RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (Honors) Degree in Information Technology
Fourth Year - Semester I Examination – January/February 2021
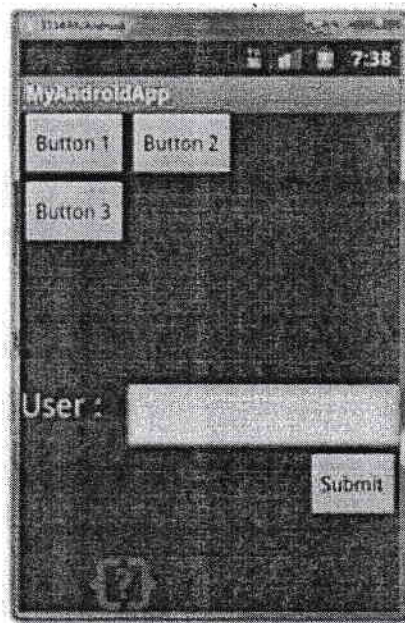
ICT 4204 – MOBILE APPLICATION DEVELOPMENT

Time: Two (02) hours

- Answer **ALL** questions
- This paper includes three (03) pages

1.
   a. Elaborate on the statement "Today, mobile marketing is more effective than ever".

   (05 marks)

   b. What features can be incorporated to a mobile App of a particular business, in order to make the App more user friendly?

   (05 marks)

   c. Before selecting the mobile platform, you should always keep one thing in your mind. Who is your target audience and who are going to use your app. Explain with appropriate examples, how you would decide the mobile platform for a particular business App?

   (05 marks)

   d. What challenges would be faced by the developers in the IT division of a well-established non-IT business trying to develop a mobile App for the first time?

   (05 marks)

   e. Why modern mobile phones are called "SMART PHONES"?

   (05 marks)

2.

a. Elaborate on the statement "Huawei could challenge Android".

(05 marks)

b. Explain the concept "Design by Declaration "in the context of Android Apps using appropriate code examples

(05 Marks)

c. Write the required source code to define the following Layout.in Android. State all your assumptions (if any) clearly.

(15 Marks)

3.

a. Re-usability is encouraged and promoted in Android development. Compared to other object oriented applications, re-usability can cause difficulties in Android applications development. Elaborate on that using appropriate examples.

(05 marks)

b. What does ANR mean in Android? What could be the main reason for that and how could the developers avoid it?

(05 marks)

c. Why Android 3.0 and 5.0 are significant?

(05 marks)

d. 'Android camera apps could be hijacked to spy on users' Elaborate on that statement.

(05 marks)

e. Discuss the advantages and disadvantages of AVD (android virtual device) in Android Studio.

(05 marks)

4. A student has been asked to develop an android app to produce the water bill; the task at present carried out by meter readers. The app needs to capture the meter, extract the current reading from the captured image, calculate the consumption, calculate the cost /fee for the current month, get the accounts details of the customer and prepare the bill for the customer.

   a) Analyze the above list of activities and describe in adequate detail how and where each activity should be carried out?

   (05 marks)

   b) What are the technologies / services required in the app to successfully perform its task?

   (05 marks)

   c) Explain in detail the key points for the android developer/ programmer to pay attention

   (05 marks)

   d) Describe in adequate detail, the work flow indicating the difficulties that can arise during the development of this app

   (10 marks)

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