



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

JANUARY – APRIL 2018 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER AND LIBRARY SCIENCE

REGULAR PROGRAMME

DIT 016: MOBILE PROGRAMMING

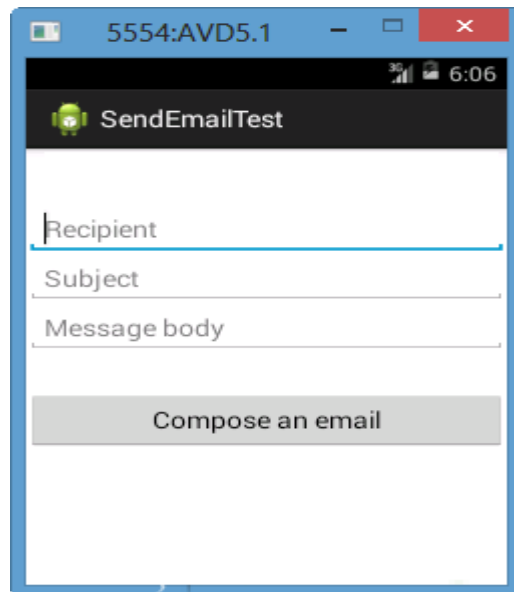
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Date: APRIL 2018

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) The Following is practical android interface on how to use Intent object to launch Email client that send an Email to the given recipients. Create an executable application using android studio or Eclipse IDE. **(12 marks)**



- b) An ICT class was evaluating android development. Create a simple mobile application to display for following string text on your mobile screen with a toast. **(8 marks)**

<Mobile programming>

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_centerHorizontal="true"
android:layout_centerVertical="true"
android:padding="@dimen/padding_medium"
android:text="@string/welcome to android class"
android:text="@string/CMT 314 EXPERIENCE EMULATOR"
tools:context=".MainActivity"/>
</RelativeLayout>
```

- i) Create a student login application and enable the interface between main activity, xml string and activity main.

```
packagecom.example.cuea;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
publicclass MainActivity extends AppCompatActivity {
    @Override
    protectedvoid onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

(6 marks)

- ii) Critique the following statements “match content is key dimension layout” **(4 marks)**

- Q2. a) Below is a simple android login module to authenticate usernames and their corresponding password.

```
<TextView
  android:id="@+id/texto"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_alignLeft="@+id/listaVista"
  android:layout_alignParentBottom="true"
  android:layout_alignRight="@+id/listaVista"
  android:text="firstname"/>
  android:text="lastname"/>
<ListView
<ListView
  android:id="@+id/listaVista"
```

- i) Explain the role of the elements used from above. **(4marks)**
- ii) Discuss a brief summary of software development in context of software development **(4 marks)**
- b) Define the following terms.
- i) DVM
 - ii) Emulator
 - iii) Toast draft
 - iv) ANR **(8 marks)**
- c) Explain how data in android is integrated with cloud services. **(4 marks)**
- Q3. a) Describe the following terms;
- i) Implicit intent **(2 marks)**
 - ii) Broadcast receiver **(2 marks)**
 - iii) Service **(2 marks)**
- b) i) State FOUR key components of android architecture **(4 marks)**
- ii) Evaluate FOUR merits of android runtime environment. **(4 marks)**
- c) Discuss common dialog boxes that support in android. **(4 marks)**
- d) State the attributes of toggle button **(2 marks)**
- Q4. a) Explain the scope of intent filter of the coding used below. **(4marks)**

```
<intent-filter>  
  
<actionandroid:name="android.intent.action.MAIN"/>  
  
<categoryandroid:name="android.intent.category.LAUNCHER"/>  
  
</intent-filter>
```

- ii) Define notifications? State and explain THREE notifications available in android giving each example. **(7 marks)**
- iii) The android students was evaluating container .Briefly state components available in android container. **(3 marks)**
- iv) Discuss major security issues facing mobile technology today. **(6 marks)**

Q5. a) use the android coding below;

```
Intentintent=newIntent(this,MyTestActivity.class);  
startActivity(intent);
```

- i) Evaluate the role of content used above. **(4 marks)**
- ii) A class was evaluate sub-activites. Describe how do you pass the data to sub-activities android? **(2 marks)**
- ii) Define application Widgets in android? Describe how it can be embedded in other applications. **(5 marks)**
- b) Android software is developed under different layers Describe Android application Architecture used **(5 marks)**
- c) Discuss FOUR common features of android software. **(4 marks)**

END