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| Student Name |  | Student Number | |  |
| Unit Code/s & Name/s | ICTPRG534 Deploy applications to production environments | | | |
| Cluster Name  *If applicable* | N/A | | | |
| Assessment Name | Deployment Project | Assessment Task No. | | 2 of 2 |
| Assessment Due Date |  | 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** | This assessment requires you to submit a portfolio of tasks. The portfolio assesses skills and knowledge required to undertake the process of deploying an application to a production environment, including:  Communicating with the Project Manager or Client to confirm details of the project and target systems.  Developing an installation plan.  Developing installation and uninstallation packages.  Testing the developed Install / Uninstall packages.  Deploying the Application and associated database to a nominated production environment.  Configuring the deployed application as per the installation plan. |

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|  | Throughout the process of completing the above tasks, several documents will be generated and will need to be submitted, these are:  A Technical Report  An Installation Plan  An Installation Guide  The ***Technical Report*** will be used to present any documentation generated throughout the deployment process, including details of testing the install/uninstall packages and any communication recorded with the Project Manager and/or the Client.  To be named: *ICTPRG534\_AT2\_TechnicalReport\_<Your Name>.docx*  The ***Installation Plan***is required as a formal plan, outlining the candidates plan to deploy that application, including analysis of the Business case presented and the results of any further research and communication required to ensure a successful deployment of the designated Application and Database  To be named: *ICTPRG534\_AT2\_SoftwareInstallationPlan\_<Your Name>. docx*  The ***Installation Guide*** will contain a series of step-by-step instructions for deploying an application and database to a production environment. This guide should be presented as a professionally formatted document that includes screenshots to support descriptive deployment steps presented in chronological order.  To be named: *ICTPRG534\_AT2\_InstallationGuide\_<Your Name>. docx*  These three documents will need to be presented in a document format that is compatible with Microsoft Office (Microsoft 365). The file format of ‘.docx’ (Microsoft Word Open XML Format Document file) is recommended.  The documents will need to be submitted collectively in a **.zip** file named: *ICTPRG534\_AT1\_<Your Name>.zip* to the relevant connect Assignment Folder – *ICTPRG534 Assessment Task 2*  **Materials to be supplied:**  Business Case Scenario – ICTPRG534\_AT2\_Scenario\_LHO\_TQM\_v1.docx  Technical Report Template – ICTPRG534\_AT2\_PE\_Technical\_Report [Student Name].docx  Software Installation Plan Template – ICTPRG534\_AT2\_InstallationPlan\_Template.docx |
|  | **Work, Health and Safety:**  When working with or on computers, ensure that following all WHS guidelines and standards when working with computers. If using physical machines, ensure that you wear closed-in shoes when moving them around and working with them.  **Details of location:**  TAFE will provide simulated work environment in the classroom all practical activities should be completed in the classroom with teacher/tutor assistance; however, it is possible to complete these tasks on a home virtual network using a freeware/shareware product such as Oracle Virtual Box/VMWare.  **Time restrictions:**  This is a portfolio assessment designed to take place over 6 weeks. The student is expected to attend in class for 6 hours per week (this includes theory sessions) and should be able to commit up to 3 hours per week in their own time.  **Level of assistance permitted:**  Teachers and tutors should be available in class, and accessible by email for students working from home. Staff cannot directly show students answers but guide them to where to go to complete tasks individually. Students with disability will receive reasonable adjustments.  If you are unable to attend assessment you must notify your teacher before the assessment and supply a doctor’s certificate and approval from the team manager for extension. Reasonable adjustments will be made for students as and when appropriate, after consultation with the Disability and Counselling team. Extra time may be given for Language literacy and numeracy (LLN) or extenuating circumstances – you must see your teacher prior to assessment regarding this.  **Assessment Criteria:**  To achieve a satisfactory result, your assessor will be looking for your ability to demonstrate the following key skills/tasks/knowledge to an acceptable industry standard:  Planning a software installation  Performing a software installation  Planning and testing application removal  Performing database installation  Managing application configuration during and after installation |
|  | **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.** |
| **Submission details** (if relevant) | Insert your details on page 1 and sign the Student Declaration. Include this form with your submission.  **Due Date:** Week 17  **Naming Convention**:  *ICTPRG534\_AT2\_<Your Name>.zip*  **Evidence required to be submitted:**  The zipped folder is to contain a Technical Report, Installation Plan and Installation Guide **and this document**, this zipped folder is to be submitted to Connect using the Assessment 1 Assignment Folder.  Assessment to be submitted via   * TAFE Queensland Learning Management System (Connect): [*https://connect.tafeqld.edu.au/d2l/login*](https://connect.tafeqld.edu.au/d2l/login) * Username; 9 digit student number * For password resets go to: [*https://passwordreset.tafeqld.edu.au/default.aspx*](https://passwordreset.tafeqld.edu.au/default.aspx) |
| **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.  This assessment can be completed over several sessions, with the students submitting the work generated over this period.  The following restrictions should apply to the environment in which the development and deployment occurs, where possible:  The test installation and uninstallation could occur on the same machine used to develop the application and install / uninstall packages.  The deployment ‘to a production environment’ should occur on a separate system that is configured to reflect the scenario requirements to best simulate deployment of an application.  The Production Environment could be simulated using a Virtual Machine on the same hardware as the development machine. |
|  | The Application to be deployed must meet the following criteria:  The application must make use of a database component  The application must be completed, in so far as to provide the ability to test the deployment process  The database component must be of a type and in a state to be deployed to a production environment  It may be necessary to review the potential application, and if found not to be suitable, to provide a demonstration application and database the candidate can use to demonstrate the deployment process.   1. The candidate must gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the programming and software development industry, and include access to:  Sufficient privileges to install packages on client and server system 2. Database management system software 3. Specific tools and licences relevant to development, deployment, and configuration depending on the selected platform 4. A configured system (Physical or Virtual) on which to perform deployment 5. Word Processing software as required to edit and produce .docx documents   **Note**: A project specification document needs to be presented to or needs to be made available for the students to undertake the planning and deployment of an application.  Details of location:  TAFE will provide simulated work environment in the classroom. the practical activities should be completed in the classroom with teacher/tutor assistance; however, it is possible to complete these tasks on a home virtual network using a freeware/shareware product such as Oracle Virtual Box/VMWare  Time restrictions:  this is a portfolio assessment designed to take place over 6 weeks. The student is expected to attend in class for 6 hours per week (this includes theory sessions), and also should be able to commit up to 3 hours per week in their own time. |
|  | **Level of assistance permitted:**  Teachers and tutors should be available in class, and accessible by email for students working from home. Staff cannot directly show students answers but guide them to where to go to complete tasks individually. Students with disability will receive reasonable adjustments.  **WHS requirements:**  All workplace health and safety legislation and policy should apply to the practical activities Interactions - teamwork skills are essential in the IT industry therefore you should work in teams to consult and collaborate on the practical activities. However, each student is to complete the tasks below individually and will be required to show their work (unless indicated).    **Contingencies:**  Reasonable adjustments can be made for students who require variations to assessment conditions. Work Health and Safety: A work health and safety check of the assessment environment is to be conducted prior to the assessment and any hazards addressed appropriately. |
| **Note to Student** | An overview of all Assessment Tasks relevant to this unit is located in the Unit Study Guide. |

