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NAME: ERIC MAHASI

ID NUMBER: 675642

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INSTRUCTOR'S NAME: DR. GERALD CHEGE

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1. OBJECTIVES

- To create an app that allows the user to take a quiz of five questions.

- To demonstrate the concept of intents.

- To demonstrate the concept of passing data among activities.

- To demonstrate the concept of sending an SMS.

2. INTRODUCTION

The project was carried out to create a simple app that allows the user to enter their name and ID number. The user can then take a short quiz of five questions. At the end of the quiz the results are displayed on the screen as well as sent to the lecturer via SMS.

3. APPARATUS

The tools that were used in the development of this program are as follows:

- Android Studio

- Android Virtual Device emulator

- My Android phone

- Trello for task management

- draw.io

- Git and GitHub for version control

The full project repository can be found here on GitHub.

4. METHODOLOGY

a. Design Phase

I started the project by first designing all the activities. As per Android's best practices, the parent layout for all my activities is the constraint layout.

`<androidx.constraintlayout.widget.ConstraintLayout>`

b. Implementation Phase

In the beginning I was considering using a database to store all the question answers when the user moves to another question. This however proved itself a non necessary feature for the following reasons:

- Writing to and reading from a database every time a new activity is launched would not only be difficult to implement but also inefficient.

- There is no real need to store data permanently thus a database is redundant. Storing data in a data structure in memory is more efficient.

Initially I had planned to use an array to capture all the data that I would need to display at the end of the quiz. This however came with it's own problems:

- When an array is declared, it's size has to be initialized. In consequent activities this was causing Null Pointer Exceptions because of index mismatches.

- Another problem with arrays is that you cannot dynamically add items to them.

These problems caused me to reconsider. An ArrayList proved itself to be the most appropriate data structure since it addresses both problems.

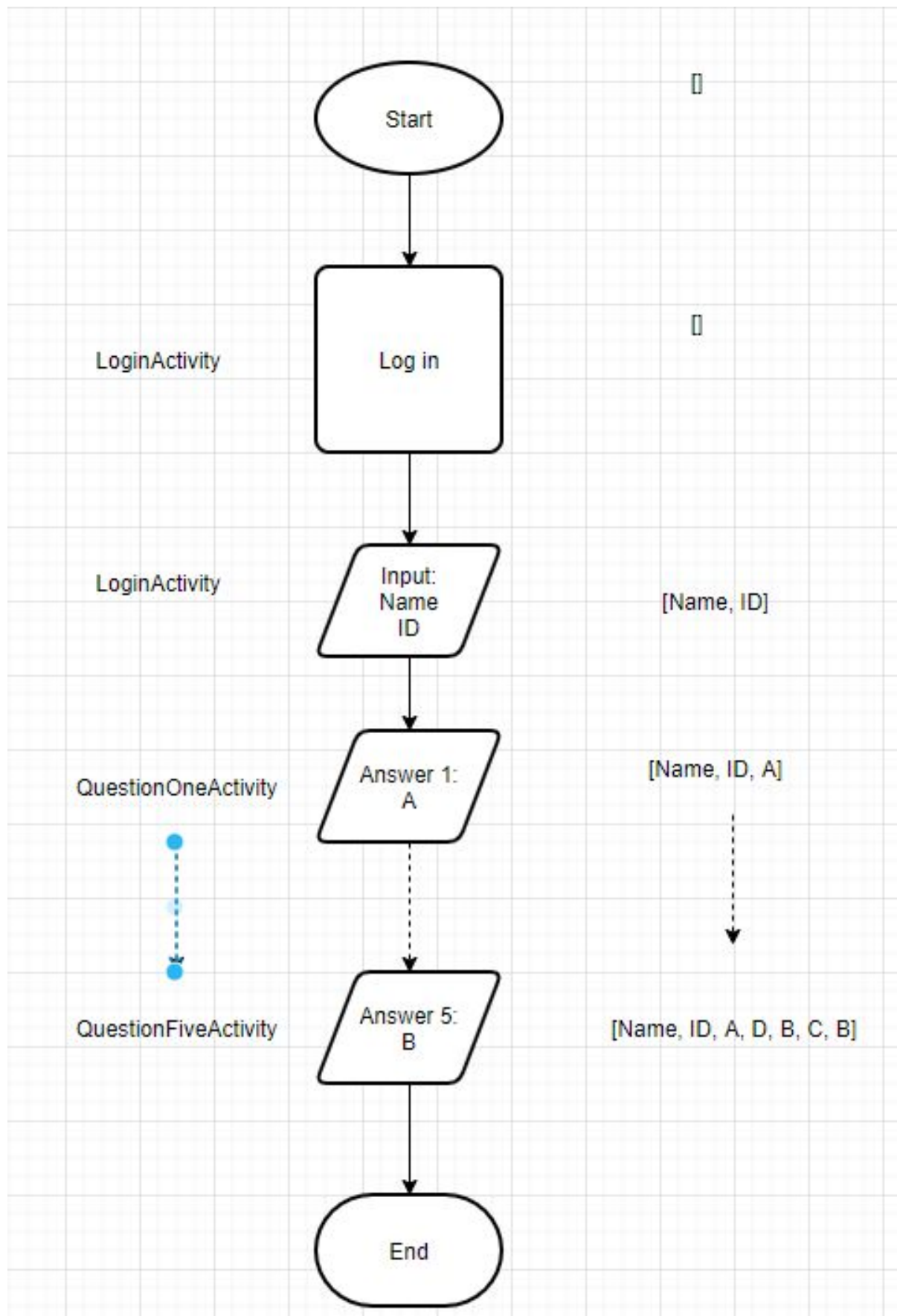I switched to an ArrayList and added data to it as follows

Fig 1

At every stage, I use intents to pass the ArrayList from one activity to the next.

4.ISSUES

In my testing I have come across one bug that has to do with the way I chose to store data. When the user goes to a previous activity after selecting an answer causes the ArrayList to be refreshed in memory. Thus it takes the value `null` and if the user tries to continue from there the app crashes.

