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| Student Name | Kyle Kent | | Student Number | |  |
| Unit Code/s & Name/s | ICTPRG502 Manage a project using software management tools | | | | |
| Assessment Name | Class Test | | Assessment Task No. | | AT2 |
| Date of test/exam | 28/11/2018 | | | | |
| **Student Declaration:**  I declare that this assessment is my own work. I am aware of and understand the rules related to assessment as outlined in TAFE Queensland Student Rules and acknowledge that failure to comply with these rules will be regarded as misconduct and will be subject to disciplinary action as outlined. | | | | | |
| Student Signature |  | | | Date |  |
| Assessor Feedback:  Student provided with feedback *(check box when completed)* | | | | | |
| Attempt 1 | Satisfactory | Unsatisfactory | | Date | / / |
| Attempt 2 | Satisfactory | Unsatisfactory | | Date | / / |
| Assessor Name |  | Assessor Signature | |  | |
| Note to assessor: Please record any reasonable adjustment below that has occurred during this assessment. E.g. written assessment given orally; scribe provided. | | | | | |
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| **PRIVACY DISCLAIMER:** TAFE Queensland is collecting your personal information for assessment purposes. The information will only be accessed by authorised employees of TAFE Queensland. Some of this information may be given to the Australian Skills Quality Authority (ASQA) or its successor and/or TAFE Queensland for audit and/or reporting purposes. Your information will not be given to any other person or agency unless you have given us written permission or we are required by law. | | | | | |

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| Assessment rules | Only students enrolled in the unit of competency, the Assessor / Supervisor, and other authorised personnel may enter or remain in the room during a written test / exam. The Assessor/ Supervisor may ask you to produce photographic identification (e.g. student ID card, driver’s licence).  Unless approved by the Assessor / Supervisor prior to the written test / exam (e.g. for open-book exams) you may not bring any devices capable of conveying information relevant to the content (e.g. text books, course notes, mobile phones, pagers, notebook computers, and other devices). You must ensure mobile phones and other electronic devices are turned off prior to the commencement of the written test / exam.  You are required to comply with all directions:   1. Detailed in assessment material supplied; 2. Set out on any notice displayed in the room; and 3. Given by the supervisor.   During a written test / exam session you may not:   1. Communicate with any person other than the supervisor; 2. Assist another person to communicate with another person; and 3. Willingly receive communication from any person except with the approval of the supervisor.   Unless permitted by the supervisor, you may not take from the room any papers or other materials provided for use during the written test / exam.  You are expected to be considerate of other students when entering or leaving the room or when in the vicinity of the room.  If you consider that your performance in the written test / exam has been adversely affected by illness, disability, bereavement or other exceptional circumstances you may apply for special consideration. **For more information, refer to the Student Rules.** |
| Instructions to Student | **Number of Questions:** 8  **Time Allowed:** 4 hours  **Examination Conditions:**  This is a closed book examination; All questions must be attempted.  **Materials to be supplied:**  Examination paper  **Materials to be supplied by the Student:**  Paper for recording answers  **General Instructions:**  You are required to answer each of the questions provided. You must use a black or blue pen to provide answers, not pencil. Sketches, however, may be in pencil.  **Calculators:**  Calculators may be used during this examination. Before the examination commences, all memories must be fully cleared and programs erased.  **Number of Attempts:**  You will receive up to two (2) attempts at this assessment task. Should your 1st attempt be unsatisfactory (U), your teacher will provide feedback and discuss the relevant questions with you and will arrange a date your 2nd attempt. If your 2nd attempt is unsatisfactory (U), or you fail to attend the scheduled date for a 2nd attempt, you will receive an overall unsatisfactory result for this assessment task. Only one re-assessment attempt may be granted for each assessment task, with the exception of Apprentices or Trainees who are permitted an additional supplementary assessment. **For more information, refer to the Student Rules.** |
| Instructions for the Assessor | This is a closed book examination.Remind students of TAFE Queensland Student Rules assessment requirements. |
| Submission details | Students are to submit written answers to the teacher at the end of the exam. |
| Note to Student | An overview of all Assessment Tasks relevant to this unit is located in the Unit Study Guide. |

