1

Question

Hello World Program (Write a program to Toast Hello World)

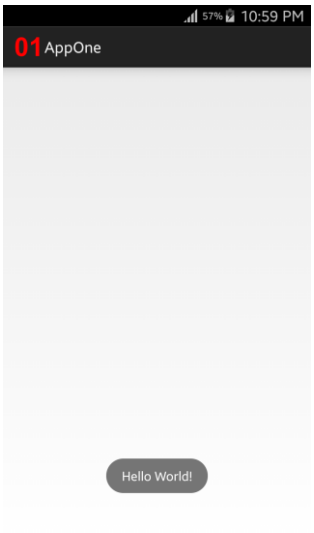
activity_main.xml

```
<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="dcs.nmsm.appone.MainActivity" >

</RelativeLayout>
```

MainActivity.java

```
package dcs.nmsm.appone;

import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends Activity {


      @Override
      protected void onResume() {
            Toast.makeText(getApplicationContext(),"Hello
            World!",Toast.LENGTH_LONG).show();
            super.onResume();
      }


}
```

Screen Shot



2

Question

Addition of two Numbers (Write a program to add two numbers)

activity_main.xml

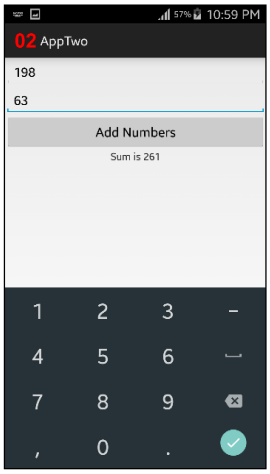
```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context="dcs.nmsm.apptwo.MainActivity" >

    <EditText
        android:id="@+id/txtNum1"
        android:hint="First Number"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:inputType="number"

        />
    <EditText
        android:id="@+id/txtNum2"
        android:hint="Second Number"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:inputType="number"

        />
    <Button
         android:id="@+id/btnAdd"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Add Numbers"
        />
    <TextView
        android:id="@+id/txtResult"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="" />

</LinearLayout>
```

MainActivity.java

```
package dcs.nmsm.apptwo;


import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
```

```
public class MainActivity extends Activity {
      EditText n1,n2;
      Button b1;
      TextView res;
      int a,b,sum;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        n1=(EditText)(findViewById(R.id.txtNum1));
        n2=(EditText)(findViewById(R.id.txtNum2));
        res=(TextView)(findViewById(R.id.txtResult));
        b1=(Button)(findViewById(R.id.btnAdd));
        b1.setOnClickListener(new OnClickListener() {

                @Override
                public void onClick(View v) {
                      if(n1.length()>0 && n2.length()>0)
                      {
                            a=Integer.parseInt(n1.getText().toString()) ;
                            b=Integer.parseInt(n2.getText().toString()) ;
                            sum=a+b;
                            res.setText("Sum is "+sum);
                      }
                      else
                            res.setText("Input Please!");

                }
            });
    }}
```

Screen Shot



3

Question

Date and Time Dialog box (Write a program to display date and time using dialog box)

activity_main.xml

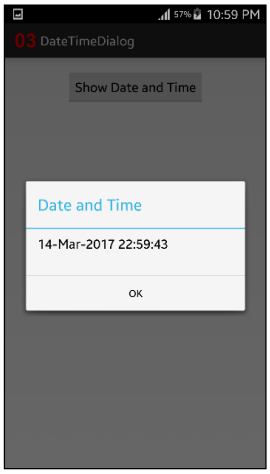
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="dcs.nmsm.datetimedialog.MainActivity" >

    <Button
        android:id="@+id/btnDialog"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:text="Show Date and Time" />

</RelativeLayout>
```

MainActivity.java

```
package dcs.nmsm.datetimedialog;


import java.text.SimpleDateFormat;
import java.util.Calendar;
import android.app.Activity;
import android.app.AlertDialog;
import android.app.Dialog;
import android.app.DialogFragment;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;



public class MainActivity extends Activity {


        Button b;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
```

```
    setContentView(R.layout.activity_main);
    b=(Button)findViewById(R.id.btnDialog);
    b.setOnClickListener(new OnClickListener() {