A full list of all the issues can be found on the repository's [issue page](#).

5.CONCLUSIONS AND RECOMMENDATIONS

- I feel confident that I implemented both the functional and the non-functional requirements of this project to

the best of my ability. The app is able to capture a user's name, id and answers to the five questions. Additionally, it can calculate the user's score out of five as well as the number of questions attempted and not attempted. All this data is displayed on the screen and sent to the lecturer's number.

- It could be improved by fixing the issue mentioned in the section above.

  It would also be a good idea to give the user the option of sending the results to the lecturer upon completion. This alongside keeping track of the number of times the user has attempted the quiz would make great additions to the app.

6.APPENDIX

Code

AndroidManifest

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.eric.quiz">

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

    <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=".LoginActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

        <activity android:name=".QuestionOneActivity">
        </activity>

        <activity android:name=".QuestionTwoActivity">
        </activity>

        <activity android:name=".QuestionThreeActivity">
        </activity>
```

```xml
        <activity android:name=".QuestionFourActivity">
        </activity>

        <activity android:name=".QuestionFiveActivity">
        </activity>

        <activity android:name=".ResultsActivity">
        </activity>
    </application>

</manifest>
```

LoginActivity

```java
package com.eric.quiz;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class LoginActivity extends AppCompatActivity {

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

```java
    public void login() {
        final EditText idEditText = findViewById(R.id.editTextID);
        final EditText nameEditText = findViewById(R.id.editTextName);
        Button loginButton = findViewById(R.id.buttonOkLogin);
        loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // This ArrayList will store all the data we're interested in
                ArrayList<String> myList = new ArrayList<>();
                myList.add(String.valueOf(idEditText.getText()));
                myList.add(String.valueOf(nameEditText.getText()));
                Intent intent = new Intent(LoginActivity.this,
QuestionOneActivity.class);
                intent.putExtra("key", myList);
                startActivity(intent);
            }
        });
    }
}
```

QuestionOneActivity

```java
package com.eric.quiz;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class QuestionOneActivity extends AppCompatActivity {
    @Override
```

```java
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_question_one);
        final ArrayList<String> myList = (ArrayList<String>)
getIntent().getSerializableExtra("key");
        Button previousButton = findViewById(R.id.buttonPrevious);
        Button homeButton = findViewById(R.id.buttonHome);
        Button nextButton = findViewById(R.id.buttonNext);
        previousButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionOneActivity.this,
LoginActivity.class);
                startActivity(intent);
            }
        });

        homeButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionOneActivity.this,
LoginActivity.class);
                startActivity(intent);
            }
        });


        nextButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                RadioButton radioButtonA = findViewById(R.id.radioButtonA);
                RadioButton radioButtonB = findViewById(R.id.radioButtonB);
                RadioButton radioButtonC = findViewById(R.id.radioButtonC);
                RadioButton radioButtonD = findViewById(R.id.radioButtonD);
                int notDone = 0;
                if (myList != null) {
```

```java
            if (radioButtonA.isChecked()) {
                myList.add("A");
            } else if (radioButtonB.isChecked()) {
                myList.add("B");
            } else if (radioButtonC.isChecked()) {
                myList.add("C");
            } else if (radioButtonD.isChecked()) {
                myList.add("D");
            } else {
                // If none of the radio buttons is checked, insert N into the ArrayList to
                // represent N/A and set the number of questions not done to 1
                myList.add("N");
                notDone = 1;
            }
        }
        System.out.println(myList);
        Intent intent = new Intent(QuestionOneActivity.this, QuestionTwoActivity.class);
        intent.putExtra("key", myList);
        intent.putExtra("not done", notDone);
        startActivity(intent);
    }
    });
}
}
```

QuestionTwoActivity

```java
package com.eric.quiz;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
```

```java
import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class QuestionTwoActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_question_two);
        final ArrayList<String> myList = (ArrayList<String>)
getIntent().getSerializableExtra("key");
        final Intent intent = getIntent();
        Button previousButton = findViewById(R.id.buttonPrevious);
        Button homeButton = findViewById(R.id.buttonHome);
        Button nextButton = findViewById(R.id.buttonNext);
        previousButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionTwoActivity.this,
QuestionOneActivity.class);
                startActivity(intent);
            }
        });

        homeButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionTwoActivity.this,
LoginActivity.class);
                startActivity(intent);
            }
        });

        nextButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```java
            RadioButton radioButtonA = findViewById(R.id.radioButtonA);
            RadioButton radioButtonB = findViewById(R.id.radioButtonB);
            RadioButton radioButtonC = findViewById(R.id.radioButtonC);
            RadioButton radioButtonD = findViewById(R.id.radioButtonD);
            int notDone = intent.getIntExtra("not done", 0);
            if (myList != null) {
                if (radioButtonA.isChecked()) {
                    myList.add("A");
                } else if (radioButtonB.isChecked()) {
                    myList.add("B");
                } else if (radioButtonC.isChecked()) {
                    myList.add("C");
                } else if (radioButtonD.isChecked()) {
                    myList.add("D");
                } else {
                    // If none of the radio buttons is checked, insert N into the
ArrayList to
                    // represent N/A and increment the number of questions not
done by 1
                    myList.add("N");
                    notDone++;
                }
            }
            Intent intent = new Intent(QuestionTwoActivity.this,
QuestionThreeActivity.class);
            intent.putExtra("key", myList);
            intent.putExtra("not done", notDone);
            startActivity(intent);
        }
    });
  }
}
```

