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| **COURSEWORK ASSIGNMENT** | |
| **Module Title: Platforms for Computing – Sem B** | **Module Code: 4WCM0019** |
| **Assignment Title: Assignment 3 – The One Stop Helpdesk** | **Individual Assignment - Yes** |
| **Tutor**: Gani Nashi | **Internal Moderator**: |

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| Marks Awarded %: | Marks Awarded after Lateness Penalty applied %: |
| Penalties for Late Submissions   * Late submission of any item of coursework for each day or part thereof (or for hard copy submission only, working day or part thereof) for up to five days after the published deadline, coursework relating to modules at Levels 0, 4, 5, 6 submitted late (including deferred coursework, but with the exception of referred coursework), will have the numeric grade reduced by 10 grade points until or unless the numeric grade reaches or is 40. Where the numeric grade awarded for the assessment is less than 40, no lateness penalty will be applied. * Late submission of referred coursework will automatically be awarded a grade of zero (0). * Coursework (including deferred coursework) submitted later than five days (five working days in the case of hard copy submission) after the published deadline will be awarded a grade of zero (0). * Where genuine serious adverse circumstances apply, you may apply for an extension to the hand-in date, provided the extension is requested a reasonable period in advance of the deadline. | |
| Please refer to your student handbook for details about the grading schemes used by the School when assessing your work. Guidance on assessment will also be given in the Module Guide. | |
| Guidance on avoiding academic assessment offences such as plagiarism and collusion is given at this URL: <http://www.studynet.herts.ac.uk/ptl/common/LIS.nsf/lis/citing_menu> | |

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| **ASSIGNMENT BRIEF**  ***Students, you should delete this section before submitting your work.*** | | |
| **This Assignment assesses the following module Learning Outcomes (from the module DMD):**  Successful students will typically:   * have a knowledge and understanding of:   1. [iii] the functionality of a computing platform and how that relates to the functionality of end-user software and devices. * be able to:  1. [vi] solve simple problems in the design and development of computing platforms. 2. [viii] analyse and measure the performance of networked applications. | | |
| **THE ASSIGNMENT TASK:** You are required to complete a range of troubleshooting tasks, as it would be the case in Helpdesk environment. These tasks relate to hardware, software, and network troubleshooting, including a small portfolio of a selection of tasks that have been set out in every unit of this module. The evidence to be submitted will be in different formats, such as Word or PDF format for the report part, and Packet Tracer format for the network troubleshooting part. This assignment is divided into three parts, and the requirements for each part are explained in the Assignment Brief section further down this document. The word count guide is displayed individually for each task. A marking scheme is provided as well, so you can evaluate the quality of work against it, before submission. Any other material produced as part of the assignment submission must be included in the appendices. DO NOT submit the written part of the assignment as separate pieces of documents. ONE report document in PDF format must be submitted.  **Assignment Brief in detail**  After finishing your qualifications, you have decided that the next step in your career is to apply for a job in the very busy Helpdesk department (One Stop Helpdesk) of a very reputable IT support company called The One Solution.  Working in a Helpdesk environment mostly involves troubleshooting and maintenance day-to-day jobs. Therefore, your troubleshooting skills will be tested as part of the interview stage of the application. The practical and written aspects of this work are divided into three parts and involve the following tasks:  **Assignment 3 Part I - Hardware and Software Troubleshooting**  Part 1 of testing your troubleshooting skills involves a selection of **three** of the following issues to troubleshoot:   * The printer is turned on, and when the user tries to print from MS Word, for example, they can see a printer, but no printing can be done. * The computer apparently did not have enough memory, so you bought a new memory module and installed it. From that day, every time that too many applications are running, the computer crashes (BSOD). * The USB devices seem to not be recognised * You have just installed a new piece of software, but it is working incorrectly. * The computer is very slow, applications hang forever, but otherwise, the mouse and keyboard are working. * The user clicked on something, and suddenly the command prompt window opened hundred times in very quick succession. Although the user tries to close the windows, they continue to open.     