ASSESSMENT 1 BRIEF	
Subject Code and Title	MIS102 Data and Networking
Assessment Task	Network Environment Exploration
Individual/Group	Individual
Length	Concept Map (1 x A2 or 2 x A3)
Learning Outcomes	The Subject Learning Outcomes demonstrated by successful completion of the tasks below include: a) Describe key components, protocols, and architectures used in data communication and networking. b) Interpret data communication requirements through guided research to support network design decisions.
Submission	**12-week duration:** Due by 11:55pm AEST/AEDT Sunday end of Module 5 (Week 5) **6-week duration:** Due by 11:55pm AEST/AEDT Sunday end of Module 5 (Week 3)
Weighting	25%
Total Marks	100 marks

Assessment Task

For this assessment, you will investigate the network environment of a real-world organisation with which you have interacted, identifying key network components, transmission media and end devices. You will trace how data flows through the network and present your findings in a professional concept map, with recommendations for future improvements.

Please refer to the **Instructions** for details on how to complete this task.

Context

Modern organisations depend on computer networks to connect people, systems and services. As emerging information technology (IT) professionals, understanding how these networks operate in real-world settings is essential for diagnosing issues, improving performance and supporting users. This assessment enables you to explore network infrastructures operating in real-world settings by analysing a business or institution with which you have interacted. You need to be familiar with

some of the organisation's activities in the digital space based on your own experience and/or your own research. You will identify key network components, trace data flow and present your findings in a professional concept map.

This assessment will introduce you to network architecture, data communication and design principles, while developing your analytical and communication skills. It will help you consolidate your understanding of how networks function. It will also prepare you to apply this knowledge in professional contexts such as network analysis, systems design and IT support, where clear technical documentation and justified recommendations are essential.

Instructions

In this assessment, you will investigate and document the network environment of a real-world organisation with which you are personally familiar—ideally one you have interacted or engaged with in the past (e.g., as a customer, employee or partner). Based on your observations and brief research, you will identify key data communication requirements and needs that will influence the preparation of the network's design. The goal is to understand how data flows through various network devices/components and to identify opportunities for improvement.

It is expected that you perform additional research and provide a minimum of five references, including academic sources. Ensure that you use current APA referencing for any sources.

Follow the steps below to complete the task:

1. **Choose an organisation** with at least three identifiable network components and observable data flow processes. Avoid selecting an organisation with highly restricted network access or visibility. You should be familiar with some of the organisation's activities in the digital space, either from your own experience as a customer/user or through brief research on how the organisation uses technology in its operations.

2. **Identify the network elements**, including:
    - end devices (e.g., Point of Sale [POS] terminals, servers, computers and mobile devices);
    - core components (start by identifying the backbone of the network, such as routers, switches and access points. Understanding these will help you see how data flows across the network); and
    - transmission media (e.g., wired, fibre or wireless connections).

3. **Trace the flow of data** through these components—describe how data travels from one point to another by choosing three examples (e.g., from a user device to a server or an external service). Identify some protocols that govern communication and briefly explain their role in data transmission.

4. **Develop a visual representation** of your findings using a **concept map**:
    - Use the **provided concept map template** or create your own design if you prefer; both options are acceptable.
    - Present your concept map on **one A2 page** *or* **two A3 pages** combined into a single file.
    - Include labels, annotations and brief explanations of each element and connection. Each annotation should be 1–2 sentences.
    - Explain how you verified and adapted the generative artificial intelligence (GenAI) output to suit your concept map (see the **AI Tools—Statement of Acknowledgement** section).

5. **Provide short recommendations** and considerations for designing a functional, efficient, secure and scalable network diagram in the future. Your recommendations should reflect how the organisation's data communication needs can be better supported through improved network design. This may include suggestions for upgrading components, changing transmission media or improving data flow efficiency. These will form the basis of your work in *Assessment 2*.

Submit your concept map as a single PDF file. Ensure your full name, student identification (ID) number and subject name are clearly visible on the poster.

Referencing

It is essential that you use current APA style to cite and reference the sources that you use. For more information on citing and referencing guidelines, see the Academic Success webpage.

Assessment Support

For a range of additional resources and support to help you complete your assessment, please consult the Study Support page on the Student Hub.

Academic Integrity

All students are responsible for ensuring that their submitted work is original, adheres to academic writing standards outlined in the Torrens University Academic Writing Guide and is appropriately referenced according to the guidelines provided in the Torrens University APA Referencing Guide.

Students need to have read and be aware of the Torrens University Australia Academic Integrity Policy, Academic Integrity Procedure and subsequent penalties for academic misconduct. For more information, please refer to the Academic Integrity guidelines and the Torrens University Library.

