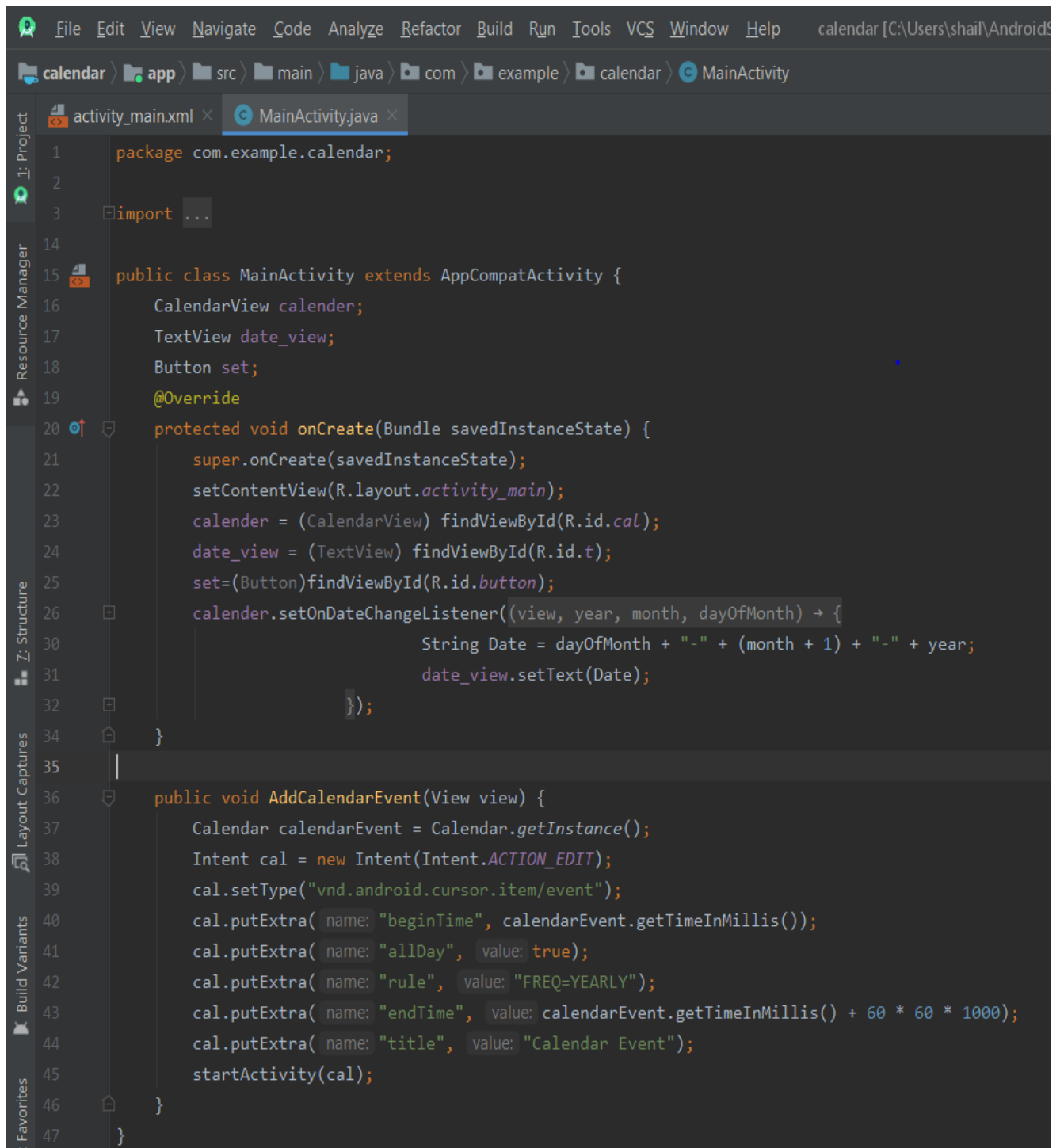
type variable, and also use `findViewById()` to get the `Calendarview` and `textview`.

