ACU
PETER FABER
BUSINESS SCHOOL

ASSESSMENT GUIDE

ITEC611 Computer Networks

Semester 2, 2023

Assessment 3

Assessment Artefact: Practical Task (Build a network)

Weighting [50%]

Why this assessment?

- Troubleshoot a network to make it operational
- Plan, design, configure and build a network from scratch
- Efficient network design to reduce cost, time and computing resources
- The feedback from this assessment will help students to understand their current level of knowledge and skills and also to identify the areas of improvement

What are the types of employability skills that I will acquire upon completion of this assessment?

Skill Type	
Developed practical skills to solve problems	☒
Developed confidence to learn independently	☒
Developed knowledge in the field study	☒
Developed work-related knowledge and skills	☒

Assessment Overview:

This assessment task will test the students' grasp of both theoretical and practical aspects of the unit.

Due date	Week 14/15 (16/11/2023 - 08:00 am AEDT)
Weighting	50%
Length and/or format	N/A
Assessment type	Individual
Learning outcomes assessed	LO1, LO2, LO3, LO4
Graduate attributes assessed	GA2, GA4, GA5, GA8, GA10
How to submit	Via Turnitin
Return of assignment	Within 3 weeks of submission
Assessment criteria	Rubric: see end of the document

Context

This is a skill-based assessment where you will be given two different network scenarios and a set of requirements. For the first scenario, you will be given a misconfigured network to identify the errors and make it operational. For the second scenario, you will be given a number of requirements to build a small network for an organisation. In this part, you need to plan, design, configure and build a small network based on the requirements. You must consider various aspects of computer networking including sustainability issues to design an optimal and effective solution. Upon successful completion of this assignment, you will gain essential knowledge and skills which will be required to solve networking problems in your professional career as a network administrator.

Instructions

This is an individual assignment. You need to troubleshoot, plan, design, configure and build an effective and optimal network for a small organisation.

Network Scenario:

You will be provided two network scenarios as follows.

Scenario 1 (Network troubleshooting)- You will be given a packet tracer file that includes a number of misconfigured devices, interfaces and protocols. You need to identify the errors, re-configure the devices/interfaces/protocols to make the network functional. You also need to answer a number of questions related to the network scenario. You need to submit your updated packet tracer file and answers to the questions for this part of the assignment.

Scenario 2 (Building a network)- You will be given a set of network design requirements for a small organisation. Based on the requirements, you need to plan, design, configure and build an effective, optimal and sustainable network. You also need to answer a number of questions related to your network design. For this part of the assignment, you need to submit a packet tracer file of the designed and configured network. You also need to submit answers to the questions related to the designed network including physical topology, logical topology, IP addressing, security and sustainability issues of the network.

How do I submit?

You must submit your files (2 network scenario packet tracer files and 2 answer scripts files word/pdf) via Turnitin. The assignment submission links can be accessed from the Assessments section on the LEO site. Assessments submitted after the due date will incur a late penalty of 5% for each calendar day the assessment is late. Note that if the assignment is submitted three days later the due date, you will not receive any mark.

Some Helpful Websites and Resources (for practice)

https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13788-3.html

https://www.calculator.net/ip-subnet-calculator.html

Who can help me?

- Academic skills Unit (ASU)
- Post a question to the LEO discussion forum
- Consult with your CL.
- Make an appointment with the LiC: Dr Mahmoud Bekhit, Email: mabekhit@acu.edu.au

I'm having problems

SC: Application for Special Consideration Complete this form if you wish to be exempted from academic penalty because your study has been affected by unforeseen circumstances.

EX: Application for extension of time for submission of an Assessment Task Complete this form if you wish to apply for extension of time for submission of this Assessment Task.

Referencing

N/A

Criteria

The full criteria are compiled in a rubric, which can be found on page 6 (Appendix-III).

Appendix I: Feed Forward Template (Example): A Template for Students to Use and Act on Feedback and Provide Recommendations for Improvement

This must be submitted as the first page of the follow-on assignment (assessment 2 and 3) to ensure you acted on the feedback provided to you in the previous assignment (this is not counted as part of the assessment word count).

How did you act on the feedback?

Feedback is an important component of learning. Please consider the feedback you received in your previous assignment and provide a response on how you acted on, or intend to act upon, that feedback, and how it has informed the current assignment task. Submit this sheet along with your assignment.

Example Questions	Feedback recommendation (what I learnt from the feedback and what works for me)
1. How have you acted on the feedback from the previous assessment to improve your work in this assignment?	(e.g., based on the previous feedback, I made sure that I supported my discussion, position, ideas, concepts with peer reviewed journal references in this assignment.)
2. What is your expectation around the type of feedback that enhances your learning?	(e.g., I want to know where I made a mistake and how I can correct them and not make the same mistake again i.e. I want specific feedback that will help me to improve my learning and performance in the next assignment.)
3. Did you have any difficulty understanding or acting on previous feedback? Please be as specific as possible so that you can gain further feedback/clarify anything that you do not understand in the feedback.	(e.g., feedback provided in my previous assignment was very generic and vague and I did not know how to improve my work. So, I would like the lecturer to explain more on xxxx aspects of the feedback or I would like an opportunity to have a dialogue to understand the feedback.)