Students must also keep all required evidence in making an assessment, a copy of all submitted material and any assessment drafts.

AI Tools—Statement of Acknowledgement

Torrens University requires students to declare any use of artificial intelligence (AI) tools in their assessments. If you have used AI tools, please include a Statement of Acknowledgement with your submission. For guidance on the appropriate use of AI tools, refer to the Torrens University Library or speak with your learning facilitator.

Submission Instructions

Submit the concept map via Assessments > Briefs & Submissions in the main navigation menu in *MIS102: Data and Networking*. Please name your file using the following format:

- SubjectCode_Surname_FirstNameInitial_AssessmentNumber
  E.g., MIS102_Jones_S_Assessment1.pdf

Your marked assessment can be viewed in MyLearn.

Assessment Due Dates and Late Penalties

Assessments may be submitted on or before the due date. Late penalties apply for assessments that are submitted after the due date.

Refer to:

- Assessment Policy for Higher Education Coursework (HE) and ELICOS
  Torrens University | Think Education
- Assessment Special Consideration Guidelines for Students (HE Coursework)
  Torrens University | Think Education
- Student Hub for Assessment Extension Information.

Special Consideration

To apply for special consideration for a modification to an assessment task or examination due to unexpected or extenuating circumstances, please consult the Assessment Special Consideration Guidelines for Students.

Assessment Rubric

Assessment Criteria	High Distinction (Exceptional) 85–100%	Distinction (Advanced) 75–84%	Credit (Proficient) 65–74%	Pass (Functional) 50–64%	Fail (Yet to achieve minimum standard) 0–49%
Network Component Identification and Analysis **Percentage for this criterion = 25%**	• Accurately identifies and classifies all relevant components, devices, media and protocols • Shows a deep understanding of their roles, functionalities and relevance • Evidence clearly supports observations	• Identifies and classifies most components and protocols correctly • Shows a clear understanding of their roles, functionalities and relevance • Evidence supports most observations	•Identifies key components with some classification errors • Shows a basic understanding of their roles, functionalities and relevance • Evidence partially supports observations	• Identifies few components and/or classification is inconsistent • Shows a limited understanding of their roles, functionalities and relevance. Evidence is minimal or unclear	• Components are missing or misclassified • Shows no understanding of their roles, functionalities and relevance • Evidence is absent or irrelevant

Data Flow and Communication Requirements **Percentage for this criterion = 25%**	•Clearly maps data flow with logical sequencing • Identifies and explains key communication requirements that influence design • Shows a deep understanding of network operations	• Maps data flow with minor errors • Identifies most communication requirements and links them to design • Shows a good understanding of network operations	• Maps basic data flow • Identifies some communication needs with limited explanation • Shows a basic understanding of network operations	• Data flow is unclear or incomplete • Communication needs are minimally addressed • Shows a limited understanding of network operations	• Data flow is missing or incorrect • Communication requirements are not considered • No understanding demonstrated
Recommendations and Design Justification **Percentage for this criterion = 20%**	• Provides insightful, feasible recommendations directly linked to communication needs and network observations • Justifies decisions using networking principles, and industry practices and standards	• Provides relevant recommendations mostly linked to observations • Justification is clear and mostly aligned with industry practices and standards	• Provides basic recommendations with some linkage to observations • Justification is limited	• Recommendations are vague or weakly linked • Justification is minimal	• Recommendations are missing or irrelevant • No justification provided

Concept Map Design and Visual Communication **Percentage for this criterion = 20%**	• Concept map is highly professional, well-organised and visually clear • Annotations are concise and informative • Layout is evident, logical and well-organised	• Concept map is mostly clear and organised • Annotations are mostly informative • Layout is clear and logical, with strong organisation	• Concept map is understandable but may be cluttered or inconsistent • Annotations are basic • Layout is generally clear, with some minor confusion	• Concept map is disorganised or unclear • Annotations are minimal or vague • Layout shows basic organisation but lacks clarity	• Concept map is missing or unreadable • Annotations are absent • Layout is unclear, disorganised or incomplete
Professional Presentation and Referencing **Percentage for this criterion = 10%**	• Writing is clear, accurate and well-structured • APA referencing is correct and complete • Acknowledges AI use appropriately • Includes all the required information (e.g., name, ID and title)	• Writing is mostly clear with minor errors • APA referencing is mostly correct • AI use acknowledged • Includes most of the required information	• Writing has noticeable errors • APA referencing is partially correct • Unclear AI acknowledgement • Some of the required elements are missing	• Writing is frequently unclear • APA referencing is mostly incorrect • Unclear source use • Required elements are incomplete	• Writing is poor or incomprehensible • APA referencing is absent • AI use not acknowledged • Required elements are missing