                @Override
                public void onClick(View v) {
                        ShowDateTimeDialog DT=new ShowDateTimeDialog();
                        DT.show(getFragmentManager(), null);
                }
            });

  }
  public class ShowDateTimeDialog extends DialogFragment {
    @Override
    public Dialog onCreateDialog(Bundle savedInstanceState) {
        Calendar c = Calendar.getInstance();
        SimpleDateFormat sdf = new SimpleDateFormat("dd-MMM-yyy HH:mm:ss");
        String strDate = sdf.format(c.getTime());
      AlertDialog.Builder builder = new AlertDialog.Builder(getActivity());
      builder.setTitle("Date and Time");
      builder.setMessage(strDate);
      builder.setNeutralButton("OK", null);
      return builder.create();
    }
  }

}
```

Screen Shot


10:59 PM
03 DateTimeDialog
Show Date and Time
Date and Time
14-Mar-2017 22:59:43
OK

4

Question

Alert Box (Write a program to Display an alert box with OK and Cancel)

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="dcs.nmsm.alertbox.MainActivity" >

    <Button
        android:id="@+id/btnAlert"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:text="Show Alert Box" />

</RelativeLayout>
```

MainActivity.java

```
package dcs.nmsm.alertbox;

import android.app.Activity;
import android.app.AlertDialog;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class MainActivity extends Activity {

      Button b;
      @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b=(Button)findViewById(R.id.btnAlert);
        b.setOnClickListener(new OnClickListener() {

                @Override
                public void onClick(View v) {
                      AlertDialog.Builder builder = new
                      AlertDialog.Builder(MainActivity.this);
                      builder.setCancelable(true);
                      builder.setMessage("This is an Alert Box!");
                      builder.setPositiveButton("OK",null);
                      builder.setNeutralButton("Cancel",null);
                      AlertDialog myAlert = builder.create();
                      myAlert.show();
                }
```

```
                });
        }
}
```

Screen Shot


10:59 PM
04 AlertBox
Show Alert Box
This is an Alert Box!
Cancel
OK

5

Question

Menu Program (Write a Program to create menu with three menu items)

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="dcs.nmsm.menudemo.MainActivity" >

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Press the Menu Button" />

</RelativeLayout>
```

main.xml (Main Menu) // add this file to 'menus' folder

```
<menu xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    tools:context="dcs.nmsm.menudemo.MainActivity" >

    <item
        android:id="@+id/item1"
        android:showAsAction="never"
        android:title="First"/>
      <item
        android:id="@+id/item2"
        android:showAsAction="never"
        android:title="Second"/>
      <item
        android:id="@+id/item3"
        android:showAsAction="never"
        android:title="Third"/>

</menu>
```

MainActivity.java

```
package dcs.nmsm.menudemo;


import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;


public class MainActivity extends Activity {
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {

        getMenuInflater().inflate(R.menu.main, menu);
        return true;
    }

    @Override
    public  boolean onOptionsItemSelected(MenuItem item) {

        int id = item.getItemId();
        if (id == R.id.item1) {
            Toast.makeText(getApplicationContext(), "First Item Selected!",
Toast.LENGTH_SHORT).show();
        }
        if (id == R.id.item2) {
            Toast.makeText(getApplicationContext(), "Second Item
Selected!", Toast.LENGTH_SHORT).show();
        }
        if (id == R.id.item3) {
            Toast.makeText(getApplicationContext(), "Third Item Selected!",
Toast.LENGTH_SHORT).show();
        }
        //return super.onOptionsItemSelected(item);
            return true;
    }
}
```

Screen Shot


60% 11:12 PM
05 MenuDemo
Press the Menu Button
First
Second
Third

6

Question

Radio Button (Write a Program to select gender using radio button)

activity_main.xml

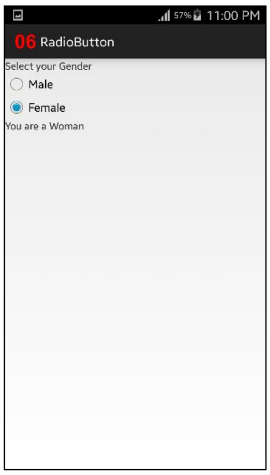
```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context="dcs.nmsm.radiobutton.MainActivity" >

