Mobile_Lesson7: Notification, Calendar,and Publishing Apps

ICP GROUP: 38

ICP 14
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ICP14 Repository: https://github.com/UMKC-APL-WebMobileProgramming/ICP14-AnilkumarreddyNandikonda

ICP14 source code link:
https://umsystem.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=ee2a79d9-16fe-494e-a783-adfd004ab1fd

InsertCalendarEvent : https://github.com/UMKC-APL-WebMobileProgramming/ICP14-AnilkumarreddyNandikonda/tree/main/Source%202/InsertCalendarEvent

Sample Calendar App: https://github.com/UMKC-APL-WebMobileProgramming/ICP14-AnilkumarreddyNandikonda/tree/main/Source%202/SampleCalendarApp

Notification : https://github.com/UMKC-APL-WebMobileProgramming/ICP14-AnilkumarreddyNandikonda/tree/main/Source%202/Notification

ICP14 Video: https://umsystem.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=ee2a79d9-16fe-494e-a783-adfd004ab1fd

My Partner:
Partner name: Abhinay Yadav
Partner Email: ayr6y@umsystem.edu

Partner Repository: https://github.com/UMKC-APL-WebMobileProgramming/ICP14-YAbhinay

Source Code Link : InsertCalendarEvent : https://github.com/UMKC-APL-WebMobileProgramming/ICP14-YAbhinay/tree/main/Source/InsertCalendarEvent/app/src

Notification : https://github.com/UMKC-APL-WebMobileProgramming/ICP14-YAbhinay/tree/main/Source/Notification/app/src

SampleCalendarApp : https://github.com/UMKC-APL-WebMobileProgramming/ICP14-YAbhinay/tree/main/Source/SampleCalendarApp/app/src

ICP14 video: https://umsystem.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=ee2a79d9-16fe-494e-a783-adfd004ab1fd

Lesson Overview:In this lesson, we are going to learn about Notification, Calendar,and Publishing apps to Google Play Store

Programming elements:Notification, Calendar,and creating APK file to publishapps to Google Play Store

In Class Programming (ICP):

Calendar View

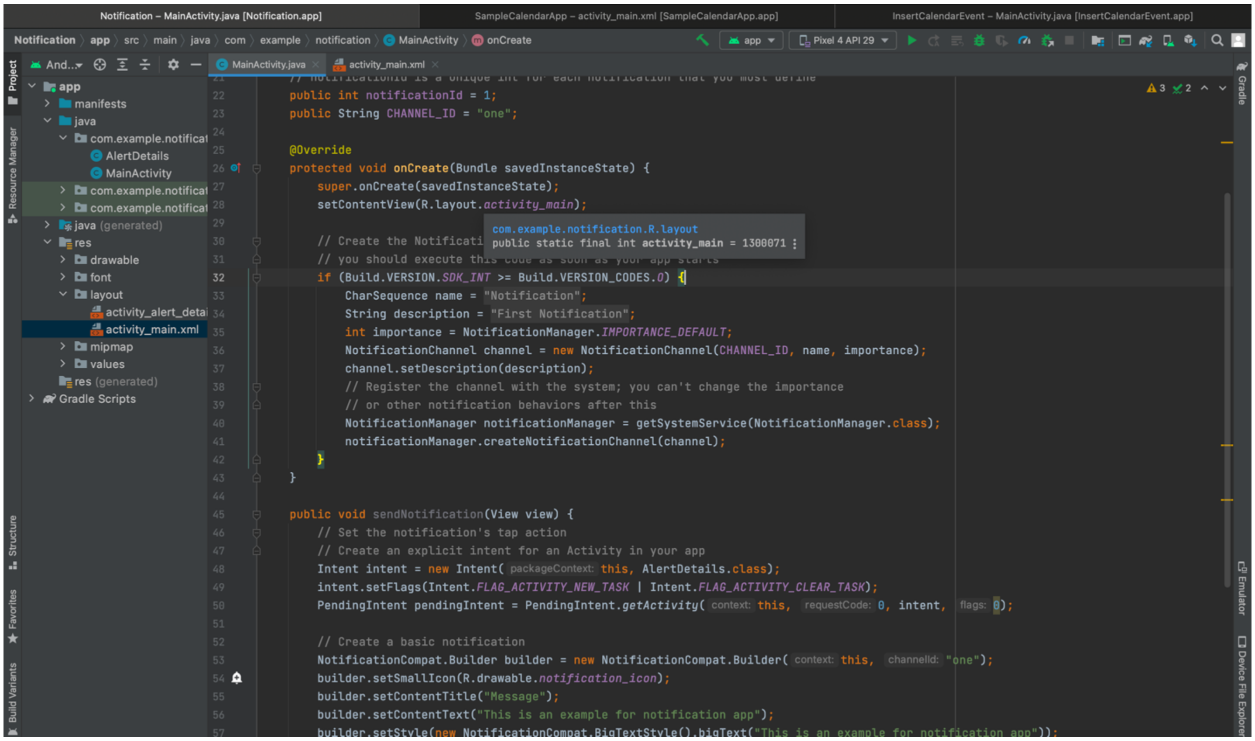
1. Add calendar view to one of the Activities in existing projects(Hint: You canuseNotificationapp)