QuestionThreeActivity

```java
package com.eric.quiz;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class QuestionThreeActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_question_three);
        final ArrayList<String> myList = (ArrayList<String>)
getIntent().getSerializableExtra("key");
        final Intent intent = getIntent();
        Button previousButton = findViewById(R.id.buttonPrevious);
        Button homeButton = findViewById(R.id.buttonHome);
        Button nextButton = findViewById(R.id.buttonNext);
        previousButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionThreeActivity.this,
QuestionTwoActivity.class);
                startActivity(intent);
            }
        });

        homeButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```java
            Intent intent = new Intent(QuestionThreeActivity.this,
LoginActivity.class);
            startActivity(intent);
        }
    });


    nextButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            RadioButton radioButtonA = findViewById(R.id.radioButtonA);
            RadioButton radioButtonB = findViewById(R.id.radioButtonB);
            RadioButton radioButtonC = findViewById(R.id.radioButtonC);
            RadioButton radioButtonD = findViewById(R.id.radioButtonD);
            int notDone = intent.getIntExtra("not done", 0);
            if (myList != null) {
                if (radioButtonA.isChecked()) {
                    myList.add("A");
                } else if (radioButtonB.isChecked()) {
                    myList.add("B");
                } else if (radioButtonC.isChecked()) {
                    myList.add("C");
                } else if (radioButtonD.isChecked()) {
                    myList.add("D");
                } else {
                    myList.add("N");
                    notDone++;
                }
            }
            Intent intent = new Intent(QuestionThreeActivity.this,
QuestionFourActivity.class);
            intent.putExtra("key", myList);
            intent.putExtra("not done", notDone);
            startActivity(intent);
        }
    });
}
```

```
}
```

QuestionFourActivity

```java
package com.eric.quiz;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class QuestionFourActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_question_four);
        final ArrayList<String> myList = (ArrayList<String>)
getIntent().getSerializableExtra("key");
        final Intent intent = getIntent();
        Button previousButton = findViewById(R.id.buttonPrevious);
        Button homeButton = findViewById(R.id.buttonHome);
        Button nextButton = findViewById(R.id.buttonNext);
        previousButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionFourActivity.this,
QuestionThreeActivity.class);
                startActivity(intent);
            }
        });
```

```java
    homeButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent intent = new Intent(QuestionFourActivity.this,
LoginActivity.class);
            startActivity(intent);
        }
    });


    nextButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            RadioButton radioButtonA = findViewById(R.id.radioButtonA);
            RadioButton radioButtonB = findViewById(R.id.radioButtonB);
            RadioButton radioButtonC = findViewById(R.id.radioButtonC);
            RadioButton radioButtonD = findViewById(R.id.radioButtonD);
            int notDone = intent.getIntExtra("not done", 0);
            if (myList != null) {
                if (radioButtonA.isChecked()) {
                    myList.add("A");
                } else if (radioButtonB.isChecked()) {
                    myList.add("B");
                } else if (radioButtonC.isChecked()) {
                    myList.add("C");
                } else if (radioButtonD.isChecked()) {
                    myList.add("D");
                } else {
                    myList.add("N");
                    notDone++;
                }
            }
            Intent intent = new Intent(QuestionFourActivity.this,
QuestionFiveActivity.class);
            intent.putExtra("key", myList);
            intent.putExtra("not done", notDone);
```

```
            startActivity(intent);
        }
    });
    }
}
```

QuestionFiveActivity

```java
package com.eric.quiz;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class QuestionFiveActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_question_five);
        final ArrayList<String> myList = (ArrayList<String>)
getIntent().getSerializableExtra("key");
        final Intent intent = getIntent();
        Button previousButton = findViewById(R.id.buttonPrevious);
        Button homeButton = findViewById(R.id.buttonHome);
        Button submitButton = findViewById(R.id.buttonSubmit);
        previousButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionFiveActivity.this,
QuestionFourActivity.class);
                startActivity(intent);
```

```java
                }
        });


        homeButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(QuestionFiveActivity.this,
LoginActivity.class);
                startActivity(intent);
            }
        });


        submitButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                RadioButton radioButtonA = findViewById(R.id.radioButtonA);
                RadioButton radioButtonB = findViewById(R.id.radioButtonB);
                RadioButton radioButtonC = findViewById(R.id.radioButtonC);
                RadioButton radioButtonD = findViewById(R.id.radioButtonD);
                int notDone = intent.getIntExtra("not done", 0);
                if (myList != null) {
                    if (radioButtonA.isChecked()) {
                        myList.add("A");
                    } else if (radioButtonB.isChecked()) {
                        myList.add("B");
                    } else if (radioButtonC.isChecked()) {
                        myList.add("C");
                    } else if (radioButtonD.isChecked()) {
                        myList.add("D");
                    } else {
                        myList.add("N");
                        notDone++;
                    }
                }
                Intent intent = new Intent(QuestionFiveActivity.this,
ResultsActivity.class);
```

```java
            intent.putExtra("key", myList);
            intent.putExtra("not done", notDone);
            startActivity(intent);
        }
    });
  }
}
```

