



Riphah School of Computing & Innovation (RSCI)

Riphah International University, Lahore

BS CS Program

Semester (6th)

Midterm Exam (FALL - 2022)

Subject: Mobile Application Development Lab

Marks : 20 (Practical + Viva)

Instructions for the Submission:

- All Questions are compulsory (*Compulsion is bad, I know*).
- All codes are required to be provided in GO language only.
- Marks will be given as per the depth of the answer, not length (*as this is no beauty contest*).
- Answer without logic is illogical (*Simple logic*) • Carefully write your Name and Sap ID before attempting.
- Copied answers caused 0 marks.
- LATE SUBMISSIONS WILL NOT BE ALLOWED.

Sap ID: _____Haider Rasheed_____

Name: _14454_

Q1: Create a Custom Calendar App to store reminders and events using SQLite Database in Android Studio? [5 Marks]

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    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">

    <!-- CalendarView with monday as first day and minmal and maximal day
-->
    <CalendarView
        android:id="@+id/simpleCalendarView"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:firstDayOfWeek="2"
        android:maxDate="01/01/2018"
        android:minDate="01/01/2016" />

</RelativeLayout>
```

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_500">#FF6200EE</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="teal_200">#FF03DAC5</color>
    <color name="teal_700">#FF018786</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFFF</color>
</resources>
```

```
package example.abhiandroid.calenderviewexample;

import android.graphics.Color;
import android.os.Bundle;
import android.widget.CalendarView;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import com.example.calendarviewexample.R;

public class MainActivity extends AppCompatActivity {
```

```

CalendarView simpleCalendarView;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    simpleCalendarView = findViewById(R.id.simpleCalendarView); // get
the reference of CalendarView
    simpleCalendarView.setFocusedMonthDateColor(Color.RED); // set the
red color for the dates of focused month
    simpleCalendarView.setUnfocusedMonthDateColor(Color.BLUE); // set
the yellow color for the dates of an unfocused month
    simpleCalendarView.setSelectedWeekBackgroundColor(Color.RED); //
red color for the selected week's background
    simpleCalendarView.setWeekSeparatorLineColor(Color.GREEN); //
green color for the week separator line
    // perform setOnDateChangeListener event on CalendarView
    simpleCalendarView.setOnDateChangeListener((view, year, month,
dayOfMonth) -> {
        // display the selected date by using a toast
        Toast.makeText(getApplicationContext(), dayOfMonth + " " +
month + "/" + year, Toast.LENGTH_LONG).show();
    });
}
}

```

CalendarViewExample

<	January 2018					
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				

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CalendarViewExample



December 2016



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CalendarViewExample



July 2017



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CalendarViewExample



December 2017



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CalendarViewExample



January 2017



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Q2: Create a Custom Create a Wallpaper App in Android Studio using Kotlin Language? [5 Marks]



```
MainActivity.class:  
package com.android.wallpaperbackgrapp;
```

```

import android.app.Activity;
import android.app.WallpaperManager;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;

public class MainActivity extends Activity implements View.OnClickListener
{

    private int[] backgrounds;

    private ImageView background1;
    private ImageView background2;
    private ImageView background3;
    private ImageView background4;

    private WallpaperManager wallpaperManager;

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

        wallpaperManager = WallpaperManager.getInstance(this);

        background1 = findViewById(R.id.background1);
        background1.setOnClickListener(this);
        background2 = findViewById(R.id.background2);
        background2.setOnClickListener(this);
        background3 = findViewById(R.id.background3);
        background3.setOnClickListener(this);
        background4 = findViewById(R.id.background4);
        background4.setOnClickListener(this);

        loadBackgrounds();
    }

    void loadBackgrounds() {
        backgrounds = new int[4];
        backgrounds[0] = R.drawable.background1;
        backgrounds[1] = R.drawable.background2;
        backgrounds[2] = R.drawable.background3;
        backgrounds[3] = R.drawable.background4;
    }

    void updateBackground(int background) {
        try{
            wallpaperManager.setResource(background);
        }catch (Exception e){
            System.err.println(e.getMessage());
        }
    }
}

```

```

    }

    @Override
    public void onClick(View view) {
        if(view == background1){
            updateBackground(backgrounds[0]);
            return;
        }

        if(view == background2){
            updateBackground(backgrounds[1]);
            return;
        }

        if(view == background3){
            updateBackground(backgrounds[2]);
            return;
        }

        if(view == background4){
            updateBackground(backgrounds[3]);
            return;
        }
    }
}

```

activity_main.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"
    tools:context=".MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:layout_margin="10dp"
        android:padding="5dp">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="horizontal"
            android:weightSum="2"
            android:layout_weight="1">

```

```
<ImageView
    android:id="@+id/background1"
    android:layout_width="0dp"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:src="@drawable/background1"
    android:layout_margin="5dp"/>

<ImageView
    android:id="@+id/background2"
    android:layout_width="0dp"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:src="@drawable/background2"
    android:layout_margin="5dp"/>

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="horizontal"
    android:layout_weight="1">

<ImageView
    android:id="@+id/background3"
    android:layout_width="0dp"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:src="@drawable/background3"
    android:layout_margin="5dp"/>

<ImageView
    android:id="@+id/background4"
    android:layout_width="0dp"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:src="@drawable/background4"
    android:layout_margin="5dp"/>

</LinearLayout>

</LinearLayout>

</LinearLayout>
```

AndroidManifest.xml:

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.android.wallpaperbackgrapp">

    <uses-permission android:name="android.permission.SET_WALLPAPER"/>

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```