2. Display the current date,and when the user clicks on any date,then the date should be displayed as shown in the image

3. Create a calendar event

4. Generate signed APK for the source code.

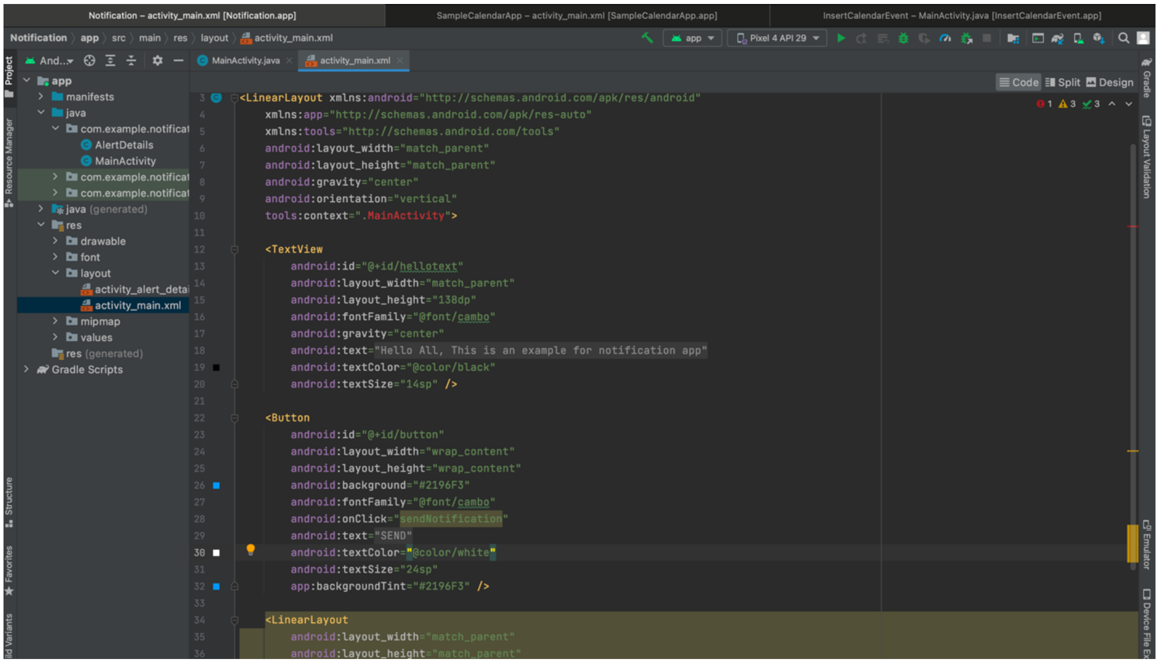
- Creating Notification app, to hit a notification “SEND” button with notification sound



```
    // notificationId is a unique int for each notification that you must define
    public int notificationId = 1;
    public String CHANNEL_ID = "one";

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // Create the Notificati
        // you should execute this code as soon as your app starts
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O) {
            CharSequence name = "Notification";
            String description = "First Notification";
            int importance = NotificationManager.IMPORTANCE_DEFAULT;
            NotificationChannel channel = new NotificationChannel(CHANNEL_ID, name, importance);
            channel.setDescription(description);
            // Register the channel with the system; you can't change the importance
            // or other notification behaviors after this
            NotificationManager notificationManager = getSystemService(NotificationManager.class);
            notificationManager.createNotificationChannel(channel);
        }
    }

    public void sendNotification(View view) {
        // Set the notification's tap action
        // Create an explicit intent for an Activity in your app
        Intent intent = new Intent( packageContext: this, AlertDetails.class);
        intent.setFlags(Intent.FLAG_ACTIVITY_NEW_TASK | Intent.FLAG_ACTIVITY_CLEAR_TASK);
        PendingIntent pendingIntent = PendingIntent.getActivity( context: this,  requestCode: 0, intent,  flags: 0);

        // Create a basic notification
        NotificationCompat.Builder builder = new NotificationCompat.Builder( context: this,  channelId: "one");
        builder.setSmallIcon(R.drawable.notification_icon);
        builder.setContentTitle("Message");
        builder.setContentText("This is an example for notification app");
        builder.setStyle(new NotificationCompat.BigTextStyle().bigText("This is an example for notification app"));
```

```
com.example.notification.R.layout
public static final int activity_main = 1300071
```