ResultsActivity

```java
package com.eric.quiz;

import android.content.Intent;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class ResultsActivity extends AppCompatActivity {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_results);
    final ArrayList<String> myList = (ArrayList<String>)
getIntent().getSerializableExtra("key");
    Intent intent = getIntent();
    int notDone = intent.getIntExtra("not done", 0);
    // Number of questions done is got by subtracting the number of
questions not done from
    // the total number of questions
    int done = 5 - notDone;
```

```java
    TextView textViewId = findViewById(R.id.textViewID);
    TextView textViewName = findViewById(R.id.textViewName);
    TextView textViewAttempted = findViewById(R.id.textViewAttempted);
    TextView textViewResults = findViewById(R.id.textViewResults);
    TextView textViewFailed = findViewById(R.id.textViewFailed);
    TextView textViewNotAttempted =
findViewById(R.id.textViewNotAttempted);

    String id = myList.get(0);
    String name = myList.get(1);
    textViewId.setText(id);
    textViewName.setText(name);
    textViewAttempted.setText(Integer.toString(done));
    textViewNotAttempted.setText(Integer.toString(notDone));

    // Remove id and name from ArrayList
    myList.remove(0);
    myList.remove(0);
    String[] correctAnswers;
    correctAnswers = new String[]{"C", "B", "D", "C", "D"};
    int failed = 0;
    // Compare the submitted answers to the correct answers
    for (int i = 0; i < correctAnswers.length; i++) {
        if (!myList.get(i).equals(correctAnswers[i])) {
            failed++;
        }
    }
    int result = 5 - failed;
    textViewFailed.setText(Integer.toString(failed));
    textViewResults.setText(String.format("%d/%d", result, 5));
    Button homeButton = findViewById(R.id.buttonHome);
    homeButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent intent = new Intent(ResultsActivity.this, LoginActivity.class);
            startActivity(intent);
```

```java
        }
    });

    // Send all the results to the lecturer's number
    String phoneNo = "+254735000330";
    String message = "Student ID: " + id + " Student Name: " + name + "
scored: " + result + "/" + 5 + "\nQuestions Attempted: " + done + "\nQuestions
Failed: " + failed + "\nQuestions not attempted: " + notDone;
    try {
        SmsManager smsManager = SmsManager.getDefault();
        smsManager.sendTextMessage(phoneNo, null, message, null, null);
        Toast.makeText(getApplicationContext(), "SMS sent.",
            Toast.LENGTH_LONG).show();
    } catch (Exception e) {
        Toast.makeText(getApplicationContext(), "SMS failed, please try
again.", Toast.LENGTH_LONG).show();
    }
}
}
```

XML resources

activity_login.xml

```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"
    tools:context=".LoginActivity">

    <LinearLayout
        android:id="@+id/linearLayout"
```

```xml
        android:layout_width="409dp"
        android:layout_height="wrap_content"
        android:layout_marginEnd="2dp"
        android:layout_marginRight="2dp"
        android:orientation="vertical"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0">

        <ImageView
            android:id="@+id/imageView2"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:contentDescription="@string/usiu_logo"
            app:srcCompat="@drawable/usiu_logo"
            tools:src="@tools:sample/avatars"
            tools:srcCompat="@drawable/usiu_logo" />

        <TextView
            android:id="@+id/textView5"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="center"
            android:text="@string/united_states_international_university"
            app:layout_constraintTop_toBottomOf="@+id/textView6" />

        <TextView
            android:id="@+id/textView6"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="center"
            android:text="@string/ist_099_examination"
            android:textAppearance="@style/TextAppearance.AppCompat.Large"
            android:textStyle="bold" />
```

```xml
    </LinearLayout>

    <TableLayout
        android:id="@+id/tableLayout"
        android:layout_width="409dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="1dp"
        android:layout_marginLeft="1dp"
        android:layout_marginTop="1dp"
        android:layout_marginEnd="1dp"
        android:layout_marginRight="1dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/linearLayout"
        app:layout_constraintVertical_bias="0.0">

        <TableRow
            android:layout_width="match_parent"
            android:layout_height="match_parent">

            <TextView
                android:id="@+id/textView9"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="@string/student_id"
                tools:text="Enter Your Student ID" />

            <EditText
                android:id="@+id/editTextID"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:autofillHints=""
                android:ems="10"
                android:hint="@string/id"
```

```xml
                android:inputType="numberDecimal" />
        </TableRow>

        <TableRow
            android:layout_width="match_parent"
            android:layout_height="49dp">

            <TextView
                android:id="@+id/textView10"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="@string/student_name"
                tools:text="Enter Your Student Name" />

            <EditText
                android:id="@+id/editTextName"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:autofillHints=""
                android:ems="10"
                android:hint="@string/name"
                android:inputType="textPersonName" />

        </TableRow>

    </TableLayout>

    <Button
        android:id="@+id/buttonOkLogin"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="162dp"
        android:layout_marginLeft="162dp"
        android:layout_marginTop="143dp"
        android:layout_marginEnd="162dp"
        android:layout_marginRight="162dp"
```

```xml
        android:layout_marginBottom="203dp"
        android:text="@android:string/ok"
        android:textAppearance="@style/TextAppearance.AppCompat.Medium"
        android:textColor="#000000"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/tableLayout" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_question_one.xml

```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"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="1dp"
        android:gravity="center"
        android:text="@string/header_1"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        android:textColor="#000000"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.046" />
```

```xml
    <View
        android:id="@+id/divider"
        android:layout_width="409dp"
        android:layout_height="10dp"
        android:layout_marginBottom="480dp"
        android:background="?android:attr/listDivider"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="81dp"
        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginEnd="17dp"
        android:layout_marginRight="17dp"
        android:layout_marginBottom="384dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <TextView
            android:id="@+id/textView2"
            android:layout_width="74dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/q1"

android:textAppearance="@style/TextAppearance.AppCompat.Medium"
            android:textColor="#000000"
            android:textStyle="bold" />

        <TextView
            android:id="@+id/textView3"
```

```xml
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/question_1"

android:textAppearance="@style/TextAppearance.AppCompat.Medium" />
    </LinearLayout>

    <RadioGroup
        android:layout_width="214dp"
        android:layout_height="160dp"
        android:layout_marginEnd="112dp"
        android:layout_marginRight="112dp"
        android:layout_marginBottom="184dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent">

        <RadioButton
            android:id="@+id/radioButtonA"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/my_computer" />

        <RadioButton
            android:id="@+id/radioButtonB"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/my_documents" />

        <RadioButton
            android:id="@+id/radioButtonC"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/the_recycle_bin" />

        <RadioButton
```

```xml
        android:id="@+id/radioButtonD"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/the_task_bar" />
    </RadioGroup>

    <LinearLayout
        android:id="@+id/linearLayout3"
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="354dp"
        android:layout_height="60dp"
        android:layout_marginStart="28dp"
        android:layout_marginLeft="28dp"
        android:layout_marginEnd="29dp"
        android:layout_marginRight="29dp"
        android:layout_marginBottom="60dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <Button
            android:id="@+id/buttonPrevious"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/previous" />

        <Button
            android:id="@+id/buttonHome"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/home" />
```