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| Scenario-01 | Scenario |
| **Carmel’s Caravanning Crosswords**    © TAFE Queensland 2017  **Introduction:**  Carmel, who runs Carmel’s Caravans – a caravan sales yard - is looking for a novel way to get new and existing customers coming back to her web site regularly.  Carmel has decided that a 10 by 10 grid crossword, changed monthly, may provide one form of incentive.  **Web Application Requirements**  Carmel requires this *Crossword Application* to:  Allow users to add/edit their personal details including: Name, Address, Phones, Email, Marketing-Contact-Is-Okay, plus Username and Password.  On user request, display this month’s 10 by 10 grid crossword, ready for the user to add their crossword entries. This page should also provide the list of associated crossword clues.  Allow a logged-in user to:  save their partly completed crossword for review and completion at a later time.  view solutions of crosswords from previous months.  Allow the administrator to:  add/edit/save new crossword puzzles including associated clues.  review old crosswords.  add/edit user and other administrator-related details.  **Management Facilities**  The system is to allow Carmel to add, edit, save and send emails to clients who have a tick in the field: Marketing-Contact-Is-Okay.  The system is to allow Carmel to print mailing labels for clients who have a tick in the field: Marketing-Contact-Is-Okay.  **Management Reporting**  The system is to generate the following reports:  User listings:  All users.  Users who have attempted a crossword between two dates.  Statistical Report, between two dates:  Total Number of users.  Number of crosswords attempted by members.  Number of marketing emails prepared.  Number of marketing emails sent (Sum of the number of members for each email.) | |

Answer the following in paragraph or dot-point format in roughly 100 words per question:

1. What software **development methodology** would you apply to this development project? Give reasons to your answer.

I would choose the Waterfall methodology. The client has clearly defined the required functions for this project. With the objective of the project clear and not needing to suit new rising business requirements, there is no need for the adaptability that an Agile methodology offers. Waterfall also allows for more accurate planning regarding time, budget and cost. This project has a clear outline and would benefit more from accurate planning, than from what an Agile methodology provides.

1. What **source code control** would you use? Give reasons to your answer.

The best source code control software available is Mercurial. All the software options would make good choices, since they all do what they are needed for. But, Mercurial boasts of a user-friendly interface, which is incredibly important when working with software a team hasn’t used before. Using an interface that is confusing or not friendly to beginners would result in wasted time, learning how to operate the software. With a client waiting for a product, reducing the wait time is paramount.

1. Describe how you would **manage** your project throughout the life cycle using your project management software and source code control software.

Management software, like MS Word, Excel, Project and Visio would primarily be used throughout the analysis and design stages of the life cycle. Outlining the development and requirements of the project, calculating the budget with all the involved costs and directing the tasks within the project.

Control software, like GitHub, would be used in all the following stages. Allowing team members to work on individual or group stages separately from others, protecting the software from any errors and sectioning off areas of the project to test and debug.

1. Explain why **initiative and enterprise skills** are important in managing a project using software management tools.

When using management tools, you must have enterprise skills to properly determine what must be done and how it must be outlined. Without them, you would not know what is required. This must be combined with initiative. Since, all you have is a broad understanding on the project, you must show initiative and narrow down the objectives of the project with very little information to go off.

1. List and describe 5 Knowledge Areas of Project Management, or explain the basic fundamentals of successfully managing a project.

**Project Scope management**

It is here the projects scope is defined. Here, what is within scope and what is not is determined. This gives everyone a better understanding of the project, giving the team an understanding of what the project requires.

**Project Risk Management**

Here all risks are identified. The risks are then categorized and prioritised by the severity of the risk. After this has been done, it allows the team to plan risk responses, with the goal of finding and implementing solutions to these risks.

**Project Stakeholder Management**

Stakeholders are identified, and their concerns addressed. As the project is being designed for the stakeholder’s needs, it must address their needs. This is where stakeholder management comes into play.

**Project Time Management**

Here the project is meticulously arranged and schedules to fit a timeframe. The project is divided into sections, which all have start dates and end dates. These sections also include the budget for those sections.

**Project Cost Management**

Here the budget is determined, and costs are estimated for every task then added together for an overall cost. Estimations must include things such as, labour, equipment and materials.

1. Under what circumstances might you use a **Waterfall** Software Development Life Cycle? Describe the standard phases within a Waterfall SDLC.

A waterfall life cycle would be used in conjunction with a waterfall methodology. It is t used when the instructions for a project are clear and avoided when they are not. The waterfall life cycle is rather meticulous, having many documents on the projects planning. This makes it useful for when records need to be kept or viewed. The typical phases of a waterfall life cycle are analysis, design, implementation, testing and launch.

1. Outline two (2) reasons why software specifications are important.

With no software specifications, a project can’t be started. Without knowing the specifications of a project, it is impossible to know what the software is meant to do. Making it impossible to implement.

Software requirements specifications are a guideline to the entire project, outlining and explaining almost everything that you need to know about a project. It defines what you know about the project and what you need to know. Without it, managing projects would be much more difficult.

1. Describe version control and its process or technique and explain why it’s necessary in software development.

Version control is a collection of files that can track any changes or revisions you or others make to the files within the depository. Everything is tracked and stored, including who edited what and when. This ensures that you never lose progress and allows you to easily backtrack to a more stable version of your software. Version control is useful in small projects and a necessity in large ones. Without it, there would be too much to manage, resulting in confusion, lost progress and lost time.

**End of assessment**