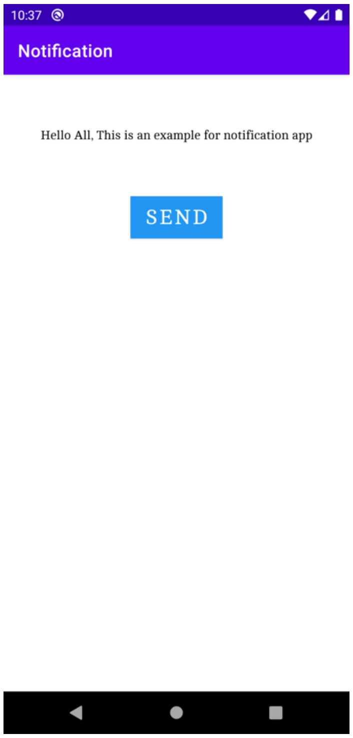
- Here is the .xml file for notification app layout



```xml
<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:gravity="center"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/hellotext"
        android:layout_width="match_parent"
        android:layout_height="138dp"
        android:fontFamily="@font/cambo"
        android:gravity="center"
        android:text="Hello All, This is an example for notification app"
        android:textColor="@color/black"
        android:textSize="14sp" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:background="#2196F3"
        android:fontFamily="@font/cambo"
        android:onClick="sendNotification"
        android:text="SEND"
        android:textColor="@color/white"
        android:textSize="24sp"
        app:backgroundTint="#2196F3" />

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
```

OUTPUT:

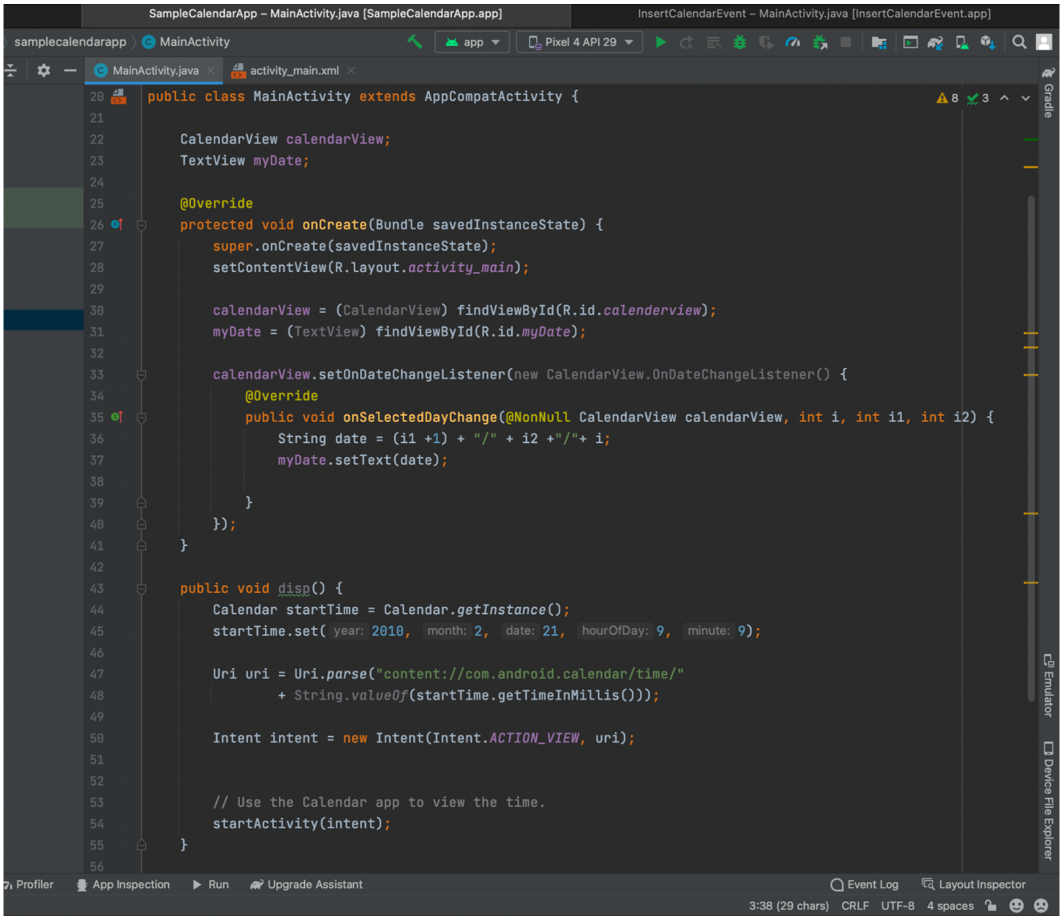
Click on “SEND” button so that message will be send to the user with a notification sound.