```xml
    <Button
        android:id="@+id/buttonNext"
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/next" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_question_two.xml

```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"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="1dp"
        android:gravity="center"
        android:text="@string/header_2"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        android:textColor="#000000"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.046" />
```

```xml
<View
    android:id="@+id/divider"
    android:layout_width="409dp"
    android:layout_height="10dp"
    android:layout_marginBottom="480dp"
    android:background="?android:attr/listDivider"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent" />

<LinearLayout
    android:layout_width="345dp"
    android:layout_height="73dp"
    android:layout_marginStart="16dp"
    android:layout_marginLeft="16dp"
    android:layout_marginEnd="17dp"
    android:layout_marginRight="17dp"
    android:layout_marginBottom="384dp"
    android:orientation="horizontal"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="71dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/q2"

android:textAppearance="@style/TextAppearance.AppCompat.Medium"
        android:textColor="#000000"
        android:textStyle="bold" />

    <TextView
        android:id="@+id/textView3"
```

```xml
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/question_2"

android:textAppearance="@style/TextAppearance.AppCompat.Medium" />
    </LinearLayout>

    <RadioGroup
        android:layout_width="214dp"
        android:layout_height="160dp"
        android:layout_marginEnd="112dp"
        android:layout_marginRight="112dp"
        android:layout_marginBottom="184dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent">

        <RadioButton
            android:id="@+id/radioButtonA"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/database" />

        <RadioButton
            android:id="@+id/radioButtonB"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/computer_aided_design" />

        <RadioButton
            android:id="@+id/radioButtonC"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/computer_graphics" />

        <RadioButton
```

```xml
        android:id="@+id/radioButtonD"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/spreadsheet" />
    </RadioGroup>

    <LinearLayout
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="354dp"
        android:layout_height="60dp"
        android:layout_marginStart="28dp"
        android:layout_marginLeft="28dp"
        android:layout_marginEnd="29dp"
        android:layout_marginRight="29dp"
        android:layout_marginBottom="60dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <Button
            android:id="@+id/buttonPrevious"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/previous" />

        <Button
            android:id="@+id/buttonHome"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/home" />
```

```xml
    <Button
        android:id="@+id/buttonNext"
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/next" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_question_three.xml

```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"
  android:layout_width="match_parent"
  android:layout_height="match_parent">

  <TextView
    android:id="@+id/textView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="1dp"
    android:gravity="center"
    android:text="@string/header_3"
    android:textAppearance="@style/TextAppearance.AppCompat.Large"
    android:textColor="#000000"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.046" />
```

```xml
<View
    android:id="@+id/divider"
    android:layout_width="409dp"
    android:layout_height="10dp"
    android:layout_marginBottom="480dp"
    android:background="?android:attr/listDivider"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent" />

<LinearLayout
    android:layout_width="355dp"
    android:layout_height="50dp"
    android:layout_marginStart="17dp"
    android:layout_marginLeft="17dp"
    android:layout_marginEnd="17dp"
    android:layout_marginRight="17dp"
    android:layout_marginBottom="384dp"
    android:orientation="horizontal"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="68dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/q3"

android:textAppearance="@style/TextAppearance.AppCompat.Medium"
        android:textColor="#000000"
        android:textStyle="bold" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/question_3"

android:textAppearance="@style/TextAppearance.AppCompat.Medium" />
    </LinearLayout>

    <RadioGroup
        android:layout_width="214dp"
        android:layout_height="160dp"
        android:layout_marginEnd="112dp"
        android:layout_marginRight="112dp"
        android:layout_marginBottom="184dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent">

        <RadioButton
            android:id="@+id/radioButtonA"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/holiday" />

        <RadioButton
            android:id="@+id/radioButtonB"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/stolen" />

        <RadioButton
            android:id="@+id/radioButtonC"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/traffic" />

        <RadioButton
            android:id="@+id/radioButtonD"
```

```xml
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/payroll" />
    </RadioGroup>

    <LinearLayout
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="354dp"
        android:layout_height="60dp"
        android:layout_marginStart="17dp"
        android:layout_marginLeft="17dp"
        android:layout_marginEnd="17dp"
        android:layout_marginRight="17dp"
        android:layout_marginBottom="60dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <Button
            android:id="@+id/buttonPrevious"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/previous" />

        <Button
            android:id="@+id/buttonHome"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/home" />

        <Button
```

```xml
        android:id="@+id/buttonNext"
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/next" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_question_four.xml

```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"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="1dp"
        android:gravity="center"
        android:text="@string/header_4"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        android:textColor="#000000"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.046" />

    <View
        android:id="@+id/divider"
```

```xml
        android:layout_width="409dp"
        android:layout_height="10dp"
        android:layout_marginBottom="480dp"
        android:background="?android:attr/listDivider"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <LinearLayout
        android:layout_width="228dp"
        android:layout_height="46dp"
        android:layout_marginStart="17dp"
        android:layout_marginLeft="17dp"
        android:layout_marginEnd="17dp"
        android:layout_marginRight="17dp"
        android:layout_marginBottom="384dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <TextView
            android:id="@+id/textView2"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/q4"

android:textAppearance="@style/TextAppearance.AppCompat.Medium"
            android:textColor="#000000"
            android:textStyle="bold" />

        <TextView
            android:id="@+id/textView3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
```

```xml
        android:text="@string/question_4"

android:textAppearance="@style/TextAppearance.AppCompat.Medium" />
    </LinearLayout>

    <RadioGroup
        android:layout_width="316dp"
        android:layout_height="168dp"
        android:layout_marginEnd="32dp"
        android:layout_marginRight="32dp"
        android:layout_marginBottom="168dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent">

        <RadioButton
            android:id="@+id/radioButtonA"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/main_memory" />

        <RadioButton
            android:id="@+id/radioButtonB"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/secondary" />

        <RadioButton
            android:id="@+id/radioButtonC"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/illusion" />

        <RadioButton
            android:id="@+id/radioButtonD"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
```

```xml
        android:text="@string/type_super" />
    </RadioGroup>

    <LinearLayout
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="384dp"
        android:layout_height="60dp"
        android:layout_marginStart="28dp"
        android:layout_marginLeft="28dp"
        android:layout_marginEnd="28dp"
        android:layout_marginRight="28dp"
        android:layout_marginBottom="60dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <Button
            android:id="@+id/buttonPrevious"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/previous" />

        <Button
            android:id="@+id/buttonHome"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/home" />

        <Button
            android:id="@+id/buttonNext"
            style="?android:attr/buttonBarButtonStyle"
```

```xml
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/next" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_question_five.xml

