COS 3

Remaining Time: 2 hours, 17 minutes, 22 seconds.

⯆ **Question Completion Status:**

T

Test Information

Description	SemesterTest 1 - 3rd April 2023
Instructions	**Examiner**

Internal: Stacey Baror and Arne Schreuder

External: Dr Dongmo Cyrille, University of South Africa

Instructions

1. Read the question carefully and answer all the questions that follow.

2. If you plagiarise your submission, your marks will be forfeited (i.e., you earn a '0' mark), and you will face disciplinary action.

3. The test starts at 17:30 and stops at 20:00

4. You have 120 minutes to complete the paper, and 30 minutes is allocated to typing, editing and formatting your document - **Start time 17:30 - Stop time 20:00**

5. Type your answer in any software application of your choice, and when a drawing (modelling) is required, do so using the following **draw.io** or **visual paradigm** software.

6. A lecturer will be on COS 301 ClickUp Blackboard session **"SemesterTest Query" from 17:30-18:30** for error or omission queries related to the semester test questions.

7. Extra time students, your concerns are acknowledged; communicate with the Course Coordinator asap.

Timed Test	This test has a time limit of 2 hours and 30 minutes.This test will save and submit automatically when the time expires. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple	This test allows multiple attempts.

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Remaining Time: 2 hours, 17 minutes, 22 seconds.

| **QUESTION 1** | **15 points** | Saved |

1a.

Software Architecture is **not** the operational aspect of software development. What, then, is the usefulness of software architecture? *Backup your answers with a real-world example and ensure to present at least **five values of software architecture** with real-world examples to obtain full marks* [10] points

1b.

What is the role of architectural structure in software architect design? [5] points

For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).

| B | I | U | S | Paragraph ⌄ | Arial ⌄ |

| 10pt ⌄ | ☰ ⌄ | ☷ ⌄ | **A** ⌄ | 🖊 ⌄ | T× | ⋯ |

✂ ⧉ 📋 🔍 ↺ ↻ | ≡ ≡ ≡ ≡ | ⇥ ⇤

x² x₂ | 🔗 ⛓ | ¶ ¶ | — ± | ABC✓ ⌄ | √

¶ " Ω ☺ 🔖 | ⊞ ⌄ ⊠ | ⊟ ⊟ | ⊟ ⊞ ⊞ ⊠

⊞ ⊞ ⊠ | <> ☥ {;} | 👁 ⑦ ⤢ | ⊕

| P | 0 WORDS   POWERED BY TINY |

| **QUESTION 2** | **12 points** | Saved |

You have been tasked with developing a 'social network' app for the mini project. Following the software engineering life-cycle, present a case study of the 'social network' app's

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

QUESTION 3   **10 points**   Saved

At a high level, the software engineering process is broken down into five steps/phases. List these steps/phases and explain what happens in each step in the context of your mini-project. [10] points

For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).

P   0 WORDS   POWERED BY TINY
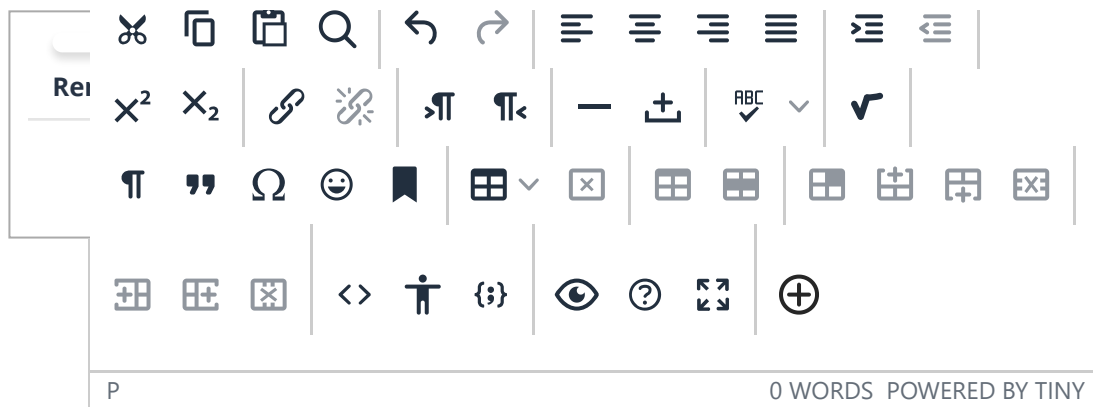
QUESTION 4   **10 points**   Saved

Name and explain the purpose of each role in your group. i.e., project owner = The client [10] points

For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

QUESTION 5   48 points   Saved

Using the LinkedIn system, in line with the software functional and architectural requirements discussions, do the following.

1. List **seven subsystems of the LinkedIn system** [3.5]points

2. For each subsystem of the LinkedIn system listed above, **list a minimum of three functions** of each subsystem [7 X 3] = [10.5] points.

3. Draw **ONE use case diagram** that consists of the **seven (7) subsystem**s of the LinkedIn system you listed above. Each subsystem should **also have its three (3) functions** [3.5 + 10.5] = [14] points

4. For the LinkedIn system, based on the functional requirements you have listed above, list and explain at least seven (7) quality requirements [7] points

5. Identify **four (4) architectural patterns** that best address and align with the requirements you have identified so far and **describe how the architectural patterns should work together** to achieve the **LinkedIn system's goal** as in your functional requirements --- [9]---- [13] points

For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Remaining Time: 2 hours, 17 minutes, 22 seconds.

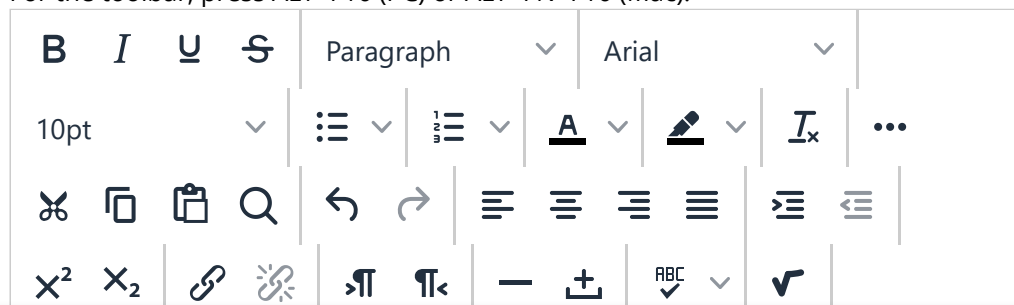| QUESTION 6	**5 points**	Saved

Evaluate your contributions to the mini-project.

1. What have you contributed to your team and the mini-project [2]?

2. Is there any area you need to improve to enable you to excel in the capstone project? How will you go about achieving this [2]?

3. Grade your **contributions to the mini project out of 100** based on your evaluation above [1]?

For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).

B	I	U	S	Paragraph ∨	Arial ∨

10pt ∨

1. I am the business analyst for my Mini Project team, I have initiated communication (drafted an email alongside my collegue) with regards to the project specification with the client (Mr. Arno Schreurder) where I let them know of our plan so far and to see if they understood and greed with what we were doing. They seemed happy about it. I have also drafted documentation among the team itself where we outline everything about the project, which includes the requirement analysis, implementation plan, design and other such relevant information (The document is still being completed as the team carries on with the work). And I am still the medium between the team and the client alongside my colleague.

P	194 WORDS POWERED BY TINY

Click Save and Submit to save and submit. Click Save All Answers to save all answers.