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Select your Gender" />

    <RadioGroup
        android:id="@+id/rdGender"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" >

        <RadioButton
            android:id="@+id/rdMale"
            android:text="Male"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

            />
        <RadioButton
            android:id="@+id/rdFemale"
            android:text="Female"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

            />

    </RadioGroup>
    <TextView
            android:id="@+id/txtGender"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

            />

</LinearLayout>
```

MainActivity.java

```
package dcs.nmsm.radiobutton;

import android.app.Activity;
import android.os.Bundle;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.RadioGroup.OnCheckedChangeListener;
```

```
import android.widget.TextView;


public class MainActivity extends Activity {

        RadioButton rm,rf;
        RadioGroup rg;
        TextView t;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      rm=(RadioButton)findViewById(R.id.rdMale);
      rf=(RadioButton)findViewById(R.id.rdFemale);
      t=(TextView)findViewById(R.id.txtGender);
      rg=(RadioGroup)findViewById(R.id.rdGender);
      rg.setOnCheckedChangeListener(new OnCheckedChangeListener() {

                        @Override
                        public void onCheckedChanged(RadioGroup group, int checkedId) {
                                if (rm.isChecked())
                                {
                                        t.setText("You are a Man");
                                }
                                if (rf.isChecked())
                                {
                                        t.setText("You are a Woman");
                                }
                        }
                });

   }
}
```

Screen Shot


11:00 PM
06 RadioButton
Select your Gender
Male
Female
You are a Woman

7

Question

Spinner (Write a Program to spin four items)

activity_main.xml

```
<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="dcs.nmsm.spinner.MainActivity" >

    <Spinner
        android:id="@+id/mySpin"
        android:layout_width="match_parent"
        android:layout_height="50sp"
        android:spinnerMode="dropdown"
        />
   </LinearLayout>
```

MainActivity.java

```
package dcs.nmsm.spinner;

import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.ArrayAdapter;
import android.widget.Spinner;


public class MainActivity extends Activity {
      Spinner spin;
      private String[] spinArray;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        spin=(Spinner)findViewById(R.id.mySpin);

        this.spinArray = new String[] {"Java", "Pyhton", "PHP", "Perl"};

            ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
                    android.R.layout.simple_spinner_item, spinArray);
            spin.setAdapter(adapter);

    }

}
```

Screen Shot

8

Question

Timer Program (Write a Program to emulate a Stop watch)

activity_main.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:layout_height="match_parent"
      >

    <TextView
        android:id="@+id/timerValue"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
      android:layout_gravity="center"
        android:textSize="40sp"
        android:text="00:00:00" />

    <Button
        android:id="@+id/startButton"
        android:layout_width="90dp"
        android:layout_height="45dp"
      android:layout_gravity="center"
        android:text="Start" />


</LinearLayout>
```

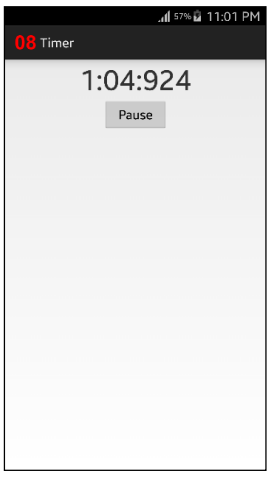
MainActivity.java

```
package dcs.nmsm.timer;


import android.app.Activity;

import android.os.Bundle;

import android.os.Handler;

import android.os.SystemClock;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;


public class MainActivity extends Activity {


        private Button startButton;
```

```
int isOn;
private TextView timerValue;
private long startTime = 0L;
private Handler customHandler = new Handler();
long timeInMilliseconds = 0L;
long timeSwapBuff = 0L;
long updatedTime = 0L;

@Override
public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        isOn=0;
        timerValue = (TextView) findViewById(R.id.timerValue);
        startButton = (Button) findViewById(R.id.startButton);
        startButton.setOnClickListener(new View.OnClickListener() {

                public void onClick(View view) {

                        if(isOn==0)
                        {
                        startTime = SystemClock.uptimeMillis();
                        customHandler.postDelayed(updateTimerThread, 0);
                        isOn=1;
                        startButton.setText("Pause");
                        }
                        else
                        {
                                timeSwapBuff += timeInMilliseconds;
                                customHandler.removeCallbacks(updateTimerThread);
                                isOn=0;
                                startButton.setText("Start");
                        }
```

```
                }
            });

        }
        private Runnable updateTimerThread = new Runnable() {

            int secs,mins,milliseconds;
            public void run() {

                timeInMilliseconds = SystemClock.uptimeMillis() - startTime;
                updatedTime = timeSwapBuff + timeInMilliseconds;
                secs = (int) (updatedTime / 1000);
                mins = secs / 60;
                secs = secs % 60;
                milliseconds = (int) (updatedTime % 1000);
                timerValue.setText("" + mins + ":"
                        + String.format("%02d", secs) + ":"
                        + String.format("%03d", milliseconds));
                customHandler.postDelayed(this, 0);
            }
        };
}
```