For each of the **three** selected scenarios above, you need to state and review information gathering methods you would use to assess the issues, the troubleshooting method(s) that is most efficient**,** and how you would document the solutions for future reference**.**  **Assignment 3 Part II - Network Troubleshooting**  Using networking simulator software that will be provided, you will troubleshoot connectivity issues in a simple home network. The network should have been correctly configured according to a given set of requirements and topology design. However, some of the devices are not able to access the network services. Your tasks are as follows:   1. Download the simulated network file ‘Troubleshooting\_Part\_II’, together with the network documentation file ‘Network Configuration Information’ and fix the connectivity issues. The finished the troubleshooting activity, it will show 100% completion. Take a screenshot of the completion window, in order to upload it with the troubleshooting report (same as the example below). Further instructions are in the network documentation file.      1. Write a short troubleshooting report for this part (the documentation), stating and reviewing the methodology and the commands that you used to assess the issue(s), locate them, and what you did to fix them. The troubleshooting narrative should **NOT** be written in the format “I clicked here, and I clicked there”, but to explain the purpose of what was done.   **Assignment 3 Part III**  In many of the units of study, you have been provided with a number of tasks, individual or in group. A selection of **five** these tasks will be put together in the form of a portfolio and will be submitted as part of Part III.  In addition to the portfolio of five tasks, you will also write a summary of conclusions and lessons drawn as part of the portfolio work. This summary will be written in an analytical and evaluative format. | | |
| **Submission Requirements:**  Your deliverables for Parts I, II, and III will be:   * The completed Packet Tracer file in .pka or .pkt format, called Troubleshooting Part II, which will include your student ID in the filename. * A technical report, in Word or PDF format, with a **professional title page**, and **contents page**, including the following parts:   + Part I - Hardware and Software Troubleshooting section (about 800 words), as per the troubleshooting scenarios, including a review of the methodologies and techniques used for troubleshooting.   + Part II – The network troubleshooting section in the form of a technical report including the review of the methodology and the commands that you used to assess the issue(s), locate them, and what you did to fix them.   + Part III – A portfolio of completed selection of unit tasks, including the evaluative summary. **(Although an indicative word count is given for this part, the evaluative summary will not be considered in the word count if you write more than 300 words, in order to give you freedom to write about the lessons learned, as it is the whole purpose of studying and doing coursework).**   + A reference page   + Any necessary appendices | | |
| **Marks awarded for:**  This assignment is worth **30%** of the overall mark for this module.  The table below shows the word count and the weighting percentage for each section of the submission (the word count is given as a guide, so you don’t go overboard and write too much about each section):   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **Section** | **Hardware and Software Troubleshooting** | **Review of methodologies used to gather information and troubleshoot HW and SW issues** | **Network Troubleshooting** | **Review of methodologies used to gather information and troubleshoot networking issues** | **Portfolio work – Unit tasks** | **Summary of Portfolio work** | **Total** | | **Word count** | 300 | 500 | 200 | 500 | 500 - 1000 | 300 | 2000 - - 2800 | | **Weighting %** | 15 | 20 | 15 | 20 | 20 | 10 | 100 |   **NOTE**: The above word counts for each section are only for guidance purpose.  A note to the Students:   1. For undergraduate modules, a score above 40% represent a pass performance at honours level. 2. For postgraduate modules, a score of 50% or above represents a pass mark. 3. Modules may have several components of assessment and may require a pass in all elements. For further details, please consult the relevant Module Guide or ask the Module Leader. | | |
| Typical (hours) required by the student(s) to complete the assignment:  **35** hours | | |
| **Date Work handed out:**  **w/c 05/04/2021** | **Date Work to be handed in:**  06/05/2021 | **Target Date for the return of the marked assignment:**  06/06/2021 |
| **Type of Feedback to be given for this assignment:**  Summative feedback will be given for the test on StudyNet, on the submission area within four weeks after you have completed the test and have submitted the evidence of test completion (screenshot) on StudyNet. | | |

Please refer to the marking scheme in the next section:

**PfC Assignment 3 Marking Scheme**

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| Numeric Score | Descriptor | Hardware and Software Troubleshooting  (15%) | Review of methodologies used to gather information and troubleshoot HW and SW issues (20%) | Network Troubleshooting (15%) | Review of methodologies used to gather information and troubleshoot networking issues (20%) | Portfolio work – Unit tasks  (20%) | Summary of Portfolio work  (10%) |
| 80-100 | Outstanding  (1st) | Outstanding troubleshooting skills. Evidence of extensive research on solving hardware and software technical issues.  Logical steps have been followed, demonstrating outstanding knowledge of HW & SW operations and malfunctions. | Outstanding explanations of the methodologies and approaches used to troubleshoot the issues.  Importance of strategy and tactics in problem solving are outstandingly understood.  No grammatical / spelling or structural errors | Outstanding troubleshooting skills. Evidence of extensive research on solving networking issues.  Logical steps have been followed, demonstrating outstanding knowledge of network operations and misconfigurations. | Outstanding explanations of the methodologies and approaches used to troubleshoot networking issues.  Importance of strategy and tactics in problem solving are outstandingly understood.  No grammatical / spelling or structural errors | Outstanding work on weekly exercises, and they are explained with great technical skills. | Outstandingly written section on the experience of doing the weekly exercises and the lessons learned.  Outstanding ability to draw conclusions and identify lessons for future work. |
| 70-79 | Excellent  (1st) | Excellent troubleshooting skills. Evidence of extensive research on solving hardware and software technical issues.  Logical steps have been followed, demonstrating excellent knowledge of HW & SW operations and malfunctions. | Excellently clear explanations of the methodologies and approaches used to troubleshoot the issues.  Excellent understanding of the importance of strategy and tactics in problem solving.  No grammatical / spelling or structural errors | Excellent troubleshooting skills. Evidence of extensive research on solving networking issues.  Logical steps have been followed, demonstrating excellent knowledge of network operations and misconfigurations. | Excellent explanations of the methodologies and approaches used to troubleshoot networking issues.  Importance of strategy and tactics in problem solving are excellently understood.  No grammatical / spelling or structural errors | Excellent work on weekly exercises, and they are explained with excellent technical skills. | Excellently written section on the experience of doing the weekly exercises and the lessons learned.  Ability to draw excellent conclusions and identify excellent lessons for future work. |
| 60-69 | Very good  (2:1) | Very good troubleshooting skills. Evidence of very good level of research on solving hardware and software technical issues.  Logical steps have been followed, demonstrating very good knowledge of HW & SW operations and malfunctions. | Very good explanations of the methodologies and approaches used to troubleshoot the issues.  A very good understanding of the importance of strategy and tactics in problem solving has been demonstrated.  Very good structure and writing skills. | Very good troubleshooting skills. Evidence of very good level of research on solving networking errors and misconfigurations.  Logical steps have been followed, demonstrating very good networking knowledge. | Very good explanations of the methodologies and approaches used to troubleshoot networking issues.  A very good understanding of the importance of strategy and tactics in problem solving has been demonstrated.  Very good structure and writing skills. | Very good work on weekly exercises, and they are explained with very good technical skills. | A very well written evaluation section on the experience of doing the weekly exercises and the lessons learned.  Very good level of ability to draw conclusions and identify lessons for future work. |
| 50-59 | Good  (2:2) | Good troubleshooting skills. Evidence of good level of research on solving hardware and software technical issues.  A series of logical steps have been followed, demonstrating good knowledge of HW & SW operations and malfunctions. | Good explanations of the methodologies and approaches used to troubleshoot the issues.  Good understanding of the importance of strategy and tactics in problem solving has been demonstrated.  Good structure and writing skills. You need to make improvements in your explanations, writing style, and in the level of understanding, for very good or excellent marks. | Good troubleshooting skills. Evidence of good level of research on solving networking technical issues.  A series of logical steps have been followed, demonstrating good knowledge of networking misconfigurations and malfunctions. | Good explanations of the methodologies and approaches used to troubleshoot the issues.  Good understanding of the importance of strategy and tactics in problem solving has been demonstrated.  Good structure and writing skills. You need to make improvements in your explanations, writing style, and in the level of understanding, for very good or excellent marks. | Good level of work on weekly exercises, and they are explained with good technical skills. | A well written evaluation section on the experience of doing the weekly exercises and the lessons learned.  Good level of ability to draw conclusions and identify lessons for future work. |