```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"
  android:layout_width="match_parent"
  android:layout_height="match_parent">

  <TextView
    android:id="@+id/textView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="1dp"
    android:gravity="center"
    android:text="@string/header_5"
    android:textAppearance="@style/TextAppearance.AppCompat.Large"
    android:textColor="#000000"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.046" />

  <View
    android:id="@+id/divider"
    android:layout_width="409dp"
    android:layout_height="10dp"
```

```xml
        android:layout_marginBottom="480dp"
        android:background="?android:attr/listDivider"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <LinearLayout
        android:layout_width="228dp"
        android:layout_height="50dp"
        android:layout_marginStart="17dp"
        android:layout_marginLeft="17dp"
        android:layout_marginEnd="17dp"
        android:layout_marginRight="17dp"
        android:layout_marginBottom="384dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <TextView
            android:id="@+id/textView2"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/q5"

android:textAppearance="@style/TextAppearance.AppCompat.Medium"
            android:textColor="#000000"
            android:textStyle="bold" />

        <TextView
            android:id="@+id/textView3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/question_5"
```

```xml
            android:textAppearance="@style/TextAppearance.AppCompat.Medium" />
    </LinearLayout>

    <RadioGroup
        android:layout_width="301dp"
        android:layout_height="164dp"
        android:layout_marginEnd="52dp"
        android:layout_marginRight="52dp"
        android:layout_marginBottom="188dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent">

        <RadioButton
            android:id="@+id/radioButtonA"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/easier" />

        <RadioButton
            android:id="@+id/radioButtonB"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/main_frame" />

        <RadioButton
            android:id="@+id/radioButtonC"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/execute" />

        <RadioButton
            android:id="@+id/radioButtonD"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@string/several" />
```

```xml
    </RadioGroup>

    <LinearLayout
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="354dp"
        android:layout_height="60dp"
        android:layout_marginStart="28dp"
        android:layout_marginLeft="28dp"
        android:layout_marginEnd="28dp"
        android:layout_marginRight="28dp"
        android:layout_marginBottom="60dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <Button
            android:id="@+id/buttonPrevious"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/previous" />

        <Button
            android:id="@+id/buttonHome"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/home" />

        <Button
            android:id="@+id/buttonSubmit"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="@string/submit" />

    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_results.xml

```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"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="1dp"
        android:gravity="center"
        android:text="@string/header_results"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        android:textColor="#000000"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.046" />

    <View
        android:id="@+id/divider"
        android:layout_width="409dp"
        android:layout_height="10dp"
        android:layout_marginBottom="480dp"
```

```xml
        android:background="?android:attr/listDivider"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <LinearLayout
        android:id="@+id/linearLayout2"
        style="?android:attr/buttonBarButtonStyle"
        android:layout_width="407dp"
        android:layout_height="0dp"
        android:layout_marginEnd="3dp"
        android:layout_marginRight="3dp"
        android:layout_marginBottom="76dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <Button
            android:id="@+id/buttonHome"
            style="?android:attr/buttonBarButtonStyle"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="@string/home" />

    </LinearLayout>

    <TableLayout
        android:layout_width="375dp"
        android:layout_height="140dp"
        android:layout_marginStart="34dp"
        android:layout_marginLeft="34dp"
        android:layout_marginEnd="3dp"
        android:layout_marginRight="3dp"
        android:layout_marginBottom="164dp"
        app:layout_constraintBottom_toTopOf="@+id/linearLayout2"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent">

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <TextView
            android:id="@+id/textView4"
            android:layout_width="wrap_content"
            android:layout_height="match_parent"
            android:text="@string/your_id"
            android:textStyle="bold" />

        <TextView
            android:id="@+id/textViewID"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <TextView
            android:id="@+id/textView8"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/name"
            android:textStyle="bold" />

        <TextView
            android:id="@+id/textViewName"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </TableRow>
```

```xml
    <TableRow
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <TextView
            android:id="@+id/textView12"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/your_results"
            android:textStyle="bold" />

        <TextView
            android:id="@+id/textViewResults"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <TextView
            android:id="@+id/textView14"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/questions_attempted" />

        <TextView
            android:id="@+id/textViewAttempted"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
```

```xml
        android:layout_height="match_parent">

    <TextView
        android:id="@+id/textView16"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/questions_failed" />

    <TextView
        android:id="@+id/textViewFailed"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
  </TableRow>

  <TableRow
      android:layout_width="match_parent"
      android:layout_height="match_parent">

    <TextView
        android:id="@+id/textView18"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/questions_not_attempted" />

    <TextView
        android:id="@+id/textViewNotAttempted"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
  </TableRow>
</TableLayout>

<TextView
    android:id="@+id/textView20"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="64dp"
```

```xml
        android:layout_marginLeft="64dp"
        android:layout_marginEnd="64dp"
        android:layout_marginRight="64dp"
        android:layout_marginBottom="124dp"
        android:text="@string/results_sent"
        android:textStyle="bold"
        app:layout_constraintBottom_toTopOf="@+id/linearLayout2"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

colors.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
  <color name="colorPrimary">#18B167</color>
  <color name="colorPrimaryDark">#005F2F</color>
  <color name="colorAccent">#B11862</color>
</resources>
```

