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| **University of Chester -** Undergraduate Programmes Assignment Specification  **Faculty of Science and Engineering**  **Department of Computer Science** | | | |
| **Module No**  CO5049 | **Module Title**  Software Management | **Assessment No**  2 | **Weighting**  50% |
| **Submission Date**  Monday 13 March 2023 at 17:30 | | | **Feedback due by**  13 April 2023 |
| **Assignment Title**  Assignment 2 – Problem Domain Scenario | | | |
| **Learning Outcomes Assessed**  4.   Analyse a problem domain and establish customer requirements through design modelling techniques  5.   Effectively apply project, risk, business continuity and information security management techniques to given scenarios. | | | |
| **Submission Information**  For projects that include programming code:  The TurnItIn submission box will have multiple parts. You must submit to the appropriate part   * A PDF file with all programming code from your project (in a monospace font), followed by a reference list in APA format. * A ZIP file containing the project   Both files must be named with your assessment (J number), e.g. J123456.pdf and J123456.zip. The name for each entry on TurnItIn must also be your assessment number.  Files submitted in an incorrect format will usually be marked as zero.  All components must be submitted to avoid receiving a mark of zero.  Any late work penalties for assignments will be calculated using the latest submission date/time. | | | |
| **Extensions**  Extensions should be requested through the online system available on the Registry services pages on [Portal](https://v3apps.chester.ac.uk/oed/#!start). Late work is penalised at the rate of 5% per day or part thereof.  **Academic Integrity** The material you submit must be your own work. Please avoid colluding with peers on your work. The penalties for breaching the academic integrity policy are severe. The minimum penalty is usually zero for that piece of work. Further information is available at Portal > Support Departments > Academic Quality and Standards > Academic Standards > [Academic Integrity](https://portal1.chester.ac.uk/aqs/Pages/aqss-academic-integrity-information-students.aspx) | | | |

**Referencing code**Code adapted from third parties must be clearly referenced using comments to denote the start and end of the adapted code. You must also include an APA format reference in the PDF file.

**Example of referenced code***//code adapted from Thomson, 2012***if** (someCharacter == **'z'** || someCharacter == **'Z'**) {  
 someCharacter -= 25;  
} **else** {  
 someCharacter += 1;  
}  
*//end of adapted code*

**Example of reference entry in PDF file**

Thomson, C. (2012). *Rot-13 function in Java?.* Retrieved from http://stackoverflow.com/questions/8981296/rot-13-function-in-java

**Assignment Brief**

For this assignment, you must produce a written report of 2,000 words covering all the questions and topics listed below, considering the information given in the scenario. You must back up what you write with good quality information sources, referenced correctly in APA 7th edition style. Your report must be submitted via Turnitin in either Word or .pdf format, with your J number included in the filename. Work submitted by other means (e.g., via e-mail) will not be marked.

**Scenario:**

A software development company has won a contract with a city museum to upgrade the museum’s existing database of the historic items in its collection.

They must produce a web application to allow (a) university researchers, (b) school/university teachers and students, and (c) the public to search the upgraded database.

Funding for the project is being provided by the British Arts and Humanities Research Council, with smaller contributions from the Heritage Lottery Fund and the local council.

The project is being managed by the museum curator, along with academic staff from a nearby university.

**Report topics:**

1. Describe the problem domain for this scenario. (Relevant information will include what kinds of organisations, companies and users are going to be involved; what software and hardware already exist, and what will need to be created; and how these factors will affect how the software company should approach the project.) (**15 Marks**)
2. Describe techniques which could be used to establish functional and non-functional requirements for the system. Explain how modelling approaches – such as creating User Journeys, or UML models (among many others) – could help the software company to fully understand the project requirements. What should they do in order to establish the feasibility and viability of any proposed solutions? (**30 Marks**)
3. Describe (with diagrams or tables as required) techniques which could be used to produce estimates of the cost of the project, to schedule project activities, and to track actual progress against schedule. Where a variety of techniques are available, say which you think would be best in this case, and why. (Back up your suggestion with references.) (**25 Marks**)
4. What national, international or industry standards would help the company to manage this project effectively? What standards or approaches would be appropriate to ensuring that the software produced is of the required quality? What are the potential information security and business continuity issues relating to this project, how should they be dealt with, and what standards would apply in these areas? (**20 Marks)**

**Please note:** **10 Marks** will be applied to application of a formal report layout, accurate academic requirements i.e., APA 7th Edition referencing, spelling, and grammar etc.

**Assessment Criteria**

A **pass mark** will be awarded for a clear report which covers the areas specified in the assignment brief, making correct use of the right techniques.  References to relevant theory must be included. Any assumptions made must be clearly described and based on good quality research.  All sources must be correctly cited and referenced using correct APA 7th style.