Screen Shot



9

Question

Check box (Write a Program to check the items listed)

activity_main.xml

```
<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"
    android:orientation="vertical"
    tools:context="dcs.nmsm.checkbox.MainActivity"
    android:paddingLeft="20sp"
    android:paddingTop="20sp">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Malayalam" />

    <CheckBox
        android:id="@+id/chkMalRead"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Read" />
    <CheckBox
        android:id="@+id/chkMalWrite"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Write" />
    <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="English" />
     <CheckBox
        android:id="@+id/chkEngRead"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Read" />
    <CheckBox
        android:id="@+id/chkEngWrite"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Write" />

    <Button
        android:id="@+id/btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Click"/>
    <TextView
        android:id="@+id/res"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="" />

</LinearLayout>
```

MainActivity.java

```
package dcs.nmsm.checkbox;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.TextView;


public class MainActivity extends Activity {

      CheckBox mr,mw,er,ew;
      Button b;
      TextView res;
      String Summary;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        mr=(CheckBox)findViewById(R.id.chkMalRead);
        mw=(CheckBox)findViewById(R.id.chkMalWrite);
        er=(CheckBox)findViewById(R.id.chkEngRead);
        ew=(CheckBox)findViewById(R.id.chkEngWrite);
        res=(TextView)findViewById(R.id.res);
        b=(Button)findViewById(R.id.btn);
        b.setOnClickListener(new OnClickListener() {

                    @Override
                    public void onClick(View arg0) {
                          Summary="";
                          if(mr.isChecked())
                          {
                                Summary+="Read Malayalam,";
                          }
                          if(mw.isChecked())
                          {
                                Summary+="Write Malayalam,";
                          }
                          if(er.isChecked())
                          {
                                Summary+="Read English,";
                          }
                          if(ew.isChecked())
                          {
                                Summary+="Write English";
                          }
                          if(Summary.length()<10)
                                res.setText("You are an illiterate " );
                          else
                          res.setText("You can " + Summary);

                    }
            });

    }

}
```

Screen Shot


11:02 PM
09 CheckBox
Malayalam
Read
Write
English
Read
Write
Click
You can Read Malayalam,Write English

10

Question

Date Time Picker (Write a Program to select current system time using date time picker)

activity_main.xml

```
<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"
      android:orientation="vertical"
    tools:context="dcs.nmsm.datetimepicker.MainActivity" >

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/in_date"
        android:inputType="date"

        />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="Select Date"
        android:id="@+id/btn_date"
        />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="time"
        android:id="@+id/in_time"
       />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="Select Time"
        android:id="@+id/btn_time"
      />

</LinearLayout>
```

