# Project assessment: Develop application to automate a process

## Criteria

### Unit code, name and release number

ICTPRG405 – Automate processes (1)

ICTPRG407 - Write script for software applications (1)

### Qualification/Course code, name and release number

ICT40518 - Certificate IV in Programming

\*\*Amend the qualification box before distributing to the student. The information here should only contain the qualification the student is enrolled in\*\*

## Student details

### Student number

880783361

### Student name

Andrew Mills

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is your own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Version: 20200108

Date created: 29 October 2019

Date modified: 8 January 2020

For queries, please contact:

Technology and Business Services SkillPoint

Ultimo

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RTO Provider Number 90003 | CRICOS Provider Code: 00591E

This assessment can be found in the [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your knowledge and performance as required to review pseudocode for errors and write script from pseudocode. |
| **Assessment Event number** | 1 of 3 |
| **Instructions for this assessment** | This is a project-based assessment and will be assessing you on your knowledge and performance of the unit.  This assessment is in three parts:   1. Determine scripting requirements 2. Write script from pseudocode 3. Create user documentation.   The assessment also contains:   * Assessment Feedback. |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your assessor for marking.  Ensure you have written your name at the bottom of each page of your assessment.  Submit the following documents for each part:   * Part 1: Determine scripting requirements * Report for Development Manager * Part 2: Write script from pseudocode * Application including HTML and JavaScript files * This document (with screenshot) * Part 3: Create user documentation * User documentation.   It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To achieve a satisfactory result for this assessment, all questions must be answered correctly. |
| **Assessment conditions** | Assessment conditions will be safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the programming and software field of work.  Assessment may be undertaken in normal classroom conditions, which is assumed to be noisy and similar to workplace conditions, or within the workplace. This may include phones ringing, people talking and other interruptions. |
| **What do I need to provide?** | * USB drive or other storage method with enough free space to save work to. |
| **What will the assessor provide?** | * Access to learning management system * Development brief for an application * Runtime and integrated development environment e.g. Visual Studio Code, Brackets * Scripting language (JavaScript) * Debugging tools e.g. JavaScript debugger for Visual Studio code, JSLint & ESLint built into Brackets, browser developer tools * Scenario documents: * [*Red Opal Innovations*](https://share.tafensw.edu.au/share/items/73f2bb48-c457-4fe9-96cf-618ee5f5f2bc/0/?attachment.uuid=2bbeb148-09a8-4884-871c-c95138fe38bf) (ROI\_Scenario.pdf) * [*ROI report template*](https://share.tafensw.edu.au/share/items/73f2bb48-c457-4fe9-96cf-618ee5f5f2bc/0/?attachment.uuid=c7103fff-d751-4918-af8a-4e44aa4f5625) (ROI\_Report\_template.dotx) * The zipped folder Cl\_Scripting\_AE\_Pro\_1of3\_SR1.zip, which contains: * order\_form.html. |
| **Due date and time allowed** | Indicative time to complete assessment:   * Part 1: One hour 30 minutes * Part 2: Two hours * Part 3: One hour. |
| **Assessment location** | Part 1 will be completed in the classroom. All other parts may be completed outside of the classroom.  The student may access their referenced text, learning notes and other resources. |
| **Supervision** | Parts 2 and 3 are an unsupervised, take-home assessment.  Your assessor may ask for additional evidence to verify the authenticity of your submission and confirm that the assessment task was completed by you. |
| **Reasonable adjustment** | If you have a permanent or temporary condition that may prevent you from successfully completing the assessment event(s) in the way described, you should talk to your assessor about ‘reasonable adjustment’. This is the adjustment of the way you are assessed to take into account your condition, which must be approved BEFORE you attempt the assessment. |
| **Assessment feedback, review or appeals** | In accordance with the TAFE NSW policy *Manage Assessment Appeals,* all students have the right to appeal an assessment decision in relation to how the assessment was conducted and the outcome of the assessment. Appeals must be lodged within **14 working days** of the formal notification of the result of the assessment.  If you would like to request a review of your results or if you have any concerns about your results, contact your Teacher or Head Teacher. If they are unavailable, contact the Student Administration Officer.  Contact your Head Teacher for the assessment appeals procedures at your college/campus. |

## Specific task instructions

### Scenario

You are working as a junior developer/programmer at [*Red Opal Innovations*](https://share.tafensw.edu.au/share/items/73f2bb48-c457-4fe9-96cf-618ee5f5f2bc/0/?attachment.uuid=2bbeb148-09a8-4884-871c-c95138fe38bf) (ROI\_Scenario.pdf) (ROI). The Development Manager, Vinh Nguyen, has asked you to undertake some programming work for one of their clients using JavaScript.

