RYM2 — RYM2 TASK 2: SOFTWARE APPLICATION AND DOCUMENTATION

SOFTWARE DEVELOPMENT CAPSTONE — C868

PRFA — RYM2

TASK OVERVIEW SUBMISSIONS EVALUATION REPORT

COMPETENCIES

981.1.1 : Capstone
The graduate integrates and synthesizes competencies from across the degree program, thereby demonstrating the ability to participate in and contribute value to the chosen professional field.

INTRODUCTION

This task is the design, development, and implementation of the software application that was approved by a course mentor.

Your work for this task will not be evaluated until the appropriate forms from Task 1 have been submitted and evaluated.

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. The originality report that is provided when you submit your task 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.

*Tasks may **not** be submitted as cloud links, such as links to Google Docs, Google Slides, OneDrive, etc., unless specified in the task requirements. All other submissions must be file types that are uploaded and submitted as attachments (e.g., .docx, .pdf, .ppt).*

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.

A. Write a comprehensive summary that addresses the following requirements:

- the business problem or opportunity you are solving for, including a description of the customers and why this application will fulfill their needs
- existing gaps in the software application you are replacing or modifying (if applicable)
- the software development life cycle methodology you use to guide and support software development activities
- deliverables associated with the applied software development life cycle methodology
- the plan for implementation of your software solution, including the anticipated outcomes from this development
- the methods for validating and verifying that the developed software application meets the requirements and subsequently the needs of the customers
- the programming environments and any related costs, as well as the human resources that are necessary to execute each task in the development of the software application
- a projected timeline including milestones, start and end dates, duration for each milestone, dependencies, and resources assigned to each task

B. Design and develop a fully functional software application that addresses your identified business problem or organizational need. Include each of the following attributes as they are the *minimum required elements* for the application:
   - **one** of the following application types: mobile, web, or stand-alone application
   - code including inheritance, polymorphism, and encapsulation
   - search functionality with multiple row results and displays
   - a database component with the functionality to securely add, modify, and delete the data
   - ability to generate reports with multiple columns, multiple rows, date-time stamp, and title
   - exception controls
   - validation functionality
   - industry appropriate security features
   - design elements that make the application scalable
   - a user-friendly, functional GUI

C. Create *each* of the following forms of documentation for the application you have developed:
   - a design document including a class diagram and design diagram
   - a test plan for a unit test, including screenshots
   - the results of the unit test based on the provided test plan, including screenshots
   - source code and executable file
   - link to where web app is hosted with HTML code (if applicable)
   - user guide for setting up and running the application for maintenance purposes
   - user guide for running the application from a user perspective

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

E. 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

PROGRAM OUTCOME 1:THE GRADUATE APPLIES CORE INFORMATION TECHNOLOGY SKILLS IN IT SYSTEMS, OPERATING SYSTEMS, NETWORKING, SECURITY, SCRIPTING AND PROGRAMMING, DATA MANAGEMENT, PROJECT MANAGEMENT, AND WEB DEVELOPMENT TO SUPPORT ORGANIZATIONAL FUNCTIONS

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
The submission does not demonstrate the ability to apply core information technology skills to support organizational functions.	The submission demonstrates the ability to apply core information technology skills and support organizational functions in some but not all of the following areas: IT systems, operating systems, networking, security, scripting and programming, data management, project management, and web development.	The submission demonstrates the ability to apply core information technology skills and support organizational functions in each of the following areas: IT systems, operating systems, networking, security, scripting and programming, data management, project management, and web development.

PROGRAM OUTCOME 2:THE GRADUATE DEVELOPS SECURE AND SCALABLE OBJECT-ORIENTED SOFTWARE APPLICATIONS TO ADDRESS SPECIFIC ORGANIZATIONAL NEEDS

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
The submission does not demonstrate the ability to develop functioning object-oriented software applications.	The submission demonstrates the ability to develop functioning object-oriented software applications, but the application provided is not secure, is not scalable, or does not address an organizational need.	The submission demonstrates the ability to develop functioning, secure, and scalable object-oriented software applications that address an organizational need.

PROGRAM OUTCOME 3:THE GRADUATE ARCHITECTS DATA-CENTRIC, MULTITIERED SOFTWARE SOLUTIONS, INCLUDING MOBILE AND WEB APPLICATIONS

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
The submission does not demonstrate the ability to architect software solutions.	The submission demonstrates the ability to architect software solutions, including mobile and web applications, but the application provided either is not data-centric or is not multitiered.	The submission demonstrates the ability to architect data-centric, multitiered software solutions, including mobile and web applications.

PROGRAM OUTCOME 4:THE GRADUATE ARCHITECTS SOFTWARE SOLUTIONS USING SOFTWARE ENGINEERING BEST PRACTICES AND PROCESS MODELING

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
The submission does not demonstrate the ability to architect software solutions.	The submission demonstrates the ability to architect software solutions, but does not demonstrate the use of either software engineering best practices or process modeling.	The submission demonstrates the ability to architect software solutions using software engineering best practices and process modeling.

PROGRAM OUTCOME 5 :THE GRADUATE PRODUCES DOCUMENTATION AND REPORTS TO SUPPORT ALL PHASES OF THE SOFTWARE DEVELOPMENT CYCLE

NOT EVIDENT	APPROACHING COMPETENCE	COMPETENT
The submission does not demonstrate the ability to produce documentation and reports to support any phases of the software development cycle.	The submission demonstrates the ability to produce documentation and reports to support some but not all phases of the software development cycle.	The submission demonstrates the ability to produce documentation and reports to support all phases of the software development cycle.

C: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.

D: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.