

061006T4ICT

ICT TECHNICIAN LEVEL 6

IT/OS/ICT/CR/11/6

DEVELOP MOBILE APPLICATION

JULY/AUGUST 2023



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL
(TVET CDACC)**

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper has TWO sections **A** and **B**. Attempt questions in each section as per instructions given in the section.
2. You are provided with a separate answer booklet.
3. Marks for each question are indicated in the brackets.
4. Do not write on the question paper

SECTION A: (40 MARKS)***Answer ALL the questions***

1. State TWO mobile operating systems that exist in the market. (2 Marks)
2. Describe TWO types of mobile applications that a developer can create. (4 Marks)
3. Apart from Android Studio, State FOUR other application development platforms that a developer can use to create a mobile application. (4 Marks)
4. Explain TWO reasons why mobile applications have become popular in the society today. (4 Marks)
5. Use the following program segment to answer the questions that follow;

```

1. <RadioGroup>
2.   <RadioButton
3.     android:id="@+id/ radioYes"
4.     android:text="Male"
5.     android: checked="true" />
6.   <RadioButton
7.     android:id="@+id/ radioNo"
8.     android:text="Female"
9.     android:checked="false" /
10. </RadioGroup>

```

- a) In which file are you likely to find such statements. (1 marks)
- b) Explain the importance of such a file in (i), when developing mobile applications. (2 Marks)
- c) Interpret the statements of line 5 & 9. (2 Marks)
6. List TWO computer programming languages that can be used in mobile application development. (2 Marks)
7. Jane an ICT Level 6 student intends to setup storage of data for an Android application. Identify FOUR data storage options that she will use. (4 Marks)
8. Outline THREE resources defined in XML. (3 Marks)
9. Describe TWO testing techniques used in software development. (4 Marks)
10. Emulators are used for performing similar kinds of testing which are performed on real devices. Highlight FOUR scenarios that can be tested on a real device but not on the emulator. (4 Marks)
11. Differentiate between Activities and Services as used in mobile application development. (4 Marks)

SECTION B: (60 MARKS)

Answer any THREE questions in this section.

12.

- a) Describe THREE reasons why you would advise a user to run the application on mobile device as opposed to desktop computer. (6 Marks)
- b) Outline THREE practices incorporated to enhance data security. (6 Marks)
- c) Discuss FOUR security risks that businesses experience on using mobile applications. (8 Marks)

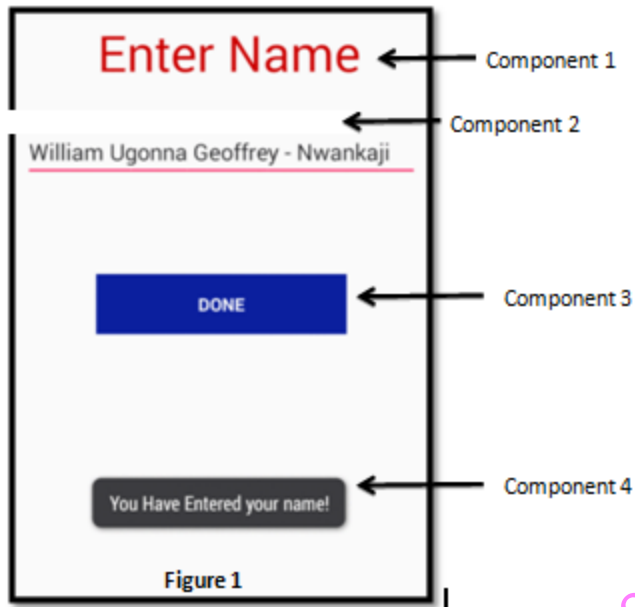
13.

- a) Android is an example of system software used in mobile technology. Identify FOUR components of an Android project. (4 Marks)
- b) Outline FOUR popular IDE for mobile application development in the modern technology (4 Marks)
- c) Describe THREE types of dialog boxes supported by the Android development platform. (6 Marks)
- d) James has noticed that his mobile application is crashing often; explain THREE ways of troubleshooting it. (6 Marks)

14.

- a) List FOUR mobile application distribution platforms that a mobile developer will use to come up with various applications (4 Marks)

b) Write Android program statements to get the following user interface.



- i) Component 1 (3 Marks)
- ii) Component 2 (4 Marks)
- iii) Component 3 (3 Marks)

c) Write a program statement to implement event handler to achieve the pop message on figure 1, Component 4 (6 Marks)

15.

- a) Name FIVE types of mobile application testing as one of the stages of mobile development. (5 Marks)
- b) Highlight FOUR steps involved in publishing an application as applied in development of mobile application. (4 Marks)
- c) List FIVE types of buttons used in a mobile application development environment (5 Marks)
- d) Outline THREE reasons why SQLite database is most preferred for mobile applications. (6 Marks)