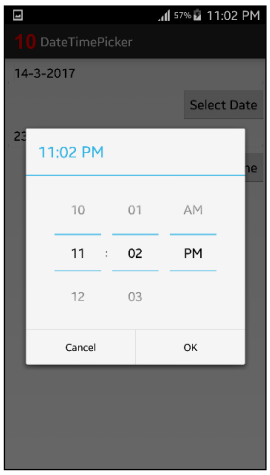
MainActivity.java

```
package dcs.nmsm.datetimepicker;


import android.app.Activity;

import android.app.DatePickerDialog;

import android.app.TimePickerDialog;

import android.os.Bundle;
```

```
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.TimePicker;
import java.util.Calendar;

public class MainActivity extends Activity implements View.OnClickListener
{
    Button btnDatePicker, btnTimePicker;
    EditText txtDate, txtTime;
    private int mYear, mMonth, mDay, mHour, mMinute;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btnDatePicker=(Button)findViewById(R.id.btn_date);
        btnTimePicker=(Button)findViewById(R.id.btn_time);
        txtDate=(EditText)findViewById(R.id.in_date);
        txtTime=(EditText)findViewById(R.id.in_time);
        btnDatePicker.setOnClickListener(this);
        btnTimePicker.setOnClickListener(this);

    }

    @Override
    public void onClick(View v)
      {
        if (v == btnDatePicker)
        {
            // Get Current Date
            final Calendar c = Calendar.getInstance();
            mYear = c.get(Calendar.YEAR);
            mMonth = c.get(Calendar.MONTH);
            mDay = c.get(Calendar.DAY_OF_MONTH);
```

```
DatePickerDialog datePickerDialog = new DatePickerDialog(this,
                    new DatePickerDialog.OnDateSetListener() {


@Override
public void onDateSet(DatePicker view, int year,int monthOfYear, int
dayOfMonth)
       {
       txtDate.setText(dayOfMonth + "-" + (monthOfYear + 1) + "-" + year);
       }}, mYear, mMonth, mDay);
       datePickerDialog.show();
       }
        if (v == btnTimePicker)
       {

            // Get Current Time
            final Calendar c = Calendar.getInstance();
            mHour = c.get(Calendar.HOUR_OF_DAY);
            mMinute = c.get(Calendar.MINUTE);

            // Launch Time Picker Dialog
            TimePickerDialog timePickerDialog = new TimePickerDialog(this,
                    new TimePickerDialog.OnTimeSetListener() {

                        @Override
public void onTimeSet(TimePicker view, int hourOfDay,int minute)
  {
  txtTime.setText(hourOfDay + ":" + minute); }}, mHour, mMinute, false);
  timePickerDialog.show();
  }
 }
}
```

Screen Shot


11:02 PM
DateTimePicker
14-3-2017
Select Date
11:02 PM
10
01
AM
11
02
PM
12
03
Cancel
OK

11

Question

Grid View (Write a Program to display contacts using Grid View Control)

activity_main.xml

```
<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="dcs.nmsm.gridcontacts.MainActivity" >

    <GridView
    android:id="@+id/gridview"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:padding="10dp"
    android:verticalSpacing="10dp"
    android:horizontalSpacing="10dp"
    android:numColumns="auto_fit"
    android:columnWidth="100dp"
    android:stretchMode="columnWidth"
    android:gravity="center"
    />

</LinearLayout>
```

cell.xml // add this file into 'layouts' folder

```
<?xml version="1.0" encoding="utf-8"?>
      <TextView xmlns:android="http://schemas.android.com/apk/res/android"
      android:layout_width="wrap_content"
      android:layout_height="20dp"
      android:textSize="14sp">
      </TextView>
```

// add this permission tag to 'AndroidManifest.xml'

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

MainActivity.java

```
package dcs.nmsm.gridcontacts;


import java.util.ArrayList;
import java.util.List;
import android.app.Activity;
import android.database.Cursor;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.widget.ArrayAdapter;
import android.widget.GridView;
```

```
public class MainActivity extends Activity

{

      GridView gv;
      List<String> Names ;
      @Override

    protected void onCreate(Bundle savedInstanceState)

    {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Names = new ArrayList<String>();
        gv = (GridView)findViewById(R.id.gridview);
        Cursor phones =
getContentResolver().query(ContactsContract.CommonDataKinds.Phone.CONTENT_U
RI, null,null,null, null);

        while (phones.moveToNext())

        {

         String
name=phones.getString(phones.getColumnIndex(ContactsContract.CommonDataKind
s.Phone.DISPLAY_NAME));

         Names.add(name);

      //uncomment if u want to display the contact details

      //String phoneNumber =
phones.getString(phones.getColumnIndex(ContactsContract.CommonDataKinds.Pho
ne.NUMBER));

        }

        phones.close();

        gv.setAdapter(new ArrayAdapter<String>(this, R.layout.cell,Names));

   }}
```

