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| Student Name |  | Student Number | |  |
| Unit Code/s & Name/s | ICTPRG520 Validate an Application Design Against Specifications  ICTPRG529 Apply Testing Techniques for Software Development  ICTPRG504 Deploy an application to a production environment | | | |
| Assessment Name | Validate / Test / Deploy | Assessment Task No. | | AT1 |
| Assessment Due Date | 16 November 2018 | Date submitted | |  |
| Assessor Name |  | | | |
| **Student Declaration:** I declare that this assessment is my own work. Any ideas and comments made by other people have been acknowledged as references. I understand that if this statement is found to be false, it will be regarded as misconduct and will be subject to disciplinary action as outlined in the TAFE Queensland Student Rules. I understand that by emailing or submitting this assessment electronically, I agree to this Declaration in lieu of a written signature. | | | | |
| Student Signature |  | | Date |  |

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| **Instructions to Student** | Learning Support  Additional support is available to help you achieve your learning goals. Speak to your teacher or a Learning Skills Centre team member if you feel that you may benefit from some extra support. The Institute provides extra support through the Disability Support Unit and the Learning Skills Centre.  RPL (Recognition of Prior Learning) is available for this unit. Speak to your teacher/assessor to check if you qualify for RPL.  Conditions of Assessment  You will need to complete the learning and undertake all assessments satisfactorily to be deemed competent. You are responsible for complying with all assessment item instructions; submission and collection requirements; undertaking assessment tasks honestly and retaining a copy of all assessment items.  You must submit assessment items by the **due date**, unless an extension has been granted by your teacher. Failure to submit assessment items by the due date will result in a “did not submit” being recorded and depending on your circumstances, you may be granted one final resubmission.  To be judged competent in this assessment item the student is required to demonstrate competence in all indicators shown in the marking guide. |
|  | The Classroom as a Simulated Work Environment  Students must be aware and take responsibility for the problems of working in a shared IT environment. Problems such as noise levels, production flow, interruptions and time variances are common to workplaces. In the simulated environment provided in the classroom these problems can take the form of:  Other students who continually ask questions or talk aloud while thinking  Fire drills, projector not working, printers running out of paper or toner cartridge  Miscalculating how much work you can do in one day, missing classes and so on.  Some things are unavoidable and you must devise strategies to overcome them, for example, we cannot stop students from asking questions or entering at exiting the class. Other things are unpredictable (e.g. fire drills). You need to be aware and plan and organise your work allowing some extra time for unavoidable and unpredicted events.  Assessment Criteria:  To achieve a satisfactory result, your assessor will be looking for your ability to demonstrate key skills/tasks/knowledge to an acceptable industry standard.  Refer to the marking criteria document for a detailed list of items.  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 sections / questions with you and will arrange a due date for the submission of your 2nd attempt. If your 2nd submission is unsatisfactory (U), or you fail to submit 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.** |

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| **Submission details** (if relevant) | Submit your assessment to the allocated dropbox in **Connect** or to the allocated network folder.  Your teacher will provide all the details for the submission system or network.  Your assignment must be saved with your surname\_student number\_unit/cluster\_AssessmentNumber. For example:  **surname\_1234567890\_Internet\_Programming\_2\_AT1**  For re-submissions, an “R” must be added to the file name. For example:  **surname\_1234567890\_Internet\_Programming\_2\_AT1\_R**  The Marking Criteria Sheet must be signed and submitted with your work. |
| **Instructions to Assessor** | To be judged competent in this assessment item the student is required to demonstrate competence in all indicators shown in the marking guide and need access to:  Tools to create prototype systems  Static analysis tool  Test plan and test cases. |
| **Note to Student** | An overview of all Assessment Tasks relevant to this unit is located in the Unit Study Guide. |

# Instructions to Students

**Case Study**

***Gold Coast Pharmacies*** has engaged your software development team to create a web-based application to automate the processing of prescriptions generated by doctors attached to the Gold Coast Hospitals. The program capabilities include writing of prescriptions, processing of prescriptions by the pharmacists and distribution of prescribed drugs to indoor patients and supply of prescribed drugs to outdoor patients.

Extended details of the client’s requirements are found in the file **PharmaCare\_SRS**.

## Activity 1 - Validation

You are required to project manage a formal validation process on the software development project you are currently completing within your course.  
  
You are required to show clear evidence of appropriate planning, validation task identification and explanation, appropriate communication and liaising with relevant stakeholders and completion of the validation process.

**Your tasks:**

1. Open the “Validation\_Status\_And\_Feedback.docx” file and fill in: the Project Title, one of you as the Project Manager, and the current date. You will use this to track feedback from your client and manager (*teacher*) as you proceed through this project.