strings.xml

```xml
<resources>
  <string name="app_name">Quiz</string>
  <string name="ist_099_examination">IST 099 Examination</string>
  <string name="united_states_international_university">United States
International University</string>
  <string name="usiu_logo">USIU logo</string>
  <string name="name">Name</string>
  <string name="id">ID</string>
  <string name="student_id">Enter Your Student ID</string>
  <string name="student_name">Enter Your Student Name</string>
  <string name="header_1">IST 099 Exam. Question#1</string>
  <string name="header_2">IST 099 Exam. Question#2</string>
  <string name="header_3">IST 099 Exam. Question#3</string>
  <string name="header_4">IST 099 Exam. Question#4</string>
  <string name="header_5">IST 099 Exam. Question#5</string>
  <string name="header_results">IST 099 Exam. Results</string>
```

```xml
<string name="q1">Q1.</string>
<string name="q2">Q2.</string>
<string name="q3">Q3.</string>
<string name="q4">Q4.</string>
<string name="q5">Q5.</string>
<string name="question_1">The location on a windows operating system where all the deleted files are stored is</string>
<string name="question_2">When you draw a plan of a house, you would make use of the following software</string>
<string name="question_3">In which of the following is batch programming used?</string>
<string name="question_4">Virtual memory is</string>
<string name="question_5">Multiprogramming systems</string>

<string name="my_computer">A. my computer</string>
<string name="my_documents">B. my documents</string>
<string name="the_recycle_bin">C. the recycle bin</string>
<string name="the_task_bar">D. the task bar</string>

<string name="database">A. database</string>
<string name="computer_aided_design">B. computer aided design</string>
<string name="computer_graphics">C. computer graphics</string>
<string name="spreadsheet">D. spreadsheet</string>

<string name="holiday">A. booking a holiday</string>
<string name="stolen">B. checking stolen vehicles</string>
<string name="traffic">C. control of traffic lights</string>
<string name="payroll">D. producing a company\'s payroll</string>

<string name="main_memory">A. an extremely large main memory</string>
<string name="secondary">B. an extremely large secondary memory</string>
<string name="illusion">C. an illusion of extremely large main memory</string>
<string name="type_super">D. a type of memory used in super computers</string>
```
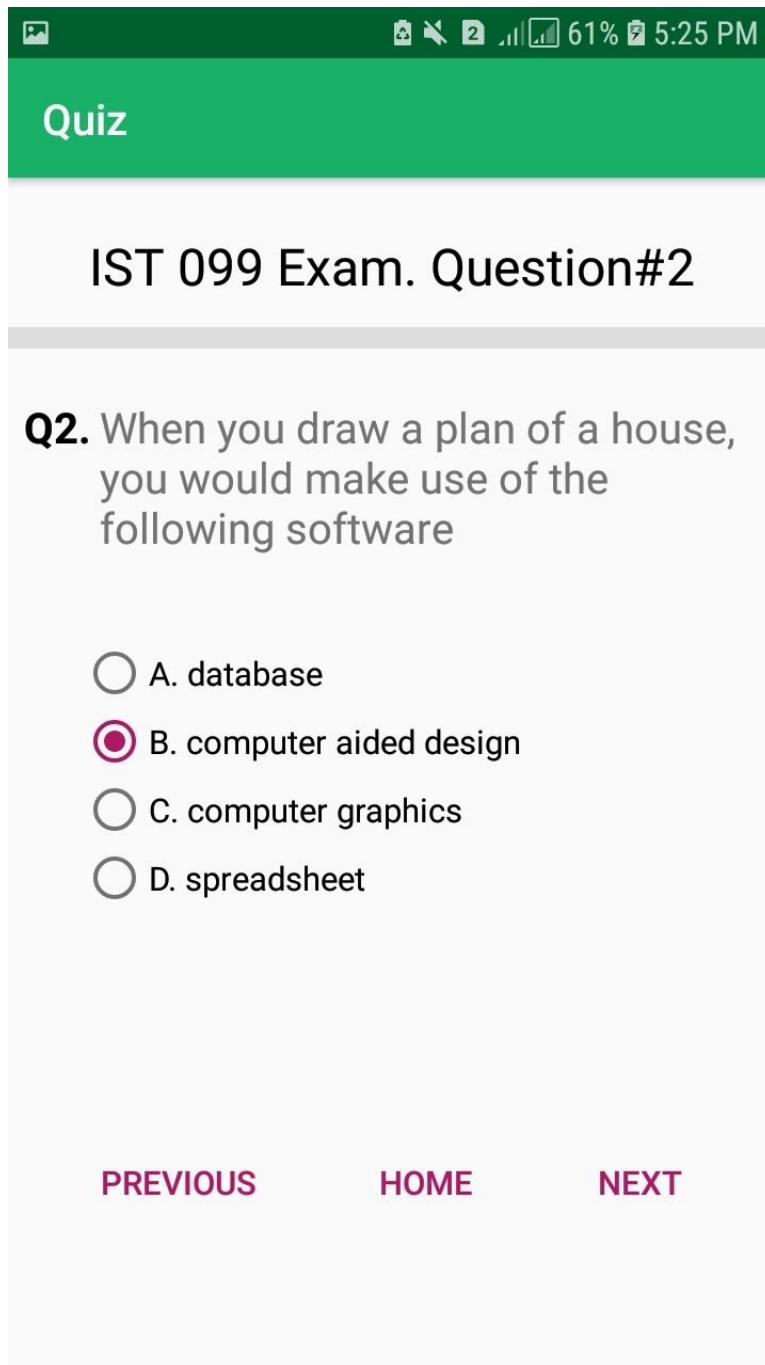
```xml
    <string name="easier">A. are easier to develop than single programming system</string>
    <string name="main_frame">B. are used only on large main frame computers</string>
    <string name="execute">C. execute each job faster</string>
    <string name="several">D. run several programs at the same time</string>

    <string name="previous">Previous</string>
    <string name="home">Home</string>
    <string name="next">Next</string>
    <string name="results_sent">Results sent to your lecturer on 0735000330</string>
    <string name="your_results">Your Results=</string>
    <string name="your_id">Your ID</string>
    <string name="questions_not_attempted">Questions not attempted=</string>
    <string name="questions_attempted">Questions attempted=</string>
    <string name="questions_failed">Questions failed=</string>
    <string name="submit">Submit</string>
</resources>
```

