Certificate IV in Programming ICA40511
ICAPMG405A D7999 Automate Processes

Assessment 1: Portfolio Tasks

Assessing Elements 1-5

ICAPMG405A D7999 Automate Processes
Element 1.   Develop algorithms to represent solution to a given problem
Element 2.   Describe structures of algorithms
Element 3.   Design and write script or code
Element 4.   Verify and review script or code
Element 5.   Document script or code

Assessment Requirement – Portfolio Tasks -

This unit describes the performance outcomes, skills and knowledge required to write scripts to automate solutions by using basic scripting processes and application-specific scripting options.

As evidence of this automated solution, each student will produce an electronic portfolio of programming tasks that support the analysis, design, code and documenting of a process that has been automated.

A. Process

1. Students will participate in the class by practicing the demonstrated research and information gathering and determining that is part of each Lesson.
2. Students will be observed researching and working towards filling in their required documentation and developing code during the Lesson. Research and evaluation will be documented by submitting the portfolio tasks provided through blackboard.
3. Students will analyse the task to be automated by completing a five-step process to describe, design, sequence, write (in a language independent form) and test the potential solution.
4. Students will use JavaScript to the develop the program
5. Students (and a partner) will test the program using the cases created in the five-step process and fix any errors found.
6. Students will create tooltips within the interface for user to get some assistance on how to complete the whole process.
7. Students will create a formal technical specification based on the five-step process.
8. **Submission** of the Portfolio tasks is to be a compressed file upload to Blackboard Assignment uploads area. All files are to be provided.

The unit is provided to assist you to learn to different aspects of programming. You will be able to analyse and design a simple program and produce a program in a programming language. This program will be supported by internal and external user and technical documentation.

B. Tasks

You will use the provided brief for all your portfolio submissions 1, 2 and 3. The programming language that will be used is JavaScript using the host language of HTML. You will need to submit all elements of your portfolio of ongoing tasks in order to be eligible to be competent for this unit.

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Note: You can refer to the learning plan for the timing of each delivery.
You can submit any item when it is ready for review, even if it is not due yet.

You will need to analyse the design brief using a five-step process, code the solution in JavaScript in HTML using Notepad, test the code yourself to ensure it works, have a partner use the test cases that you created in your five-step process to ensure it works (the completed test cases must be submitted), provide a fast-track user document to overview the process and write a technical specification based on the five-step process. Each task must be completed to the standard outlined in the following section and submitted on the due dates. The accumulation of all these tasks comprises your first submission.

If you are confident in your ability to program or pick up programming quickly, it is recommended that you complete one or more parts of the extra challenge. It will be up to you to research and develop the code yourself. The lecturer will be happy to provide assistance as you need it, but will not run any lessons specifically on how to complete these tasks.

You are working for the company I.T. Software Development as a programmer. You will need to display a copy of this logo and the client's logo on all software applications and any documentation that you create for these assessments.

n.b. You can change the name of the company that you work for and make your own logo if you want!

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Project Brief:

Nikki Nacks movies and music are looking to automate their services.

Currently, clients call and request songs and music, their credit card details are taken over the phone and their items are emailed to them directly.

They wish to provide their clients with the ability to use a program to locate and download the songs and music of choice. For the first phase (this program) you will display the options to the customer and allow them to select their items of choice and obtain a quote.

They have provided you with a list of items for sale and their associated cost in an excel spread-sheet and wish it to be included in the new system.

In this program you will provide a way for the clients to save their quote as a text file.

1. Portfolio Task 1:   Algorithm Design

Taking the information above design the program that will do this on the client side.
Provide the Inputs, Outputs and Processes that will be needed. Provide clear recognisable variable names. Some of these variable names may already be provided by the JSON file for the Data.

The Interface design will be provided to you and you are to annotate how the program works between

You are to provide as deliverables for this task the Technical Document Template supplied.
In this document you will supply the Abstract Design, Pseudo code, and Flowcharts along with an idea of how the interface will work with the variable names inserted into the Interface diagrams.

The algorithm is then to be tested using a Trace table or Desk Check for the data provided.

Marking-guide

Criteria	Not Demonstrated	Demonstrated
Automate Processes PMG405A E1-5 RS, RK		.

2: Portfolio Task 2:   JavaScript Program & user documentation

As part of this process you will complete your analysis and design using the 5 step process and then write the code to make the program work. The development of a program using the programming language JavaScript needs to be completed in a text editor development environment using HTML as the host language. Apart from minor changes to the HTML documents

a. Using the technical document you have used in Task 1, code your solution in JavaScript using the provided HTML files as the base.
b. Code your solution with tables, forms and internal methods.
c. Write clear comments (internal documentation) on what each method does
d. Include online help for the individual entry fields on your program to provide individual field end-user assistance.
e. Test it out as you write it. If any problems are encountered, fix them immediately.
f. Test the whole program out to ensure that there are no problems. If any problems are encountered, fix them immediately.
g. In your program write tooltips that instruct the user how to fill out the form and effective error messages if the wrong input is submitted. Also provide the instructions to save the quote as a text file.

Once you have completed your program and testing, zip the program and submit it through the Assessments folder for this unit in your Stage 1 course. If you have trouble understanding what you need to do or are having difficulty with your program, please contact the lecturer immediately.

Marking-guide

Criteria	Not Demonstrated	Demonstrated
Analyse, Design, Code & Test PMG405A E1-5 RS, RK	The program is not complete or has not been submitted. The program is not written in JavaScript and HTML using Notepad. The program has bugs and does not run successfully. The program does not adequately represent a solution to the provided scenario. The code provided does not include comments. The program does not have online assistance.	The program maps to the build of a application as per the requirements of the client. The program is written in JavaScript and HTML using Notepad. The program runs successfully and generates a correct quote. There are comments in the code explaining what the code is doing. Online help exists for all entry fields.