

BINDURA UNIVERSITY OF SCIENCE EDUCATION  
FACULTY OF SCIENCE AND ENGINEERING  
DEPARTMENT OF COMPUTER SCIENCE  
BSc HONS DEGREE IN COMPUTER SCIENCE  
CSH205/SWE205 MOBILE APPLICATION DEVELOPMENT

DURATION 3 HOURS

Total Marks is 100

Instructions to candidates:

2 NOV 2024

The paper consists of Section A (Theory) and Section B (Practical)  
Answer all questions.

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**Section A: Theory**

**Question 1**

- a) Compare and contrast explicit intent from implicit intent in mobile application development. [4]
- b) List any five(5) factors to consider when designing mobile applications. [10]
- c) Write a java code snippet to automatically start your default web browser and open <https://www.facebook.com> website using an implicit intent. [10]

**Question 2**

- a) Copy and fill up the missing parts in table 1. [10]

Folder/File	Descriptiion
res/drawable-hdpi	
res/layout	
AndroidManifest.xml	
Build.gradle	
res/values	

Table 1 :Android application structure components

- b) To create a service, you create a Java class that extends the **Service** base class or one of its existing subclasses. The **Service** base class defines various

callback methods. Briefly describe the following callbacks of a service base class:

- (i) onStart().
- (ii) onBind().
- (iii) onUnbind().
- (iv) onBind().
- (v) onCreate().
- (vi) onDestroy().

[6]

### Section B: Practical

Create a folder on the desktop and name it using your registration number and course code. Save all your work in this folder.

#### Question 3

Write a mobile application program that contains EditText to enter UserName, Password, Address and Age (numeric), radio buttons for gender (male and female), Date of Birth (Date Picker), countryCode (Spinner) and a Submit button. On clicking the submit button, print all the data as a Toast message. [20]

#### Question 4

Write a mobile based application program that allows the user to interact with SQLITE database (StudentDB) as shown in Figure 1. The user must be able to delete records from the database table(student) and enter new records. All necessary packages have been imported for you already. [20]

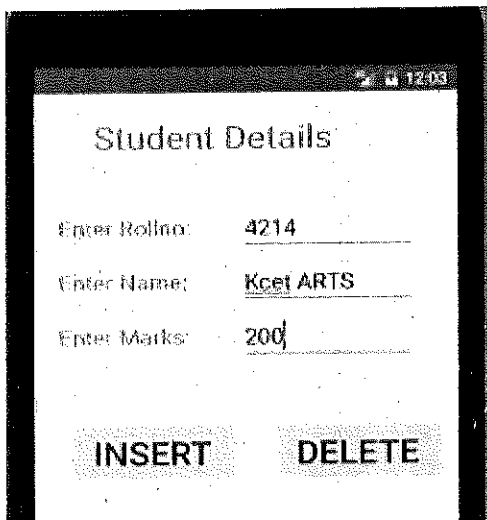


Figure 1: Database connectivity

### Question 5

Android Intent is an object carrying an intent such as a message from one component to another component within the application or outside the application. To send email from your android application you do not need to develop your email client from scratch because they are already available. Your task is to:

- (i) use **ACTION\_SEND** action to launch an email client installed on your android device.
- (ii) specify **mailto:** as URI using **setData()** method and data type will be **text/plain** using **setType()** .
- (iii) use built-in support to add **TO, SUBJECT, CC, TEXT**.
- (iv) Design and use the Compose Email button to list down all the installed email clients on your android device. [20]

\*\*\*\*\*END OF EXAM\*\*\*\*\*