Screenshots

Android Studio
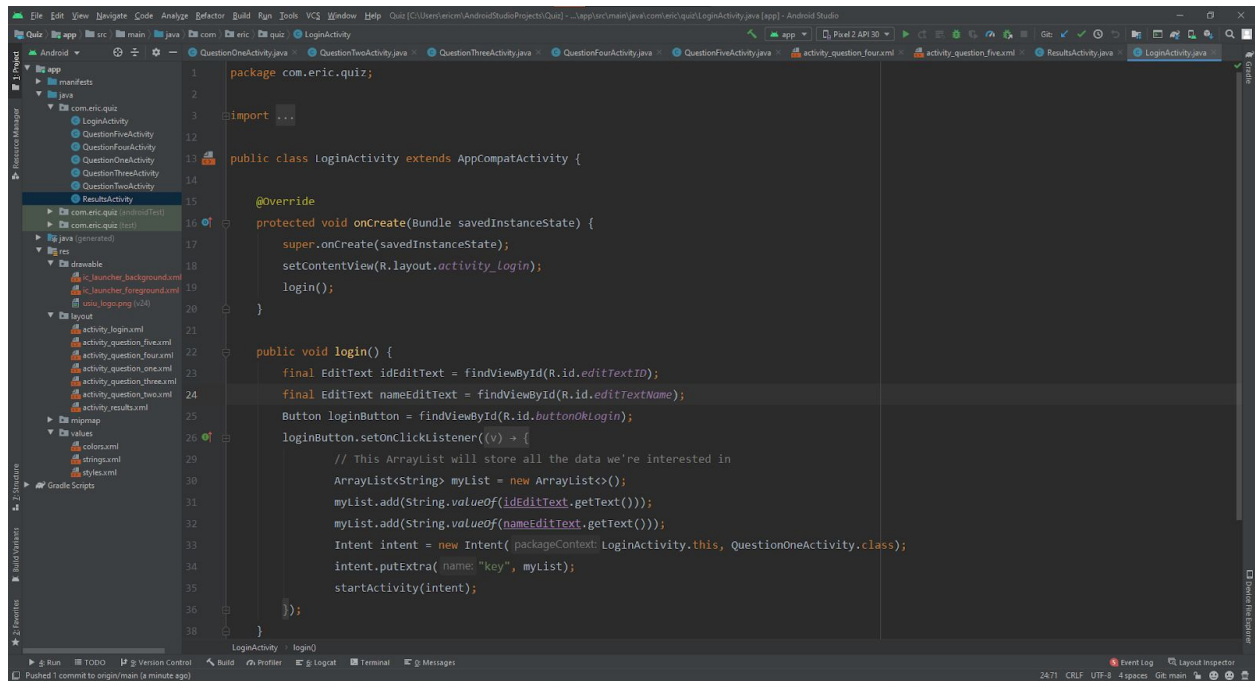
My Android Device

LoginActivity

United States International University

IST 099 Examination

Enter Your Student ID   657642

Enter Your Student Name   Eric Mahasi

OK

IST 099 Exam. Question#1

Q1. The location on a windows operating system where all the deleted files are stored is

- ○ A. my computer
- ○ B. my documents
- ● C. the recycle bin
- ○ D. the task bar

PREVIOUS   HOME   NEXT

QuestionOneActivity

QuestionTwoActivity

Quiz

IST 099 Exam. Question#2

Q2. When you draw a plan of a house, you would make use of the following software

○ A. database

◉ B. computer aided design

○ C. computer graphics

○ D. spreadsheet

PREVIOUS   HOME   NEXT

IST 099 Exam. Question#3

Q3. In which of the following is batch programming used?

○ A. booking a holiday

○ B. checking stolen vehicles

○ C. control of traffic lights

○ D. producing a company's payroll

PREVIOUS   HOME   NEXT

QuestionThreeActivity

QuestionFourActivity

IST 099 Exam. Question#4

Q4. Virtual memory is

🔘 A. an extremely large main memory

⚪ B. an extremely large secondary memory

⚪ C. an illusion of extremely large main memory

⚪ D. a type of memory used in super computers

PREVIOUS   HOME   NEXT

IST 099 Exam. Question#5

Q5. Multiprogramming systems

○ A. are easier to develop than single programming system

○ B. are used only on large main frame computers

○ C. execute each job faster

◉ D. run several programs at the same time

PREVIOUS   HOME   SUBMIT

QuestionFiveActivity

Quiz

IST 099 Exam. Results

Your ID	657642
Name	Eric Mahasi
Your Results=	3/5
Questions attempted=	4
Questions failed=	2
Questions not attempted=1	

Results sent to your lecturer on 0735000330

HOME

Quiz

IST 099 Exam. Results

Your ID	657642
Name	Eric Mahasi
Your Results=	3/5
Questions attempted=	4
Questions failed=	2
Questions not attempted=1	

Results sent to your lecturer on 0735000330

HOME

SMS sent.

My SMS app confirms the details were sent

🔋 🔕 🄂 📶 62% 🔋 5:28 PM

< **+254735000330**   📞 ⋮

Name: Eric Mahasis
cored2/5Questions
Attempted:
4Questions Failed:
3Questions not
attempted: 1

🄂 8:12 PM

Student ID: 543
Student Name: test
scored: 5/5
Questions
Attempted: 5
Questions Failed:
0 Questions not
attempted: 0

🄂 8:15 PM

———— Sunday, November 22, 2020 ————

Student ID: 657642
Student Name: Eric
Mahasi scored: 3/5
Questions
Attempted: 4
Questions Failed: 2
Questions not
attempted: 1

🄂 5:27 PM

📎 |Enter message   ☺ 🄂₁