Appendix II: Assignment Checklist

You must submit this checklist with your assignment. The second page of your submission should include the completed checklist. Please tick on the checkbox for the tasks you completed.

My submitted assignment report is within the specified word limit	☐
I have included references using specified referencing style	☐
I have correctly cited all my sources and references	☐
I have formatted my report as per the specifications	☐
I have checked my Turnitin report to ensure the similarity report is within the acceptable level (below 20% similarity)	☐
I have included specified process output in my submission (e.g. reflection report, e-portfolio submission, video summary, screen dump of my search and retrieval of journal articles, etc.)	☐
I have actioned feedback advice provided to me from previous assignment feedback (ifapplica ble)	☐
I have completed proof reading and checked for spelling and grammar	☐
I have submitted my work before the due date/time	☐
I have submitted feed forward template along with my assignment submission	☐

Appendix-III: Rubric for ITEC611- Assessment Task 3- Build a Network (50%)

Learning Outcomes	Criteria	Standards				
		Below Expectations	**Meets Expectations**		**Exceeds Expectations**	
		NN (0-49)	PA (50-64)	CR (65-74)	DI (75-84)	HD (85-100)
GA5 LO1-LO4 Weight: **20** marks TL: 3 Learning Stage: D	Demonstrate good level of knowledge and skills in troubleshooting, planning, designing, configuring and building a network.	Failed to correctly troubleshoot, plan, design, configure and build an effective and optimal network. Failed to answer most of the questions.	Satisfactorily troubleshooted, planned, designed, configured and built a mostly effective and near optimal network. Answered some of the questions correctly.	Credibly troubleshooted, planned, designed, configured, and built an effective and near optimal network. Answered most of the questions correctly.	Distinctively troubleshooted, planned, designed, configured, and built a very effective and optimal network. Answered almost all questions correctly.	Network troubleshooting is done with 100%accuracy. Highly distinctive design of the network that meets all requirements. Answered all questions correctly.
GA2 LO2 Weight: **5** marks TL: 3 Learning Stage: D	Demonstrate the importance of effective, expandable and sustainable network design	Failed to demonstrate the importance of effective network design in terms of cost, time, communication, and sustainability.	Adequately demonstrated the importance of effective network design in terms of cost, time, communication, and sustainability. Failed to link them with social and environmental responsibilities.	Credibly demonstrated the importance of effective network design in terms of cost, time, communication, and sustainability. Reasonably link them to social and environmental responsibilities.	Present distinctive demonstration of the importance of effective network design in terms of cost, time, communication, and sustainability. Correctly link them to social and environmental responsibilities.	Present highly distinctive demonstration of the importance of effective network design in terms of cost, time, communication, and sustainability. Appropriately link them to social and environmental responsibilities as well as with the given scenario.
GA4 LO3 Weight: **10** marks TL: 3 Learning Stage: D	Network design and troubleshooting techniques illustrate good command of knowledge, skills, and critical thinking	Failed to show any evidence of good level of knowledge and skills in applying a layered approach in network design and troubleshooting	Satisfactorily presented some evidence of good level of knowledge and skills in applying a layered approach in network design and troubleshooting	Credibly presented evidence of good level of knowledge and skills in applying a layered approach in network design and troubleshooting.	Distinctive presentation of good level of knowledge and skills in applying a layered approach in network design and troubleshooting.	Highly distinctive presentation of good level of knowledge and skills in applying a layered approach in network design and troubleshooting.

GA8 LO1 Weight: **5** marks TL: 3 Learning Stage: D	Demonstrate good level of knowledge & skills in utilising, analysing and evaluating information.	Little attempt to evaluate the information or evidence in any critical way. Failed to utilise key resources for problem solving.	Some of the key factors in network design scrutinized in some depth. Utilised some key resources for problem solving.	Most of the key factors in network design scrutinized in some depth. Utilised most of the key resources for problem solving.	Identified most of the key factors pertinent to the network design and recognized the significance of any inter-relationships. Effectively utilised key resources for problem solving.	Identified all key factors pertinent to the network design and recognized the significance of any inter-relationships. Utilised optimal key resources for problem solving.
GA10 LO4 Weight: **10** marks TL: 3 Learning Stage: D	Illustrate good command of required knowledge on utilising appropriate tools and techniques such as subnetting, topology design, packet tracer	Content under-developed; failed to utilise/recommend any networking tools/techniques in the report	Content reasonably linked; adequately utilised security tools/techniques in the report	Content appropriately linked; credibly utilised networking tools/techniques in the report	Close link shown in contents; shows distinctive use of networking tools/techniques in the report	Contents are perfectly linked, shows highly distinctive use of networking tool/techniques in the report
Notes: GA – Graduate Attribute; LO – Learning outcome; TL – Taxonomy Level (see Bloom's Taxonomy); Learning Stage – Introduced (I), Developed (D), Assured (A)						