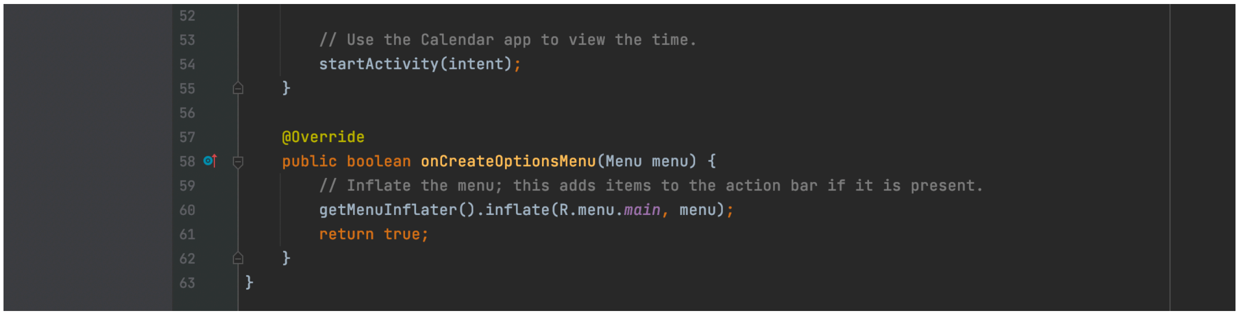
Hello All, This is an example for notification app

- Sample calendar :

When the user clicks on the date it will show up what user have selected.

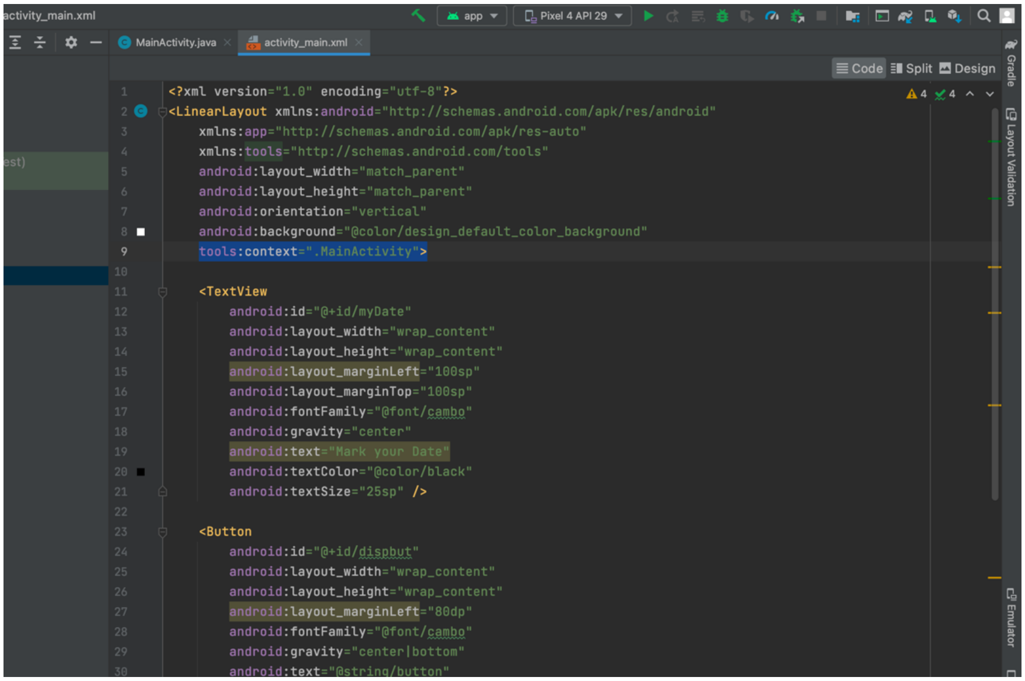


```java
public class MainActivity extends AppCompatActivity {

    CalendarView calendarView;
    TextView myDate;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        calendarView = (CalendarView) findViewById(R.id.calenderview);
        myDate = (TextView) findViewById(R.id.myDate);

        calendarView.setOnDateChangeListener(new CalendarView.OnDateChangeListener() {
            @Override
            public void onSelectedDayChange(@NonNull CalendarView calendarView, int i, int i1, int i2) {
                String date = (i1 +1) + "/" + i2 +"/"+ i;
                myDate.setText(date);

            }
        });
    }

    public void disp() {
        Calendar startTime = Calendar.getInstance();
        startTime.set( year: 2010,  month: 2,  date: 21,  hourOfDay: 9,  minute: 9);

        Uri uri = Uri.parse("content://com.android.calendar/time/"
                + String.valueOf(startTime.getTimeInMillis()));

        Intent intent = new Intent(Intent.ACTION_VIEW, uri);


        // Use the Calendar app to view the time.
        startActivity(intent);
    }

