

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION SEMESTER II SESSION 2022/2023

COURSE NAME

SOFTWARE ENGINEERING

COURSE CODE

BIT 10103

PROGRAMME CODE :

BIT

EXAMINATION DATE :

JULY/AUGUST 2023

DURATION

3 HOURS

INSTRUCTION

1. ANSWER ALL QUESTIONS

2.THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK.**

3.STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA

CLOSED BOOK

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

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Q1 Answer Q1(a)- Q1(d) based on Figure Q1.

Case Study: E-Commerce Website

Background: A company wants to develop an e-commerce website to sell their products online. They want to increase their customer base and make it easy for customers to purchase their products.

Objectives: The objective of this requirement analysis is to identify the key features and functionality required for the e-commerce website to meet the company's objectives.

Approach: The requirement analysis process will involve the following steps:

- Identify stakeholders: The stakeholders in this project are the company's management, marketing team, IT team, web developers, and end-users (customers).
- 2. Gather requirements: Requirements will be gathered from the stakeholders through interviews, surveys, and workshops. The requirements will include the following:
 - User authentication and registration: Customers should be able to create accounts and log in to the website to make purchases.
 - ii. Product catalog: The website should have a catalog of all products with detailed descriptions, images, and prices.
 - iii. Shopping cart: Customers should be able to add products to their shopping carts and make changes before checkout.
 - iv. Checkout process: The checkout process should be simple and easy to use, with multiple payment options.
 - v. Order tracking: Customers should be able to track the status of their orders.
 - vi. Shipping and delivery: The website should provide information about shipping and delivery options and costs.
 - vii. Customer support: The website should have a customer support system to address any issues or questions.
- viii. Analyze requirements: The requirements will be analyzed to ensure they are feasible, cost-effective, and aligned with the company's objectives.
- 3. Prioritize requirements: The requirements will be prioritized based on their importance and impact on the project.
- 4. Document requirements: The requirements will be documented in a requirements specification document, which will serve as a reference for the development team.

Outcome: The outcome of the requirement analysis process will be a clear understanding of the key features and functionality required for the e-commerce website. This will help the development team to build a website that meets the company's objectives and satisfies the needs of the end-users.

Source: ChatGPT

Figure Q1

2



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(a) Identify TWO (2) user requirements. (4 marks) (b) Identify TWO (2) system requirements. (4 marks) Suggest FOUR (4) non-functional requirements for the proposed system. (c) (8 marks) (d) Draw a context diagram. (16 marks) (e) Draw a use case diagram. (20 marks) Draw the architectural design for a hotel reservation system with THREE (3) components. Q2 (12 marks) Q3 State FOUR (4) typical software maintenance problems. (8 marks) Calculate the the estimated effort required to develop a simple software system with 5000 Q4 lines of code using Basic COCOMO based on constant tuning coefficient and exponent. (8 marks)

-END OF QUESTIONS -