| 40-49 | Satisfactory  (3rd) | Satisfactory troubleshooting skills. Evidence of satisfactory level of research on solving hardware and software technical issues.  A series of logical steps have been followed, demonstrating satisfactory knowledge of HW & SW operations and malfunctions. | Satisfactory explanations of the methodologies and approaches used to troubleshoot the issues.  Satisfactory understanding of the importance of strategy and tactics in problem solving.  You need to make improvements in your explanations, writing style, and in the level of understanding, for very good or excellent marks. | Satisfactory troubleshooting skills. Evidence of satisfactory level of research on solving networking technical issues.  A series of logical steps have been followed, demonstrating satisfactory knowledge of networking operations and malfunctions. | Satisfactory explanations of the methodologies and approaches used to troubleshoot the issues.  Satisfactory understanding of the importance of strategy and tactics in problem solving.  You need to make improvements in your explanations, writing style, and in the level of understanding, for very good or excellent marks. | Satisfactory level of work on weekly exercises, and they are explained with satisfactory technical skills. | Satisfactorily written evaluation section on the experience of doing the weekly exercises and the lessons learned.  Satisfactory level of ability to draw conclusions and identify lessons for future work. |
| 30-39 | Marginal fail  (Fail) | Unsatisfactory troubleshooting skills. Unsatisfactory level of research on solving hardware and software technical issues.  Unsatisfactory knowledge of HW & SW operations and malfunctions. | Unsatisfactory explanations of the methodologies and approaches used to troubleshoot the issues.  Better understanding is needed of the importance of strategy and tactics in problem solving. | Unsatisfactory troubleshooting skills. Unsatisfactory level of research on solving networking technical issues.  Unsatisfactory knowledge of networking operations and malfunctions. | Unsatisfactory explanations of the methodologies and approaches used to troubleshoot the issues.  Better understanding is needed of the importance of strategy and tactics in problem solving. | Unsatisfactory level of work on weekly exercises, and they are not explained with satisfactory technical skills. | Unsatisfactorily written evaluation section on the experience of doing the weekly exercises and the lessons learned.  Need to improve the level of ability to draw conclusions and identify lessons for future work. |
| 20-29 | Clear fail  (Fail) | Some limited troubleshooting skills. Limited level of research on solving hardware and software technical issues.  Limited knowledge of HW & SW operations and malfunctions. | Limited level of explanations of the methodologies and approaches used to troubleshoot the issues.  A much better understanding is needed of the importance of strategy and tactics in problem solving. | Some limited troubleshooting skills. Limited level of research on solving networking technical issues.  Limited knowledge of networking operations and malfunctions. | Limited level of explanations of the methodologies and approaches used to troubleshoot the issues.  A much better understanding is needed of the importance of strategy and tactics in problem solving. | Limited level of work on weekly exercises, and they are explained with limited technical skills | Limited evaluation of the experience of doing the weekly exercises and the lessons learned.  Need to urgently improve the level of ability to draw conclusions and identify lessons for future work. |
| 0-19 | Nothing of merit  (Fail) | Very little or no troubleshooting skills are demonstrated.  Very little or no research on solving hardware and software technical issues.  Little knowledge of HW & SW operations and malfunctions. | Very little or not enough explanations of the methodologies and approaches used to troubleshoot the issues.  Little understanding of the importance of strategy and tactics in problem solving. | Very little or no troubleshooting skills are demonstrated.  Very little or no research on solving networking issues.  Little knowledge of networking operations and malfunctions. | Very little or not enough explanations of the methodologies and approaches used to troubleshoot the issues.  Little understanding of the importance of strategy and tactics in problem solving. | Little or no attempt on weekly exercises, with limited or no explanations, and with little evidence of technical skills | Little or no attempt is made on the evaluation of the experience about the weekly exercises.  Little or no lessons have been learned, and little evidence of the ability to draw conclusions. |