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| **Assessment Details and Submission Guidelines** | |
| **Unit Code** | MN503 |
| **Unit Title** | Overview of Internetworking |
| **Assessment Type** | Individual |
| **Assessment Title** | Network requirement analysis and plan |
| **Purpose of the assessment (with ULO Mapping)** | This assignment is designed to assess students’ knowledge and skills related to the following learning outcomes:  b. Explain human factors in achieving business and technical goals through planning and design.  c. Investigate and develop an architectural internetworking design for the business and application domains. |
| **Weight** | 10% of the total assessments |
| **Total Marks** | 50 |
| **Word limit** | 1200 (approximately 4 pages) |
| **Due Date** | Week 7, Thursday 30 August 2018 - submit a report on Moodle |
| **Submission Guidelines** | All work must be submitted on Moodle by the due date along with a Title Page.  The assignment must be in MS Word format, 1.5 spacing, 11-pt Calibri (Body) font and 2.54 cm margins on all four sides of your page with appropriate section headings.  Reference sources must be cited in the text of the report, and listed appropriately at the end in a reference list using IEEE referencing style. |
| **Extension** | * If an extension of time to submit work is required, a Special Consideration Application must be submitted directly to the School's Administration Officer, in Melbourne on Level 6 or in Sydney on Level 7. You must submit this application three working days prior to the due date of the assignment. Further information is available at:   <http://www.mit.edu.au/about>[-mit/institute-publications/policies-procedures-and-guidelines/specialconsiderationdeferment](http://www.mit.edu.au/about-mit/institute-publications/policies-procedures-and-guidelines/special-considerationdeferment) |
| **Academic Misconduct** | * Academic Misconduct is a serious offence. Depending on the seriousness of the case, penalties can vary from a written warning or zero marks to exclusion from the course or rescinding the degree. Students should make themselves familiar with the full policy and procedure available at:[**http://www.mit.edu.au/about-mit/institute-publications/policies-procedures-and-guidelines/Plagiarism-Academic-Misconduct-Policy-Procedure**](http://www.mit.edu.au/about-mit/institute-publications/policies-procedures-and-guidelines/Plagiarism-Academic-Misconduct-Policy-Procedure).For further information, please refer to the Academic Integrity Section in your Unit Description. |

**Assignment 1 Overview of Internetworking MN503**

A report on the history, present and future of Computer Networking (1200 words). It should include at least 3 figures and 3 tables. At least 5 references are required, three of them from a conference paper, Journal and Book.

**History**

Introduction and Background

Discussion of Chronological development

Analysis of Human-centric design aspects, for example the layered approach in networking (OSI and TCP/IP models), network accessories such as the continuous design evolution of mouse, keyboard layout, first Graphic User Interface (GUI) design etc.

**Present**

Explanation of present-day technologies used in internet

A brief discussion of major internet protocols with pros and cons specific focus on routing protocols - static and dynamic routing

Comparison of Internet speed past, present and future

Analysis of Human-centric design aspects - focus on modern days ergonomics e.g., sitting arrangements to CPU inbuilt computer screens, touch screens, mobile apps etc.

**Future**

Discussion on future computer networks (How would the future computer networks be like?)

For example, the introduction of Software Defined Networking (SDN), cloud computing, intelligent networking, IoT etc.

A brief analysis of SDN, cloud computing, IoT etc.

**Marking criteria:**

Example of marking criteria is shown in the following table. Marks are allocated as follows:

***Note: The marking criteria vary for each assignment***

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| **Section to be included in the report** | **Description of the section** | **Marks** |
| Introduction and Background | A short background and introduction on the topic are expected. | 5 |
| Chronological development | A list that shows the development of technology and the year. | 5 |
| Human-centric design approach (past) | Discussion of the human-centric approaches during the development of computer networks for example: OSI model and TCP/IP model, networking accessories such as the evolution of mouse, keyboard layout, first GUI design etc. | 5 |
| A brief discussion of the present-day technology of computer network | Specific focus on routing protocols - static and dynamic routing, e.g., static, RIP, OSPF, EIGRP, BGP etc. | 5 |
| Internet speed comparison past, present and future | A discussion following Years versus data speed is expected. | 5 |
| Human-centric design aspects (present) | Focus on modern days ergonomics, sitting arrangements to CPU inbuilt computer screens, touch screen, mobile apps. | 5 |
| Discussion on future computer networks | (How would the future computer networks be like?) Introduction of the future computer networks, for example Software Defined Networking (SDN), Cloud Computing, Intelligent Networking, IoT etc. | 5 |
| Discussion of future computer networking technologies | Brief Illustration of networking technologies such as SDN, Cloud Computing, Intelligent Networking, IoT etc. | 5 |
| Conclusion | Write a summary of the report. | 5 |
| Reference style | Follow IEEE reference style. | 5 |
|  | Total | 50 |

**Example Marking Rubric for Assignment *#:* Total Marks 50**

***Note: The marking rubrics varies for each assignment***

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| **Grade**  **Mark** | **HD**  **40-50** | **DI**  **35-44** | **CR**  **30-34** | **P**  **25-29** | **Fail**  **<25** |
|  | **Excellent** | **Very Good** | **Good** | **Satisfactory** | **Unsatisfactory** |
| Introduction and Background  /5 | All topics are pertinent and covered in depth. Ability to think critically and source material is demonstrated | Topics are relevant and soundly analysed. | Generally relevant and analysed. | Some relevance and briefly presented. | This is not relevant to the assignment topic. |
| Chronological development  /5 | Demonstrated excellent ability to think critically and sourced reference material appropriately | Demonstrated excellent ability to think critically but did not source reference material appropriately | Demonstrated ability to think critically and sourced reference material appropriately | Demonstrated ability to think critically and did not source reference material appropriately | Did not demonstrate the ability to think critically and did not source reference material appropriately |
| Human cantered design approach (past)  /5 | Logic is clear and easy to follow with strong arguments | Consistency logical and convincing | Mostly consistent logical and convincing | Adequate cohesion and conviction | The argument is confused and disjointed |
| A brief discussion of the present-day technology of computer network  /5 | All elements are present and very well integrated. | Components present with good cohesive | Components present and mostly well integrated | Most components present | The proposal lacks structure. |
| Internet speed comparison past, present and future  /5 | Excellent use of credible sources. Accurate referencing. Obvious that outstanding effort made | Extremely good effort | Good effort made but not outstanding | Made some effort. For example, Web searches only | Very little, attempt to reference. The lazy effort with inaccuracies |
| Human-centric design aspects (present)  /5 | Logic is clear and easy to follow with strong arguments | Consistency logical and convincing | Mostly consistent logical and convincing | Adequate cohesion and conviction | The argument is confused and disjointed |
| Discussion on future computer networks  /5 | Excellent ability to comprehend the material and presented appropriately | Excellent ability to comprehend the material and presented appropriately good effort in source reference material | Ability to think critically but a poor source of reference | Demonstrated ability to think critically and did not source reference material appropriately | Did not demonstrate the ability to think critically and did not source reference material appropriately |
| Discussion of future computer networking technologies  /5 | Demonstrated excellent ability to think critically and sourced reference material appropriately | Demonstrated excellent ability to think critically but did not source reference material appropriately | Demonstrated ability to think critically and sourced reference material appropriately | Demonstrated ability to think critically and did not source reference material appropriately | Did not demonstrate the ability to think critically and did not source reference material appropriately |
| Conclusion  /5 | Logic is clear and easy to follow with strong arguments | Consistency logical and convincing | Mostly consistent logical and convincing | Adequate cohesion and conviction | The argument is confused and disjointed |
| Reference style  /5 | Clear styles with an excellent source of references. | Clear referencing style | Generally good referencing style | Sometimes clear referencing style | Lacks consistency with many errors |