```



```java

        // Use the Calendar app to view the time.
        startActivity(intent);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.main, menu);
        return true;
    }
}
```

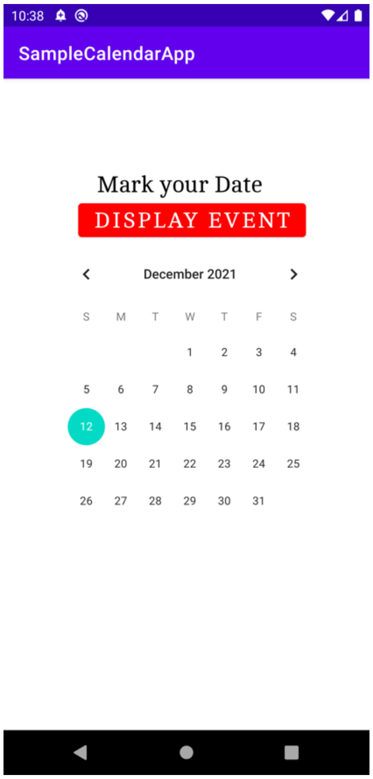
- Here the .xml file for sample calendar layout



```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="@color/design_default_color_background"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/myDate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100sp"
        android:layout_marginTop="100sp"
        android:fontFamily="@font/cambo"
        android:gravity="center"
        android:text="Mark your Date"
        android:textColor="@color/black"
        android:textSize="25sp" />

    <Button
        android:id="@+id/dispbut"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="80dp"
        android:fontFamily="@font/cambo"
        android:gravity="center|bottom"
        android:text="@string/button"
```

OUTPUT:

In we can see that the user selected date.