* Add dates and notes in the **Project Phase – Validation Summary Status** table.
* Add dates and the feedback provided by your manager (*teacher*) in the **Validation Feedback** table.

1. Open the “Validate\_Project\_Requirements.docx” file and add yourself as the Project Manager. Add all the project requirements into the *Requirements* table and then as the project proceeds, use this document to check that no requirements have been forgotten.
2. Complete the analysis & design validation document ( “Validate\_Analysis\_And\_Design.docx” )in view of validating the following:

* Software design is complete, accurate, consistent and feasible
* Software design document
* Database structure and its elements
* User Interface.

1. Review one of the developed component using a static analysis tool and complete the source code validation document ( “Validate\_Source\_Code.docx” ).
2. You are required to organise the testing process for the final PharmaCare application and associated documentation. Your tasks are to:
   1. Review the **Test Plan** provided by the Testing Organiser.
   2. Review the supplied **Test Case** detail *(see spreadsheet: PharmaCare\_Test\_Data.xls)*
   3. Fill in sections of the Testing Validation document (“Validate\_Testing.docx”) with the assumption that the testing has been planned and is now waiting testing to be completed by the testing team.

## Activity 2 - System Testing

You are required to project manage a formal testing process on the software development project you are currently completing within your course.  
  
You are required to show clear evidence of due process – appropriate planning, test case identification and explanation, appropriate communication and liaising with relevant stakeholders, completion of the testing, reporting to your team manager on updates required and appropriate closure of the testing process.

**Your tasks:**

1. Based on the scenario above and your interpretation of the PharmaCare program specifications, prepare a test plan (refer IEEE\_829\_Test\_Plan\_Example.docx) and test cases (*see spreadsheet: PharmaCare\_Test\_Data.xls*) to test at least one use-case associated with each of the actors (Doctor, Pharmacist and the Nurse) of the system.
2. Include in your test plan what will be tested in the application, how you will test it, what testing tools and testing types to use, and the input data requirements of the application being tested.
3. Prepare a checklist to build and set up the test environment in accordance to the program specifications and submit a sign-off sheet to your supervisor to verify that the test environment is built and ready for testing.
4. Based on the test cases developed, create test data and test script to test the application.
5. Using the test cases, test data, and test scripts developed, perform and record the application given to you, and analyse test results by preparing a test summary report.
6. Prepare a checklist in order of priorities the defects identified and submit a sign-off sheet to your supervisor and the development team to verify the fixes.
7. Prepare a report to your supervisor to indicate how you have archived / stored your test plan, test environment checklist, test summary report, and defect logs and checklist.

## Activity 3 – Software Deployment

You are required to project manage a formal software deployment process on the software development project with database component that you are currently completing within your course.  
  
You are required to show clear evidence of due process – appropriate planning, identification of installation method, development of installation plan, appropriate communication and liaising with relevant stakeholders, completion of the installation, reporting to your project manager on updates required and appropriate closure of the deployment process.

**Your tasks:**

1. Based on the scenario above and your interpretation of the PharmaCare program specifications, prepare a software installation plan to deploy the application. (You may use the template provided called ‘Software\_Installation\_Plan\_v1.doc’ if you wish and fill-in with the necessary information.)
2. Include in your installation plan the chosen installation method, server and client’s system and resource requirements, security and organisational requirements, data requirements, installation procedure of the application and the database, post-installation tasks, and uninstallation procedure of the application being installed.
3. Using your chosen integrated development environment (IDE) or a third party tool, create an install and uninstall package for the application (including the database, if possible) you are currently developing in your software development project.
4. Run and test (fixing any errors) the install package in a test environment capturing every steps of the installation and include the captured steps in a short installation guide.
5. Using the installation guide, run the install package in a production environment and prepare a sign-off sheet for your supervisor to verify submission of the installation guide, testing of the install package, and deployment of the install package in a production environment.
6. Using the uninstall package you have developed in task 3, run and test (fixing any errors) the uninstall package in a test environment.
7. Prepare a document (with screen dumps) to your supervisor to verify the deployment of the database and the performance of the post installation tasks to configure deployment variables, parameters, connection strings, and security features of the application to the production environment. Provide in the document the following screen dumps:
   1. deployment of the database
   2. configuration (.config) file that shows any configured parameters, variables, and connection strings of the database that are valid for the production environment
   3. configured security features of the application such as user role or privilege or permissions parameters.
8. Present your software installation plan, and results of your installation testing, to your Project Manager for sign-off.