Functional Area: Network Infrastructure & Operation (Operation / Support & Maintenance)

1. Title	Formulate functional requirement and software design specification
2. Code	ITCSNO523A
3. Range	When developing applications it is essential to have the functional requirements clearly identified and agreed with stakeholders before the application design can begin. This UoC concerns with defining competencies for formulating functional requirements and design specification.
4. Level	5
5. Credit	3
6. Competency	Performance Requirement 6.1 Possess the knowledge in the subject area • Knowledgeable of the objectives and the importance of formulating requirements and design specifications • Experienced in managing functional requirement gathering • Possess extensive experience with the methodologies to formulate high level design • Possess extensive experience in the software development life cycle (SDLC) processes (i.e. translate the needs of users to software requirements, then high level and low level design as well as program development, testing, etc.) • Possess extensive experience in software engineering and system analysis (i.e. from requirement gathering, to development and operation) 6.2 Formulate functional requirement and software design specification Be able to: • Work with users to formulate, analyse, synthesise, and develop the functional requirements • Prioritise the requirements to align with the organisation's software implementation plans and strategies • Document the functional requirements as formal SRS (Software Requirement Specification) • Review SRS and agree with users on requirement specification contents • Perform software design based on the SRS, using the organisation's adopted methodology • Document the design, indicating any assumptions, dependencies, limitations, and constraints regarding the software or hardware, operating system, end user characteristics, etc. • Analyse and validate the formulated design for meeting the requirements in the SRS. • Critically re-evaluate the design to determine its sufficiency in support for the business processes. Propose to enhance the requirement specification, if necessary • Review the design specification with stakeholders for agreement and perform handover to development phase 6.3 Exhibit professionalism • Adopt software development methodologies of the industry or the organisation • All documents are created in the format conformed to the organisation standards and policies.
7. Assessment Criteria	The integrated outcome requirements of this UoC are the ability to: i. work with users effectively to identify software functional requirements ii. document and validate the SRS to meet the user needs while align with the current project objectives iii. analyse and transform the requirements from SRS to a high-level design, produce a design specification following the industry or organisational methodology iv. document the design with assumptions, if any v. review the design at the correct level of the stakeholders to obtain approval and signoff of the design work
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