Screen Shot

12

Question

Image View (Write a Program to Display images from local storage of the device)

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <ImageView
        android:id="@+id/imgView"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1" >
    </ImageView>

    <Button
        android:id="@+id/buttonLoadPicture"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_weight="0"
        android:onClick="loadImagefromGallery"
        android:text="Load Picture" >
    </Button>

</LinearLayout>
```

// add this permission tag to 'AndroidManifest.xml'

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

MainActivity.java

```
package dcs.nmsm.imagegallery;

import android.app.Activity;
import android.content.Intent;
import android.database.Cursor;
import android.graphics.BitmapFactory;
import android.net.Uri;
import android.os.Bundle;
import android.provider.MediaStore;
import android.view.View;
import android.widget.ImageView;
import android.widget.Toast;

public class MainActivity extends Activity {
    private static int imgloaded = 1;
    String imgPath;

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

```
    public void loadImagefromGallery(View view) {
        // Create intent to Open Gallery
        Intent galleryIntent = new
Intent(Intent.ACTION_PICK,android.provider.MediaStore.Images.Media.EXTERNAL
_CONTENT_URI);
        startActivityForResult(galleryIntent, imgloaded);
    }

    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent
data) {
        super.onActivityResult(requestCode, resultCode, data);
        try
        {
            if (requestCode == imgloaded && resultCode == RESULT_OK&& null
!= data)
            {

                Uri selectedImage = data.getData();
                String[] filePathColumn = { MediaStore.Images.Media.DATA };
                Cursor cursor =
getContentResolver().query(selectedImage,filePathColumn, null, null, null);
                cursor.moveToFirst();

                int columnIndex = cursor.getColumnIndex(filePathColumn[0]);
                imgPath = cursor.getString(columnIndex);
                cursor.close();
                ImageView imgView = (ImageView) findViewById(R.id.imgView);
                imgView.setImageBitmap(BitmapFactory.decodeFile(imgPath));

            }
            else
            {
                Toast.makeText(this, "No Images Selected!",
                        Toast.LENGTH_LONG).show();
            }
        }
    catch (Exception e)
    {
     Toast.makeText(this, "Something went wrong",Toast.LENGTH_LONG).show();
    }
  }
 }
```

Screen Shot

13

Question

List View (Write a Program to Display the contacts in a list)

activity_main.xml

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

    <ListView
        android:id="@+id/mylist"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:gravity="center"
         />

</LinearLayout>
```

listitem.xml // add this file into 'layouts' folder

```
<?xml version="1.0" encoding="utf-8"?>
      <TextView xmlns:android="http://schemas.android.com/apk/res/android"
      android:layout_width="wrap_content"
      android:layout_height="20dp"
      android:textSize="14sp">
      </TextView>
```

// add this permission tag to 'AndroidManifest.xml'

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

MainActivity.java

```
package dcs.nmsm.listcontacts;
import java.util.ArrayList;
import java.util.List;
import android.app.Activity;
import android.database.Cursor;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.widget.ArrayAdapter;
import android.widget.ListView;


public class MainActivity extends Activity {
      ListView contactslist;
      List<String> Names ;
      @Override
      public void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
            setContentView(R.layout.activity_main);
            contactslist=(ListView)findViewById(R.id.mylist);
            Names = new ArrayList<String>();
            Cursor phones =
getContentResolver().query(ContactsContract.CommonDataKinds.Phone.CONTENT_U
```

```
RI, null,ContactsContract.Contacts.HAS_PHONE_NUMBER + "=?", new String[] {
"1" }, null);
         while (phones.moveToNext())
         {
          String
name=phones.getString(phones.getColumnIndex(ContactsContract.CommonDataKind
s.Phone.DISPLAY_NAME));
          Names.add(name);
         }
         phones.close();
        contactslist.setAdapter(new
ArrayAdapter<String>(this,R.layout.listitem,Names));

       }

}
```

Screen Shot

14

Question

Sqlite Log In (Write a program for Log in Using username and password)

activity_main.xml

```
<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"
 android:orientation="vertical">