Mark your Date

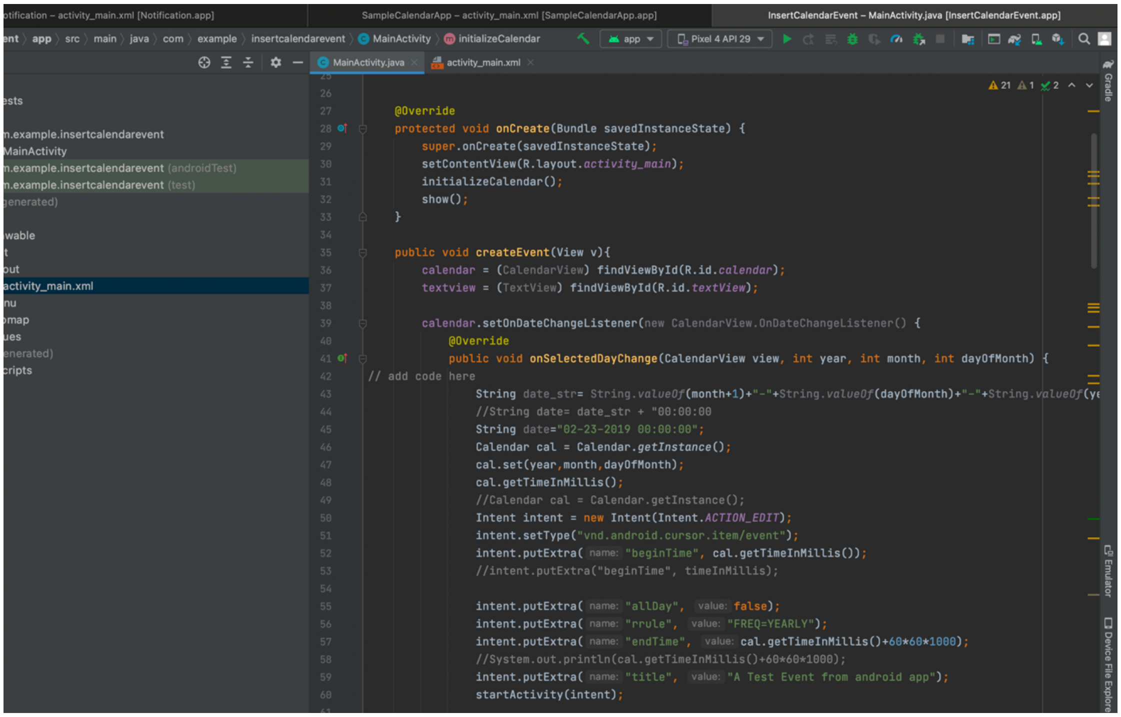
DISPLAY EVENT

December 2021

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

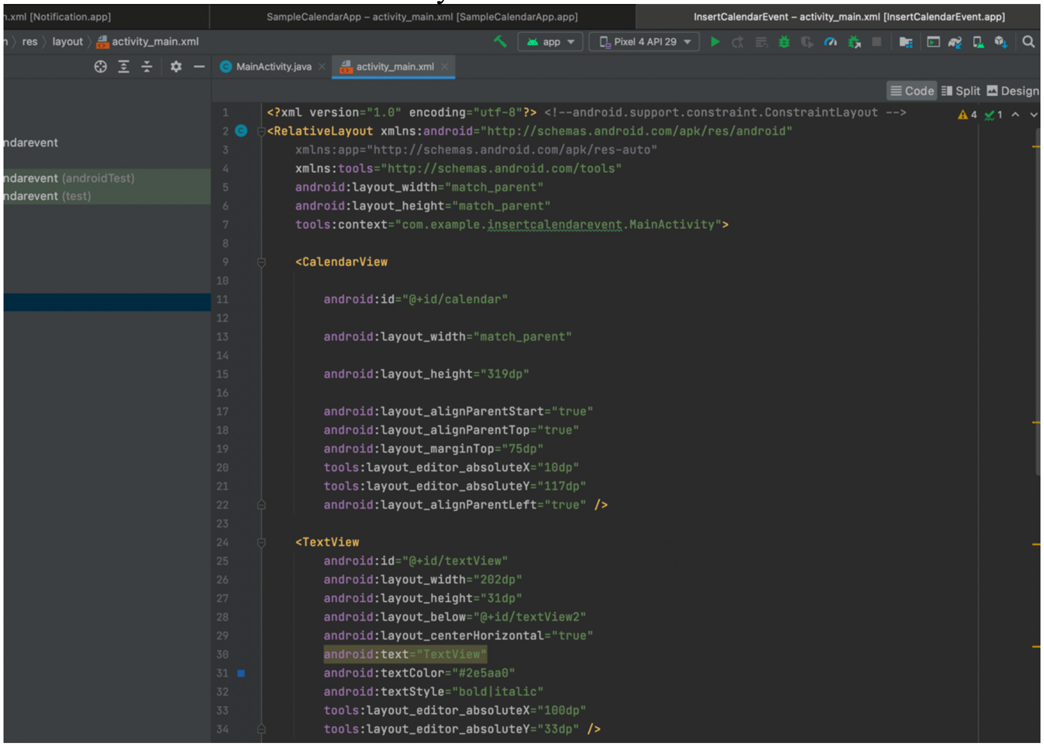
Calendar Event:

As the user selected the date then the user can create the event by filling all the data, it will be saved, and the event invitation notification can also be send to people.


otification – activity_main.xml [Notification.app]
SampleCalendarApp – activity_main.xml [SampleCalendarApp.app]
InsertCalendarEvent – MainActivity.java [InsertCalendarEvent.app]
ent 〉 app 〉 src 〉 main 〉 java 〉 com 〉 example 〉 insertcalendarevent 〉 MainActivity 〉 initializeCalendar
app
Pixel 4 API 29
MainActivity.java
activity_main.xml
Gradle
Emulator
Device File Explore