A **higher pass** will be awarded for work which meets all of the pass criteria, and also includes additional evidence of wider reading and research into the subject, going well beyond the materials covered in lectures and course materials.

**Marking Grid below**

**Assessment Criteria**

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|  | ***90–100***  ***(1st class/FD Distinction)*** | ***80–89***  ***(1st class/FD Distinction)*** | ***70–79***  ***(1st class/FD Distinction)*** | ***60–69***  ***(upper second/FD Merit)*** | ***50–59***  ***(lower second/FD Pass)*** | ***40–49***  ***(third class/FD Pass)*** | ***30—39***  ***(Fail/FD Fail)*** | ***20–29***  ***(Fail/FD Fail)*** | ***10–19***  ***(Fail/FD Fail)*** | ***0–9***  ***(Fail/FD Fail)*** |
| ***Range and relevance of reading and research*** | Far-reaching investigation and insight | Comprehensive research and coverage of topic integrating wide range of  academic sources | Excellent command of highly relevant, extensively- researched material | Wide range of core and background reading, effectively used | Reasonable range of reading; references to relevant but not wide variety of sources | Background reading mostly relevant but over-reliant on few sources | Scant evidence of background reading; weak investigation | No evidence of relevant reading | No evidence of reading | No use of sources |
| ***Breadth and depth of knowledge*** | Develops new knowledge or novel perspective going beyond the literature | Extensive subject knowledge with detailed insight into and understanding of relevant theory | Extensive, thorough coverage of topic, focused use of detail and examples | Breadth and depth of coverage, accurate and relevant in detail and example | Content generally relevant and accurate, most central issues identified; basic knowledge sound but may be patchy | Fairly basic knowledge, limited consistency of depth and accuracy of detail; not all aspects addressed,  some omissions | Contains very slight detail; content may be thin or irrelevant; issues poorly identified | Little relevance of content; unacceptably weak or inaccurate knowledge base | Knowledge base extremely weak; content almost entirely irrelevant or erroneous | Material not relevant or correct; no evidence of knowledge |
| ***Contextual studies*** | Outstanding understanding of artistic or critical context | Sophisticated understanding of artistic or critical context | Comprehensive understanding of artistic or critical context | Good understanding of artistic or critical context | Sound, but may be limited, understanding of artistic or critical context | Adequate but partial understanding of artistic or critical context | Weak understanding of artistic or critical context | Lack of understanding of artistic or critical context | Inaccurate reference to artistic or critical context | No awareness demonstrated of artistic or critical context |
| ***Selection and use of information*** | Outstanding level of original synthesis, analysis, argument and evaluation | Creative, innovative synthesis of ideas | Convincing ability to synthesise a range of views or information and integrate references | Ability to synthesise a range of views or information and incorporate references | Evidence of drawing information together | Little discrimination in use of material; limited perspective or consideration  of alternative views | Superficial use of information, minimal association; references not integrated | Incorrect use of material or information | Little or no use of material or information | Little or no use of material or information |
| ***Structure and argument*** | Work produced could hardly be bettered when produced under parallel conditions | Authoritative and persuasive argument | Excellent organisation of ideas; clear, coherent structure and logical, cogent development of argument | Logically structured; good organisation of ideas; well- reasoned discussion; coherent argument | Reasonable structure; organisation may lack some logical progression; attempt made to argue  logically with supporting | Basic structure; may be some repetition or deviation; some ability to construct an argument but  may lack clarity or | Poorly structured, little logic;  may have unsubstantiated conclusions based on generalisation | Structure confused or incomplete; poor if any relationship between introduction, middle and  conclusion; lack of | Lack of recognisable structure or reference to argument; no related evidence or conclusions | Lack of evidence of reasoning |

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|  |  |  |  |  | evidence, although some claims may be  unsubstantiated | conviction, with unsupported  assertion |  | evidence to support views expressed |  |  |
| ***Specialist skills*** | Outstanding expertise and flair in the application of specialist skills | Sophisticated expertise and flair in the application of specialist skills | Expert demonstration, accomplished and innovative application of specialist skills | Good performance; capable and confident application of  specialist skills | Mostly competent and informed application of specialist skills | Sufficient evidence of developing specialist skills | Little evidence of skill development or application | Very little evidence of specialist skill development | Minimal evidence of specialist skill development | No evidence of skill development |
| ***Professional competence*** | Extremely high level of professional competence | Extremely high level of professional competence | Very high level of professional competence | Substantial level of professional competence | Sound level of professional competence | Satisfactory level of professional competence | Questionable level of professional competence,  e.g. may be some evidence  of unsafe practice | Lack of professional competence | Serious lack of professional competence | Professional incompetence |