NUP1 — NUP1 TASK 1: SOFTWARE SOLUTION

SOFTWARE ENGINEERING — C188
PRFA — NUP1

COMPETENCIES

4020.4.1 : Introduction to Software Engineering
The graduate applies software engineering core principles, the generic process framework, and introductory software engineering concepts to a software project.

4020.4.2 : Software Engineering and Process Models
The graduate recommends a software engineering process model for a project.

4020.4.3 : Requirements Engineering
The graduate interprets requirements refined through the software engineering process.

4020.4.4 : Software Design Concepts, Including Architecture
The graduate designs requirements-based software solutions using software engineering design concepts and patterns.

4020.4.5 : Quality Concepts, Software Quality Assurance, and Software Testing
The graduate integrates software quality testing and assurance throughout the software development process.

INTRODUCTION

In this assessment, you will review a requirements document and then propose a software solution. Your submission will showcase what you've learned in the course through the creation of a design and test plan, which is a deliverable for the waterfall methodology. Review the scenario, requirements, and rubric below for additional guidance as you complete this assessment.

SCENARIO

You are a member of a software development team for a project, which includes business analysts, solution analysts, developers, quality assurance professionals, and a project manager, among other team members. You have been tasked with completing a solution proposal and design and test plan with the help of your team to support the software development process. The American Video Game Company has provided a high-level requirements document to aid you in identifying an appropriate solution.

The project is to implement a customer relationship management (CRM) system for the sales force of a medium-sized company. The initial requirements document has been provided for you to use in determining a solution. You may choose to implement a customizable/commercial off-the-shelf (COTS) system, or you may decide to have the system custom built. When making this decision, ensure all requirements are considered and can be implemented if choosing a COTS system. If you decide to build the system, consider the additional resources that will be needed. Review the attached "CRM Requirements" document provided with the assessment to gain an overall understanding of the system the American Video Game Company is looking for.

REQUIREMENTS

Your submission must be your original work. No more than a combined total of 30% of the submission and no more than a 10% match to any one individual source can be directly quoted or closely paraphrased from sources, even if cited correctly. An originality report is provided when you submit your task that can be used as a guide.

You must use the rubric to direct the creation of your submission because it provides detailed criteria that will be used to evaluate your work. Each requirement below may be evaluated by more than one rubric aspect. The rubric aspect titles may contain hyperlinks to relevant portions of the course.

Review the attached "CRM Requirements" to gain an overall understanding of the system that American Video Game Company is looking for. Then propose a software solution for American Video Game Company by doing the following:

A. Introduce your proposed system, including a purpose statement, overview of the problem, goals and objectives for the project and solution, prerequisites, scope, and environment, as outlined in the attached "Design Template."

   Note: The Introduction section of this report may be done after the project task is completed.

B. Explain how your software solution addresses **five** distinct requirements from the attached "CRM Requirements."

C. Discuss the waterfall method by doing the following:
   1. Compare the advantages and disadvantages of the waterfall method to those of another development method of your choice.
   2. Evaluate whether the waterfall method or the development method you chose in C1 is better suited to the solution for American Video Game Company, including specific examples to justify your claims.

D. Create **two** visual representations of your software solution (e.g., storyboard, flowchart, UML diagram, ERD) that illustrate how the system process or workflow aligns with and supports the business process for American Video Game Company.

E. Create a test plan with test cases for **three** different functional aspects of your software solution, including the following:
   - preconditions for *each* test case
   - steps for *each* test case
   - expected results for *each* test case

F. Acknowledge sources, using in-text citations and references, for content that is quoted, paraphrased, or summarized.

G. Demonstrate professional communication in the content and presentation of your submission.

File Restrictions

File name may contain only letters, numbers, spaces, and these symbols: ! - _ . * ' ( )
File size limit: 200 MB
File types allowed: doc, docx, rtf, xls, xlsx, ppt, pptx, odt, pdf, txt, qt, mov, mpg, avi, mp3, wav, mp4, wma, flv, asf, mpeg, wmv, m4v, svg, tif, tiff, jpeg, jpg, gif, png, zip, rar, tar, 7z

RUBRIC

A: INTRODUCTION

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
An introduction is not provided.	The introduction is incomplete, or the information included does not align with the proposed software solution.	The introduction is complete and aligns with the proposed software solution.

B: REQUIREMENTS

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
An explanation of how the software solution addresses 5 requirements from the requirements attachment is not provided.	The explanation identifies 5 distinct requirements from the requirements attachment but does not explain how the software solution addresses each of these requirements.	The explanation identifies 5 distinct requirements from the requirements attachment and explains how the software solution addresses each of these requirements.

C1: DEVELOPMENT METHODOLOGIES: COMPARISON

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
A comparison is not provided.	The comparison does not accurately outline the advantages and disadvantages of both the waterfall method and another development method.	The comparison accurately outlines the advantages and disadvantages of both the waterfall method and another development method.

C2: DEVELOPMENT METHODOLOGIES: EVALUATION

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
An evaluation is not provided.	The evaluation does not include specific examples of why the chosen method is better suited to the solution for American Video Game Company.	The evaluation includes specific examples of why the chosen method is better suited to the solution for American Video Game Company.

D: DESIGN

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
The 2 visual representations of the software solution are not provided.	The 2 visual representations of the software solution do not illustrate how the system process or workflow aligns with and supports the business process, or the system process does not correctly	The 2 visual representations of the software solution illustrate how the system process or workflow correctly aligns with and supports the business process.

align with or support the business process.

E: TESTING

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
A test plan is not provided.	The test plan does not include 3 functional aspects of the software solution or does not include the given points. The functional aspects are not different or do not require multiple steps to be tested.	The test plan includes 3 functional aspects of the software solution and includes the given points. The functional aspects are different and require multiple steps to be tested.

F: SOURCES

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
The submission does not include both in-text citations and a reference list for sources that are quoted, paraphrased, or summarized.	The submission includes in-text citations for sources that are quoted, paraphrased, or summarized and a reference list; however, the citations or reference list is incomplete or inaccurate.	The submission includes in-text citations for sources that are properly quoted, paraphrased, or summarized and a reference list that accurately identifies the author, date, title, and source location as available.

G: PROFESSIONAL COMMUNICATION

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
Content is unstructured, is disjointed, or contains pervasive errors in mechanics, usage, or grammar. Vocabulary or tone is unprofessional or distracts from the topic.	Content is poorly organized, is difficult to follow, or contains errors in mechanics, usage, or grammar that cause confusion. Terminology is misused or ineffective.	Content reflects attention to detail, is organized, and focuses on the main ideas as prescribed in the task or chosen by the candidate. Terminology is pertinent, is used correctly, and effectively conveys the intended meaning. Mechanics, usage, and grammar promote accurate interpretation and understanding.

SUPPORTING DOCUMENTS

CRM_Requirements.docx

Design Template.docx