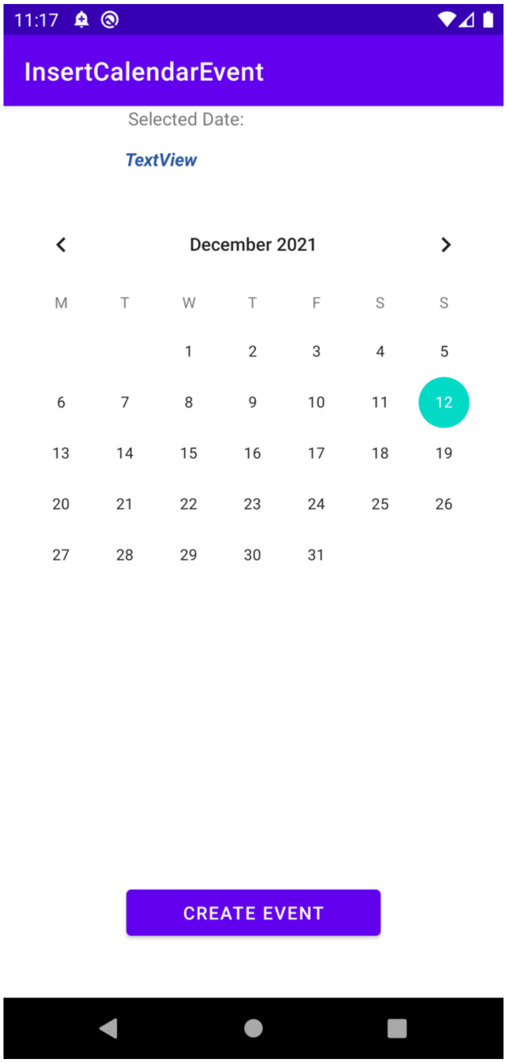
```java
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        initializeCalendar();
        show();
    }

    public void createEvent(View v){
        calendar = (CalendarView) findViewById(R.id.calendar);
        textview = (TextView) findViewById(R.id.textView);

        calendar.setOnDateChangeListener(new CalendarView.OnDateChangeListener() {
            @Override
            public void onSelectedDayChange(CalendarView view, int year, int month, int dayOfMonth) {
// add code here
                String date_str= String.valueOf(month+1)+"-"+String.valueOf(dayOfMonth)+"-"+String.valueOf(ye
                //String date= date_str + "00:00:00
                String date="02-23-2019 00:00:00";
                Calendar cal = Calendar.getInstance();
                cal.set(year,month,dayOfMonth);
                cal.getTimeInMillis();
                //Calendar cal = Calendar.getInstance();
                Intent intent = new Intent(Intent.ACTION_EDIT);
                intent.setType("vnd.android.cursor.item/event");
                intent.putExtra( name: "beginTime", cal.getTimeInMillis());
                //intent.putExtra("beginTime", timeInMillis);

                intent.putExtra( name: "allDay",  value: false);
                intent.putExtra( name: "rrule",  value: "FREQ=YEARLY");
                intent.putExtra( name: "endTime",  value: cal.getTimeInMillis()+60*60*1000);
                //System.out.println(cal.getTimeInMillis()+60*60*1000);
                intent.putExtra( name: "title",  value: "A Test Event from android app");
                startActivity(intent);
```

- Here is .xml for calendar Event layout.


.xml [Notification.app]
SampleCalendarApp – activity_main.xml [SampleCalendarApp.app]
InsertCalendarEvent – activity_main.xml [InsertCalendarEvent.app]
n 〉 res 〉 layout 〉 activity_main.xml
app
Pixel 4 API 29
MainActivity.java
activity_main.xml
Code
Split
Design

```xml
<?xml version="1.0" encoding="utf-8"?> <!--android.support.constraint.ConstraintLayout -->
<RelativeLayout 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"
    tools:context="com.example.insertcalendarevent.MainActivity">

    <CalendarView

        android:id="@+id/calendar"

        android:layout_width="match_parent"

        android:layout_height="319dp"

        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="75dp"
        tools:layout_editor_absoluteX="10dp"
        tools:layout_editor_absoluteY="117dp"
        android:layout_alignParentLeft="true" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="202dp"
        android:layout_height="31dp"
        android:layout_below="@+id/textView2"
        android:layout_centerHorizontal="true"
        android:text="TextView"
        android:textColor="#2e5aa0"
        android:textStyle="bold|italic"
        tools:layout_editor_absoluteX="100dp"
        tools:layout_editor_absoluteY="33dp" />
```