**Step 4:** Now, add `setOnDateChangeListener` interface in object of `CalendarView` which provides `setOnDateChangeListener` method. In this method we get the Dates (days, months, years) and set the dates in `TextView` for Display.

**Step 5:** Now run the app and set the current date which will be shown on the top of the screen.

```
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
calendar > app > src > main > res > layout > activity_main.xml
activity_main.xml x MainActivity.java x

1 <?xml version="1.0" encoding="utf-8"?>
2 <androidx.constraintlayout.widget.ConstraintLayout
3     xmlns:android="http://schemas.android.com/apk/res/android"
4     xmlns:app="http://schemas.android.com/apk/res-auto"
5     xmlns:tools="http://schemas.android.com/tools"
6     android:layout_width="match_parent"
7     android:layout_height="match_parent"
8     tools:context=".MainActivity">
9
10    <Button
11        android:id="@+id/button"
12        android:layout_width="264dp"
13        android:layout_height="100dp"
14        android:onClick="AddCalendarEvent"
15        android:text="set event"
16        app:layout_constraintBottom_toBottomOf="parent"
17        app:layout_constraintEnd_toEndOf="parent"
18        app:layout_constraintStart_toStartOf="parent"
19        app:layout_constraintTop_toTopOf="parent"
20        app:layout_constraintVertical_bias="0.929" />
21
22    <TextView
23        android:id="@+id/t"
24        android:layout_width="236dp"
25        android:layout_height="103dp"
26        android:text=""
27        app:layout_constraintBottom_toBottomOf="parent"
28        app:layout_constraintEnd_toEndOf="parent"
29        app:layout_constraintHorizontal_bias="0.387"
30        app:layout_constraintStart_toStartOf="parent"
31        app:layout_constraintTop_toTopOf="parent"
32        app:layout_constraintVertical_bias="0.063" />
33
34    <CalendarView
35        android:id="@+id/cal"
36        android:layout_width="380dp"
37        android:layout_height="414dp"
38        app:layout_constraintBottom_toBottomOf="parent"
39        app:layout_constraintEnd_toEndOf="parent"
40        app:layout_constraintStart_toStartOf="parent"
41        app:layout_constraintTop_toTopOf="parent"
42        tools:ignore="MissingConstraints" />
43 </androidx.constraintlayout.widget.ConstraintLayout>
```



```
1 package com.example.calendar;
2
3 import ...
4
14
15 public class MainActivity extends AppCompatActivity {
16     CalendarView calender;
17     TextView date_view;
18     Button set;
19     @Override
20     protected void onCreate(Bundle savedInstanceState) {
21         super.onCreate(savedInstanceState);
22         setContentView(R.layout.activity_main);
23         calender = (CalendarView) findViewById(R.id.cal);
24         date_view = (TextView) findViewById(R.id.t);
25         set=(Button)findViewById(R.id.button);
26         calender.setOnDateChangeListener((view, year, month, dayOfMonth) -> {
27             String Date = dayOfMonth + "-" + (month + 1) + "-" + year;
28             date_view.setText(Date);
29         });
30
31
32     }
33
34
35
36     public void AddCalendarEvent(View view) {
37         Calendar calendarEvent = Calendar.getInstance();
38         Intent cal = new Intent(Intent.ACTION_EDIT);
39         cal.setType("vnd.android.cursor.item/event");
40         cal.putExtra( name: "beginTime", calendarEvent.getTimeInMillis());
41         cal.putExtra( name: "allDay", value: true);
42         cal.putExtra( name: "rule", value: "FREQ=YEARLY");
43         cal.putExtra( name: "endTime", value: calendarEvent.getTimeInMillis() + 60 * 60 * 1000);
44         cal.putExtra( name: "title", value: "Calendar Event");
45         startActivity(cal);
46     }
47 }
```

Output :