The client, PizzasOnly, has developed a promotional scheme for all pizza sales during the months of November and December in the current year. The manager of PizzasOnly, Sean Jackson, has provided you with the following client brief.

A web application is needed to calculate the price of pizzas (listed below) that will be purchased during a promotional period. The number of pizzas will be entered by the PizzasOnly salesperson.

* One large pizza will cost $6.45.
* Two large pizzas will cost $12.00.
* Three large pizzas will cost $14.00.
* Four or more pizzas will use a combination of the above prices to ensure the best price for the customer. For example, the best price for five pizzas would be two pizzas ($12.00) + three pizzas ($14.00).

The client also needs some user documentation to help them use the application.

Download and unzip the resource folder (Cl\_Scripting\_AE\_Pro\_1of3\_SR1.zip), which contains the HTML page with a form for the web application.

## Part 1: Determine scripting requirements

Before you start, Vinh wants to make sure that you have a good understanding of scripting languages, as well as designing and building scripts.

Vinh Nguyen initially gave this task to a trainee in the company, who has since resigned. The trainee wrote some pseudocode (below) that you can use.

*Get the number of pizzas to order from user (input)*

*If number of pizzas less than or equal to zero then*

*Validation error*

*Else*

*Divide the number of pizzas by 2 and check the remainder*

*Check what option is best using the division by 2*

*Print the best buy option and the amount payable*

*Check what option is best using the division with 3*

*Divide the number of pizzas by 3 and check the remainder*

*End if*

Write a report for the Development Manager, using the [*ROI report template*](https://share.tafensw.edu.au/share/items/73f2bb48-c457-4fe9-96cf-618ee5f5f2bc/0/?attachment.uuid=c7103fff-d751-4918-af8a-4e44aa4f5625) (ROI\_Report\_template.dotx) addressing the following items (300-500 words):

1. Identify the main characteristics of scripting languages (for example, JavaScript) that are different to those of other programming languages (for example, Java).
2. Identify the framework and integrated development environment (IDE) that you will use to complete this application. Outline the advantages and disadvantages of using these for this project.
3. Identify the object model and protocols of the scripting language you will be using.
4. Interpret and analyse the provided pseudocode for missing logic and errors. Identify the errors it contains and explain why they are errors.
5. Improve the pseudocode by developing an algorithm that is an appropriate solution to the scenario and addresses the errors you identified.
   1. Create pseudocode that describes the necessary logic for the solution.
   2. Your algorithm must be precise, sufficient and guaranteed to end.
   3. It must also take account of all possible situations by using sequence, selection and iteration structures.

## Part 2: Write script from pseudocode

1. Using the IDE you identified in Part 1, translate your pseudocode from Part 1.5 into working JavaScript to interact with the form contents in the HTML page. You will need to include the JavaScript file in the HTML file.
2. Use basic JavaScript language elements as required, such as expressions, operators and variables, to manipulate items.
3. Ensure that your script runs without errors and produces the expected result.
4. Include internal documentation such as a description, author name and explanations of processes, where required.

**Place a screenshot of your code in the framework and IDE you used in the box below.**

## Part 3: Create user documentation

Prepare user documentation for your script using the [*ROI report template*](https://share.tafensw.edu.au/share/items/73f2bb48-c457-4fe9-96cf-618ee5f5f2bc/0/?attachment.uuid=c7103fff-d751-4918-af8a-4e44aa4f5625) (ROI\_Report\_template.dotx) (200-500 words plus screenshots).

This must include the following:

1. Read-me instructions, which include:
   1. usage statement (authorised use, licence etc.)
   2. version and date information
   3. installation instructions
   4. any special instructions.
2. How-to instructions, which include:
   1. a description of the program’s purpose and what it does
   2. operating instructions
   3. required inputs
   4. expected outputs
   5. relevant screenshots.

## Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor feedback

Has the Assessment Declaration been signed and dated by the student?

Are you assured that the evidence presented for assessment is the student’s own work?

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***