OUTPUT:

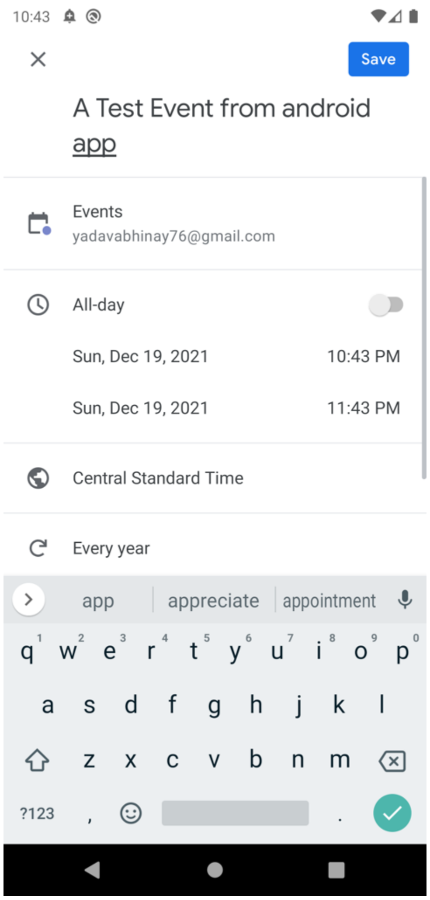


Selected Date:

TextView

December 2021

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



A Test Event from android app

Events
yadavabhinay76@gmail.com

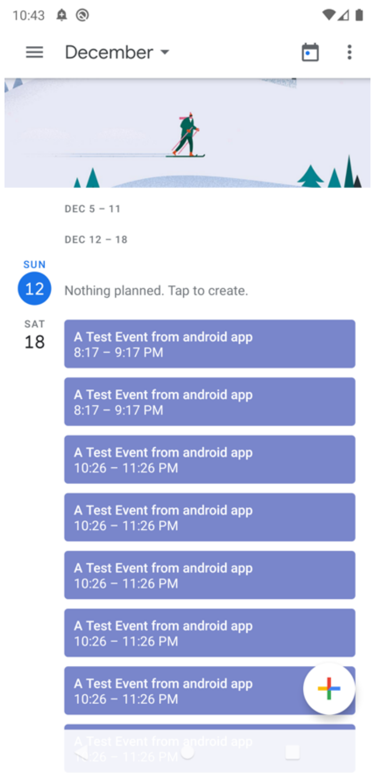
All-day

Sun, Dec 19, 2021 10:43 PM

Sun, Dec 19, 2021 11:43 PM

Central Standard Time

Every year



DEC 5 – 11

DEC 12 – 18

SUN 12 Nothing planned. Tap to create.

SAT 18

A Test Event from android app
8:17 – 9:17 PM

A Test Event from android app
8:17 – 9:17 PM

A Test Event from android app
10:26 – 11:26 PM

A Test Event from android app
10:26 – 11:26 PM

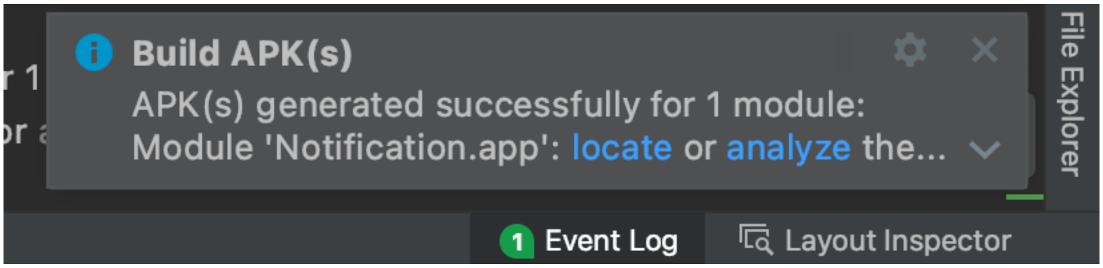
A Test Event from android app
10:26 – 11:26 PM

A Test Event from android app
10:26 – 11:26 PM

A Test Event from android app
10:26 – 11:26 PM

A Test Event from android app
10:26 – 11:26 PM

- Generated APK bundle for the app



Build APK(s)

APK(s) generated successfully for 1 module:
Module 'Notification.app': locate or analyze the...