# Instructions to Students

## Assessment 2: Software Deployment

In this assessment, you are required to project manage a formal software deployment process on a software development project with a database component that you have completed or are currently completing within your course.

If an existing application is being used, it must meet the following criteria:

* The application must make use of a database component
* The application must be completed, in so far as to provide the ability to test the deployment process
* The database component must be of a type and in a state to be deployed to a production environment

If you are unsure of whether the application to be deployed meets the above criteria, ask your instructor for advice and to review the application to be deployed.

You are required to show clear evidence of due process, including appropriate planning, identification of installation method, development of installation plan, appropriate communication and liaising with relevant stakeholders. As well as completion of the installation, reporting to your project manager on updates required and appropriate closure of the deployment process.

**Your tasks:**

1. Review the provided business case scenario and program specifications, providing this review to your Project Manager in the form of an email to confirm your understanding of the project requirements.
2. Based on the provided scenario and your interpretation of the program specifications, prepare a software installation plan to deploy the application. (You may use the template provided called ‘Software Installation Plan.docx’ if you wish and fill-in with the necessary information.)

Include in your installation plan:

1. A description of the installation method that will be used to deploy the application to a production environment.
2. Minimum requirements for the Server and Client’s system based on your analysis of the provided scenario, including the following:
3. Hardware requirements
4. Software Requirements
5. Resources required to complete the deployment to the target system/s
6. Security requirements for the deployment project including:
7. Access requirements for deployment
8. Security that will be configured as part of the deployment
9. Organisational requirements as determined via the scenario
10. Data requirements of the deployed system including:
11. Detail of the Database requirements for the deployment project
12. Whether a new database is to be created, or an existing database is to be migrated in the deployment
13. Installation procedure of the application and the database.
14. post-installation tasks.
15. Uninstallation procedure of the application being installed.
16. Prepare and send an email to your supervisors to verify that the client and server system meet the system and security requirements for the installation of the application.
17. Using your chosen integrated development environment (IDE) and Database Management System (DBMS) or a third party tool, create an install and uninstall package for the application (including the database, if possible) you have developed or are currently developing in your software development project.
18. Run and test (fixing any errors) the install package for the application and database in a test environment capturing every step of the installation and include the captured steps in a short installation guide to be presented in a separate file.
19. Using the uninstall package you have developed in task 4, run and test (fixing any errors) the uninstall package in a test environment, add the steps of uninstallation to the installation guide prepared in Task 5
20. Include in a Technical Report, A summary of the installation and uninstallation process, outlining any issues or challenges encountered in the installation process and how you may prevent these from happening when installing the application and database to a production environment
21. Using the installation guide, run the install package in a production environment including the installation of any Database Components
22. 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.
23. Prepare and send an email (with images) 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 email the following screenshots:

* The deployment of the database.
* A configuration file that shows any configured parameters, variables, and connection strings of the database that are valid for the production environment.
* Configured security features of the application or database such as user role, privilege or permissions parameters.
* The deployed application returning data from the deployed database

1. Present your software installation plan and results of your installation testing to your Project Manager for sign-off.