 <EditText
 android:id="@+id/uname"
 android:layout_width="fill_parent"
 android:layout_height="wrap_content"
 android:hint="Enter Username"/>
 <EditText
 android:id="@+id/password"
 android:layout_width="fill_parent"
 android:layout_height="wrap_content"
 android:inputType="textPassword"
 android:hint="Enter Password"/>
 <Button
 android:id="@+id/login"
 android:text="Login"
 android:layout_width="match_parent"
 android:layout_height="wrap_content" />
</LinearLayout>
```

MainActivity.java

```
package dcs.nmsm.login;


import android.app.Activity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

public class MainActivity extends Activity {

EditText uname,pswd;

Button login;

DbHandler db;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);
```

```
setContentView(R.layout.activity_main);
uname=(EditText)findViewById(R.id.uname);
pswd=(EditText)findViewById(R.id.password);
login=(Button)findViewById(R.id.login);
login.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v)
{
      String name=uname.getText().toString();
      String password=pswd.getText().toString();
      int id= checkUser(new User(name,password));
      if(id==-1)
      {
            Toast.makeText(MainActivity.this,"Invalid Login
Credentials!",Toast.LENGTH_SHORT).show();
      }
      else
      {
            Toast.makeText(MainActivity.this,"Login Success!
"+name,Toast.LENGTH_LONG).show();
      }
}});
db=new DbHandler(MainActivity.this);
//inserting dummy users
db.addUser(new User("Admin", "Admin"));
db.addUser(new User("User", "User"));
db.addUser(new User("Ajmal", "Password"));
}
public int checkUser(User user)
{
      return db.checkUser(user);
}
}
```

DbHandler.java //creating SQLite db

```
package dcs.nmsm.login;
import android.content.ContentValues;
import android.content.Context;
```

```
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
public class DbHandler extends SQLiteOpenHelper {

 private static final int Db_Version=1;
 private static final String Db_Name="users";
 private static final String Table_Name="user";
 private static final String User_id="id";
 private static final String User_name="name";
 private static final String User_password="password";
 //constructor here
 public DbHandler(Context context)
 {
 super(context,Db_Name,null,Db_Version);
 }
 //creating table
 @Override
 public void onCreate(SQLiteDatabase db) {
 // writing command for sqlite to create table with required attribs
 String Create_Table="CREATE TABLE " + Table_Name + "(" + User_id
 + " INTEGER PRIMARY KEY," + User_name + " TEXT," + User_password + " TEXT"
+ ")";
 db.execSQL(Create_Table);
 }
 //Upgrading the Db
 @Override
 public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
 //Drop table if exists
 db.execSQL("DROP TABLE IF EXISTS " + Table_Name);
 //create the table again
 onCreate(db);
 }
 //Add new User by calling this method
 public void addUser(User usr)
 {
 // getting db instance for writing the user
 SQLiteDatabase db=this.getWritableDatabase();
 ContentValues cv=new ContentValues();
 cv.put(User_name,usr.getName());
 cv.put(User_password,usr.getPassword());
 //inserting row
 db.insert(Table_Name, null, cv);
 //close the database to avoid any leak
 db.close();
 }
 public int checkUser(User us)
 {
 int id=-1;
 SQLiteDatabase db=this.getReadableDatabase();
 Cursor cursor=db.rawQuery("SELECT id FROM user WHERE name=? AND
password=?",new String[]{us.getName(),us.getPassword()});
 if(cursor.getCount()>0) {
 cursor.moveToFirst();
 id=cursor.getInt(0);
 cursor.close();
 }
 return id;
 }
}
```

User.java //manipulating user data

```
package dcs.nmsm.login;

//this is model class
public class User {
//variables
int id;
String name;
String password;
// Constructor with two parameters name and password
public User(String name,String password)
{
this.name=name;
this.password=password;
}
//Parameter constructor containing all three parameters
public User(int id,String name,String psd)
{
this.id=id;
this.name=name;
this.password=psd;
}
//getting id
public int getId() {
return id;
}
//setting id
public void setId(int id) {
this.id = id;
}
//getting name
public String getName() {
return name;
}
//setting name
public void setName(String name) {
this.name = name;
}
//getting password
public String getPassword() {
return password;
}
//setting password
public void setPassword(String password) {
this.password = password;
}
}
```

Screen Shot