

Project Paper

Faculty	Information Technology		
Qualification	Bachelor of Science in Information Technology		
Module code	ITJA321	Module name	Java and Distributed Systems
Module leader	Mr. Dennis Luke Owuor	Internal moderator	Ndai Makhurane
Copy editor	Mrs Carol Fofu	Total marks	105
Assignment title	Android Development	Due date	19 October 2018

This module is presented on NQF level 7.
 Mark deduction of 5% per day will be applied to late submission.
 Late projects will not be accepted after three days from due date.
 This is an individual project.

This project contributes 20% towards the final mark.

Instructions to candidate

- Remember to keep a copy of all submitted assignments.
- All work must be typed.
- Please note that you will be evaluated on your writing skills in all your assignments.
- All work must be submitted through Turnitin¹ and the full Originality Report must be submitted with the final assignment.
- Negative marking will be applied if you are found guilty of plagiarism, poor writing skills or if you have applied incorrect or insufficient referencing. (See the table at the end of this document where the application of negative marking is explained.)
- Each assignment must include a cover page, table of contents and full bibliography, based on the Harvard referencing method as applied at CTI Education Group.
- Use the cover sheet template² for the assignment. This is available from your lecturer.
- You are not allowed to offer your work for sale or to purchase the work of other students. This includes the use of professional assignment writers and websites, such as Essay Box. If this should happen, CTI Education Group reserves the right not to accept future submissions from a student.

Assignment format

You must follow the generic requirements when writing and submitting assignments as follows:

- Use standard Arial, font size 10.
- Include page numbers.
- Include a title page.
- Print submissions on both sides of the page.
- Write no more than the maximum word limit.
- Ensure any diagrams, screen shots and PowerPoint presentations fit correctly on the page and are referenced.
- Include a table of contents.
- Use accurate Harvard referencing method throughout the assignment.
- Include a bibliography based on Harvard referencing method at the end of the assignment.

¹ Refer to the **CTI Plagiarism Policy**, which is available from your lecturer.

² Available on *myLMS*.

- Include completed Assessment Coversheet and Declaration (available on *myLMS*).
- Check spelling, grammar and punctuation.
- Run the assignment through Turnitin software.

Essential embedded knowledge and skills required of students

- Report-writing skills
- Ability to analyse scenarios/case studies
- Understanding of subject field concepts and definitions
- Ability to apply theoretical knowledge to propose solutions to real-world problems
- Referencing skills (Harvard referencing method)

Resource requirements

- A device with Internet access for research
- A desktop or personal computer for typing assignments
- Access to a library or resource centre
- Prescribed reading resources

Delivery requirements (evidence to be presented by students)

- A typed assignment³
- A Turnitin Originality Report

Minimum reference requirements

At least five references for first year, ten references for second year and fifteen references for third year.

Additional reading is required to complete this assignment successfully. You need to include the following additional information sources:

- Printed textbooks/e-books
- Printed/online journal articles
- Academic journals in electronic format accessed via PROQUEST or other databases
- Periodical articles (e.g. business magazine articles)
- Information or articles from relevant websites
- Other information sources, e.g. geographic information (maps), census reports, interviews, etc.

Note

- It is crucial that students reference all consulted information sources, by means of in-text referencing and a bibliography, according to the Harvard referencing method.
- Negative marking will be applied if a student commits plagiarism (i.e. using information from information sources without acknowledgement and reference to the original source).
- In such cases, negative marking, also known as 'penalty scoring', refers to the practice of subtracting marks for insufficient/incorrect referencing.
- Consult the table at the end of this document, which outlines how negative marking will be applied as well as the way in which it will affect your assignment mark.

³ Refer to the **CTI Conditions of Enrolment** for more guidance (available on *myLMS*).

Assessment criteria assessed

The following criteria are assessed in this project:

LO1	Comply with the goals, architecture and changes of distributed systems.	Question no.	Support documents
1.1	Android Development	1	N/A
1.2	XML and Android Development	2	N/A
1.3	XML and Android Development	2	N/A

Question 1

30 Marks

As an Android developer, one aspect that help you come up with interactive app is by using activities and fragments. The activity and fragments instances in your app transition through different states in their lifecycle. With the aid of diagrams, discuss the activity and fragment life cycle, highlighting major differences between activity lifecycle and fragment lifecycle.

(30 marks)

End of Question 1

Question 2

75 Marks

Study the scenario and complete the questions that follow:

Your company has been contracted by a fast food restaurant company to come up with an android mobile application that allows clients to order food. Your boss has suggested the best way to aid the client in identifying application specification, is to come up with a high level prototype app and present it to the client in order to get more user requirements. The application should allow:

- Users to login
- If username and password is correct, the system takes the user to the fragment landing page or home page. If the username and password are wrong, alert dialogue message showing "wrong username or password" and username and password edittexts are set to empty.
- Home page should have two buttons (order food and logout).
- Clicking order food takes you to the second fragment, which shows a list of all foods that are available, plus their prices in a list view or a RecyclerView.
- By clicking an item on the list view, an alert dialogue box should pop showing the food you have ordered and the price.
- Clicking logout button on the homepage fragment should be able to take you to logging in fragment.

Source: Owuor (2018)

- 2.1 Based on the project, design use-case and activity diagram that best presents the scenario. (20 marks)
- 2.2 To achieve the above design, use android studio or eclipse IDE to design a LinearLayout called login_layout. The layout should have two Edittexts for login and password and one button for login (5 marks)
- 2.3 Write a code that overrides the onClick method, validates the username and password and allows the user to move to the next fragment if the correct username and password are entered. (10 marks)
- 2.4 Create a well designed Layout with two buttons, one for ordering food and the other for logout. (10 marks)
- 2.5 Implement code that maps the xml layout buttons on the onCreate view (5 marks)

- 2.6 Override the onClick method to enable the user to view the list of available foods and also to enable users to logout. (5 marks)
- 2.7 With the aid of listView or a recyclerView, implement a layout that will list the menu. (5 marks)
- 2.8 On the onCreate method, implement an arrayAdapter that lists all the available food and their prices. Also implement onclick listener to the items on the list. Upon clicking, an item displays a message box showing what you have ordered. (15 marks)

End of Question 2

You have now reached the end of this assignment. Ensure that you have answered all the required questions before submitting your assignment to your lecturer and ensure that you have adhered to all the instructions within this assignment.

Negative marking

Third-year students

- A minimum of 5 additional information sources must be consulted and correctly cited.
- If no additional information sources have been used, a full 5% must be deducted.
- Deduct 1% per missing resource of the required 5. For example:
- Markers must interpret the Turnitin report to determine actual Overall Similarity Index percentage.
- Markers to apply the penalties for Category A for insufficient sources and incorrect referencing style.
- Markers to apply the penalties/actions for Category B for plagiarism.

Category A

Minimum reference requirements	Deduction of final mark
No additional information sources have been used or referenced	5%

Category B: Interpretation of Turnitin report

Students may not have more than a 15% Overall Similarity Index on Turnitin, after analysis of the report.

Interpretation of Turnitin Originality Report
Lecturer to capture the following
1. Original Overall Similarity Index (percentage) of Turnitin report
2. Overall Similarity Index (percentage) after lecturer analysis of Turnitin report (to determine legitimate plagiarism)

Penalties	Action
a. Less than 15% of the body of assessment (based on Point 2 above)	No action. Mark according to memorandum
b. More than 15% of the body of assessment and first offence (based on Point 2 above)	Award 0% for the project
c. If more than 70% of the body of assessment	Award 0% and conduct disciplinary hearing