Experiment 16

1.

ActivityMain.xml
```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    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">
    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="600dp">
        <TextView
            android:id="@+id/textView"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginEnd="146dp"
            android:layout_marginBottom="546dp"
            android:text="@string/am_pm"
            android:textColor="@color/black"
            android:textSize="36sp" />
        <TimePicker
            android:id="@+id/timePicker"
            android:layout_width="241dp"
            android:layout_height="167dp"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginEnd="83dp"
            android:layout_marginBottom="358dp"
            android:timePickerMode="spinner" />
        <TextView
            android:id="@+id/textView1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginEnd="133dp"
            android:layout_marginBottom="263dp"
            android:text="@string/_24_hours"
            android:textColor="@color/black"
            android:textSize="36sp" />
```

```xml
        <TimePicker
            android:id="@+id/timePicker1"
            android:layout_width="241dp"
            android:layout_height="167dp"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginEnd="89dp"
            android:layout_marginBottom="83dp"
            android:timePickerMode="spinner" />
        <Button
            android:id="@+id/button1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginEnd="140dp"
            android:layout_marginBottom="18dp"
            android:text="TimePicker" />
    </RelativeLayout>
</LinearLayout>
```

Strings.xml
```xml
<resources>
    <string name="app_name">Exp16_1</string>
    <string name="am_pm">AM/PM</string>
    <string name="_24_hours">24 Hours</string>
</resources>
```

MainActivity.Java
```java
package com.example.exp16_1;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TimePicker;
public class MainActivity extends AppCompatActivity {
    private Button button;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        TimePicker picker = (TimePicker) findViewById(R.id.timePicker1);
        picker.setIs24HourView(true);
        button = (Button) findViewById(R.id.button1);
        button.setOnClickListener(new View.OnClickListener() {
```
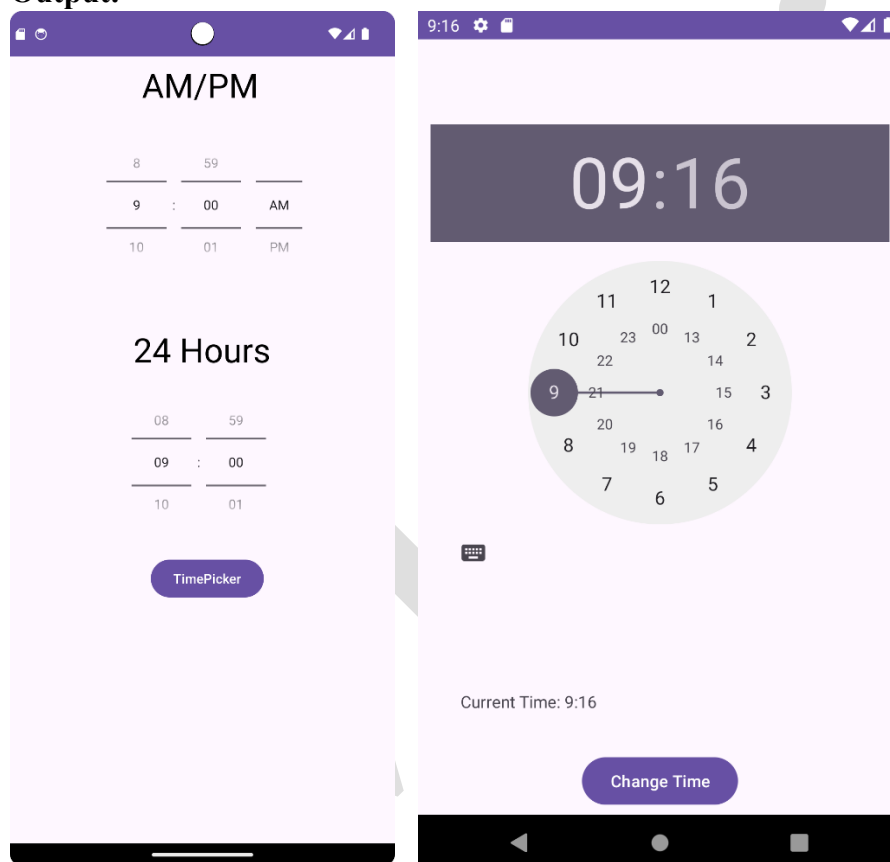
```
        @Override
        public void onClick(View v) {
            openActivity2();
        }
    });
}
private void openActivity2() {
    Intent intent = new Intent(this, MainActivity2.class);
    startActivity(intent);
}
}
```

Output:

2.

ActivityMain.xml
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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"
```

```xml
    tools:context=".MainActivity">
    <EditText
        android:id="@+id/editTextTime"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="28dp"
        android:layout_marginTop="200dp"
        android:editable="false"
        android:ems="10"
        android:inputType="time"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    tools:ignore="Deprecated" />
<EditText
    android:id="@+id/editTextDate"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="24dp"
    android:layout_marginBottom="576dp"
    android:editable="false"
    android:ems="10"
    android:inputType="date"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    tools:ignore="Deprecated" />
<Button
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="16dp"
android:layout_marginTop="104dp"
android:text="Select Date "
app:layout_constraintStart_toEndOf="@+id/editTextTime"
app:layout_constraintTop_toTopOf="parent" />
<Button
android:id="@+id/button2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="24dp"
android:layout_marginBottom="480dp"
android:text="Select Time"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintStart_toEndOf="@+id/editTextDate" />
<TimePicker
android:id="@+id/clock"
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
android:layout_marginStart="52dp"
android:layout_marginBottom="224dp"
android:timePickerMode="spinner"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintStart_toStartOf="parent"
android:visibility="invisible"/>
<DatePicker
android:id="@+id/calendar"
android:layout_width="303dp"
android:layout_height="262dp"
android:layout_marginStart="52dp"
android:layout_marginBottom="172dp"
android:visibility="invisible"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintStart_toStartOf="parent"
    />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java
```
package com.example.exp16_2;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.TimePicker;
public class MainActivity extends AppCompatActivity {
    EditText Date_enter,Time_enter;
    Button select_date,select_time;
    TimePicker clock;
    DatePicker cal;
    String s1="the time is:",s2="the cal is:";
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Date_enter=findViewById(R.id.editTextDate);
        Time_enter=findViewById(R.id.editTextTime);
        select_date=findViewById(R.id.button);
```

```java
select_time=findViewById(R.id.button2);
clock=findViewById(R.id.clock);
clock.setIs24HourView(true);
cal=findViewById(R.id.calendar);
select_time.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        clock.setVisibility(View.VISIBLE);
        cal.setVisibility(View.INVISIBLE);
        s1=s1+clock.getHour()+":"+clock.getMinute();
        Time_enter.setText(s1);
    }
});
select_date.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        cal.setVisibility(View.VISIBLE);
        clock.setVisibility(View.INVISIBLE);
        s2= s2 +cal.getDayOfMonth()+"-"+cal.getMonth()+"-"+cal.getYear();
        Date_enter.setText(s2);
    }
});
    }
}
```

Output: