

Assessment Brief - Coursework

Academic Year	2023-24 (Jan)
Semester	Y1 (Semester 01)
Module Number	CM1601
Module Title	Programming Fundamentals
Assessment Method	Course Work and Viva
Deadline (time and date)	17 th April 2024
Submission	Assessment Dropbox in the Module Study Area in CampusMoodle
Word Limit	Not Applicable
Use of Generative Artificial Intelligence (AI) text	IS NOT authorised
Module Co-ordinator	Sachinthani Perera

What knowledge and/or skills will I develop by undertaking the assessment?

1. Demonstrate competence in the algorithmic approach to problem-solving.
2. Design, code, compile, test, and execute fundamental programming concepts using a high-level programming language.
3. Construct robust, maintainable programs.

On successful completion of the assessment students will be able to achieve the following Learning Outcomes:

1. Design, code, compile, test, and execute fundamental programming concepts using a high-level programming language.
2. Construct robust, maintainable programs.

Please also refer to the Module Descriptor, available from the module Moodle study area.

What is expected of me in this assessment?

Task(s) - content

Objective

Sarah is the organizer of "TechExpo," an annual technology showcase event where innovative tech projects are presented to industry professionals and enthusiasts. To streamline the event management process Sarah decides to create a command-line application with various functionalities. The application will handle project registration, updates, deletions, viewing, random selection for spotlight showcase, and tracking award-winning projects.

All the functionalities mentioned below need to be fully implemented. You can create a command line menu to navigate.

- Adding Project Details (**APD**)
- Updating Project Details (**UPD**)
- Deleting Project Details (**DPD**)
- Viewing Project Details (**VPD**)
- Saving Project Details to Text File (**SPD**)
- Random Spotlight Selection (**RSS**)
- Recording Awards and Recognitions (**AWP**)
- Visualizing Award-Winning Projects (**VAP**)
- Exiting the Program (**EXIT**)

Coursework Sections	Detailed content	Learning Outcome	Topic/ Week/Module Activity
Adding Project Details (APD)	The system should allow the participants to input the following details. Project ID, Project Name, Category, Team Members, and a Brief Description, Country. You cannot execute this option after random selection for the spotlight showcase. Example:001, ImageHub, Image Processing, Xingyu Fu, Wenwen Zhuang, Wenhua Chen Standardizing the evaluation of conditional image generation models, Country	1	Lecture 2 – Basic Built in Functions Lecture 7 - Functions
Deleting Project Details (DPD)	The system should allow Sarah to delete the details of projects by searching from the Project ID. You cannot execute this option after random selection for spotlight showcase.	1	Lecture 3 - Python Decision Making

What is expected of me in this assessment?

Updating Project Details (UPD)	Before the random selection for spotlight showcase happen, the system should allow Sarah to update the details of projects by searching from The Project ID.	1	Lecture 3 - Python Decision Making
Viewing Project Details (VPD)	The system should display the project details in ascending order based on the Project ID, providing all the relevant information.	1	Lecture 7: Python String
Saving Project Details to Text File (SPD)	The system should allow Sarah to save the project details to the same text file whenever a change is made (add, delete, or update). The details should be categorized according to the category it belongs to.	1, 2	Lecture 10 - File handling
Random Spotlight Selection (RSS)	Using the text file, the system should simulate a random selection and select a Project for spotlight showcase from each category. Once the selection is done, it should display the randomly selected Project details of each category respectively.	1,2	Lecture 10 - File handling Lecture 5 - Python Loops II Lecture 6- Python Exception Handling
Award-winning Projects (AWP)	The system should take points (out of 5) from 4 judges for each project selected for the spotlight showcase. After calculating the points select the 1st 2nd 3 rd places. The input points of judges should be taken as stars from the command line.	1	Lecture 3 - Python Decision Making Lecture 4 - Python Loops I
Visualizing Award-Winning Projects (VAP)	The system should visualize Award-Winning Projects and the countries. Number of stars should display the total points. * * * * * * Project Name Project Name Project Name Country Country Country 1 st Place 2 nd Place 3 rd Place	1	Lecture 8- Python Collections

What is expected of me in this assessment?

Task(s) - format

1. All the functionalities mentioned above need to be fully implemented. Code should be submitted as a single zip file to the link in the assessment section. Check the following key points before you start the implementation.
 - a. A console menu system to enable the user input with validations should be implemented.
 - b. Information entered should be saved in text file(s).
 - c. You are not allowed to use databases for this coursework.
 - d. When sorting data, you are not allowed to use inbuilt Python libraries and marks will be given only for your own algorithms.
2. You should submit a report containing a flow chart for each function, python code for each function with a brief description, and a screenshot of the output.

Important: If you are further developing the application or doing any modifications due to a justifiable fact, please mention that in your report.

The approaches taken, and assumptions made, will be checked thoroughly during the viva. Full marks will be awarded for each criterion only if you implement successfully and defend well during the viva.

References

Use RGU Harvard style to format citations and references – see library guide

(<http://libguides.rgu.ac.uk/rguharvard>). Refer to textbooks and articles/academic papers rather than lecture notes.

How will I be graded?

A number of subgrades will be provided for each criterion on the feedback grid which is specific to the assessment.

The overall grade for the assessment will be calculated using the algorithm below*

A	At least 50% of the subgrades to be at Grade A, at least 75% of the subgrades to be at Grade B or better, and normally 100% of the subgrades to be at Grade C or better.
B	At least 50% of the subgrades to be at Grade B or better, at least 75% of the subgrades to be at Grade C or better, and normally 100% of the subgrades to be at Grade D or better.
C	At least 50% of the subgrades to be at Grade C or better, and at least 75% of the subgrades to be at Grade D or better.

How will I be graded?	
D	At least 50% of the subgrades to be at Grade D or better, and at least 75% of the subgrades to be at Grade E or better.
E	At least 50% of the subgrades to be at Grade E or better.
F	Failing to achieve at least 50% of the subgrades to be at Grade E or better.
NS	Non-submission.

*If the word count is above the specified word limit by more than 10% or the submission contains an excessive use of text within tables, the grade for the submission will be reduced to the next lowest grade.

Feedback grid

GRADE	A	B	C	D	E	F
DEFINITION / CRITERIA (WEIGHTING)	EXCELLENT Outstanding Performance	COMMENDABLE/VERY GOOD Meritorious Performance	GOOD Highly Competent Performance	SATISFACTORY Competent Performance	BORDERLINE FAIL	UNSATISFACTORY Fail
A console menu system with validations (1 subgrade)	All menu Options are displayed in a console correctly. Users can select the option by providing an input. Inputs are validated. The student demonstrate excellent knowledge of the task through viva.	More than 7 menu options are displayed in a console correctly. Users can select the option by providing an input. basic input validation can be seen. The student demonstrates very good knowledge of the task through viva.	More than 6 menu Options are displayed in a console correctly. Users can select many options by providing input. basic input validation. Students demonstrate good knowledge of the task through viva.	More than 5 menu Options are displayed in a console correctly. Users can select many options by providing input. minor input validation. The student demonstrates adequate knowledge of the task through viva.	Less than 5 menu options are displayed in the console. Users can only select a few options via input. no input validations can be seen. The student does not demonstrate adequate knowledge of the task through viva.	No console menu to be seen. User inputs are not considered. Demonstrates no knowledge of the task. The program does not run.
Add, delete & update project details (1 subgrade)	Adding, deleting, and updating project details can be done. Duplicate records are handled, and all the inputs are correctly validated. Sub-menu for each function works flawlessly. Student demonstrates excellent knowledge of the task through viva.	Adding, deleting, and updating project details can be done. No duplicate records are handled. All the inputs are correctly validated. sub-menu for each function works. Students demonstrate very good knowledge of the task through viva.	Adding, deleting, and updating project details can be done. No duplicate records are handled. Basic inputs are validated. Sub-menu for each function works. The student demonstrates good knowledge of the task through viva.	Adding, deleting, and updating of project details can be done. No duplicate records are handled. No inputs are validated. Sub-menu for each function works. The student demonstrates adequate knowledge of the task through viva.	Only two of the functions out of three can be done. No duplicate records are handled. No inputs are not validated. Sub-menu for each function works with errors. The student demonstrates low knowledge of the task through viva.	Functions do not work. Demonstrates no knowledge of the task. The program does not run.

GRADE	A	B	C	D	E	F
DEFINITION / CRITERIA (WEIGHTING)	EXCELLENT Outstanding Performance	COMMENDABLE/VERY GOOD Meritorious Performance	GOOD Highly Competent Performance	SATISFACTORY Competent Performance	BORDERLINE FAIL	UNSATISFACTORY Fail
View Project details and view randomly selected projects' details of each category (1 subgrade)	Display the project details in ascending order based on their Project ID and display the randomly selected projects' details of each category respectively. The student has implemented a sorting algorithms. Demonstrates excellent knowledge of the task through viva.	Display the project details in ascending order based on their Project ID and display the randomly selected projects' details of each category respectively. The student has implemented a sorting algorithms. Demonstrates very good knowledge of the task through viva.	Display the project details in ascending order based on their Project ID and display the randomly selected projects' details of each category respectively. The student has implemented a sorting algorithms. Demonstrates good knowledge of the task through viva.	Display the project details in ascending order based on their Project ID and display the randomly selected projects' details of each category respectively. The student has implemented a sorting algorithms. Demonstrates satisfactory knowledge on the task through viva.	Project details and randomly selected projects' details of each category are displayed. Demonstrates low knowledge of the through viva.	Project details and randomly selected projects' details of each category are not displaying. Demonstrates no knowledge of the task through viva.
File handling (2 subgrade)	Details of the projects are saved to a text file successfully and details of the projects are taken from a text file(s). Necessary validations are being implemented. Duplicate errors were addressed. Exceptions were handled in the code. Resume capability of the system has been implemented. The student demonstrates excellent knowledge on the task through viva	Details of the projects are saved to a text file successfully and details of the projects are taken from a text file(s). Necessary validations are being implemented. Duplicate errors were addressed. Exceptions were handled in the code. Resume capability of the system have been implemented. The student demonstrates very good knowledge of the task through viva	Details of the projects are saved to a text file successfully or details of the projects are taken from a text file(s). Necessary validations are not being implemented. Duplicate errors were addressed. Exceptions were handled in the code. The resume capability of the system has been implemented. The student demonstrates good knowledge of the task through viva.	Details of the projects are saved to a text file successfully or details of the projects are taken from a text file(s). Exceptions were not handled in the code. The student demonstrates satisfactory knowledge of the task through viva.	Attempts were made to code the file handling but not working. The file has been created without data. The student demonstrates unsatisfactory knowledge of the task through viva.	File handling is not implemented. student Demonstrates no knowledge of the task through viva.

GRADE	A	B	C	D	E	F
DEFINITION / CRITERIA (WEIGHTING)	EXCELLENT Outstanding Performance	COMMENDABLE/VERY GOOD Meritorious Performance	GOOD Highly Competent Performance	SATISFACTORY Competent Performance	BORDERLINE FAIL	UNSATISFACTORY Fail
Select random projects for spotlight showcase from each category and Select winning projects (2 subgrades)	Random projects are selected. Duplicates are being validated. Get points (out of 5) from 4 judges for each project selected for the spotlight showcase and select winning projects. The student demonstrates excellent knowledge on the task through Viva.	Random projects are selected. Duplicates are being validated. Get points (out of 5) from 4 judges for each project selected for the spotlight showcase and select winning projects. The student demonstrates very good knowledge of the task through viva.	Random projects are selected. Duplicates are being validated. Get points (out of 5) from 4 judges for each project selected for the spotlight showcase and select winning projects. The student demonstrates good knowledge of the task through viva.	Random projects are selected. No validations can be seen. Not getting points (out of 5) from 4 judges for each project selected for spotlight showcase and select winning projects. The student demonstrates satisfactory knowledge of the task through viva.	Random projects are generated with no relevance to the existing data. No validations can be seen. Not getting points (out of 5) from 4 judges for each project selected for spotlight showcase. The student demonstrates unsatisfactory knowledge of the task through viva.	Random projects' selection is not implemented. Not getting points (out of 5) from 4 judges for each project selected for spotlight showcase. No validations can be seen. The student demonstrates no knowledge of the task through viva.
Display and Visualize Winning projects and details (1 subgrade)	Display details of 1 st , 2 nd , and 3 rd projects and display the projects with project name and country it belongs. The student demonstrates excellent knowledge on the task through viva.	Display details of 1 st , 2 nd , and 3 rd projects and display the projects with project name and country it belongs. The student demonstrates very good knowledge on the task through viva.	Display details of 1 st , 2 nd , and 3 rd projects and display the projects with project name and country it belongs. The student demonstrates good knowledge on the task through viva.	Display details of 1 st , 2 nd , and 3 rd projects and display the projects with project name and country it belongs. The student demonstrates satisfactory knowledge on the task through viva.	Not displaying 1 st , 2 nd , and 3 rd projects and not displaying the projects with project name and country it belongs. The student demonstrates unsatisfactory knowledge on the task through viva.	Not displaying 1 st , 2 nd , and 3 rd projects and not displaying the projects with project name and country it belongs. Student demonstrate no knowledge on the task through viva.

GRADE	A	B	C	D	E	F
DEFINITION / CRITERIA (WEIGHTING)	EXCELLENT Outstanding Performance	COMMENDABLE/VERY GOOD Meritorious Performance	GOOD Highly Competent Performance	SATISFACTORY Competent Performance	BORDERLINE FAIL	UNSATISFACTORY Fail
Report, Test Plan, Code Quality of the application (2 subgrades)	A Detailed report can be seen. Report has all the required details. Code is added to the report and clear descriptions are given. Added flow charts clearly. All the screenshots of outputs are clearly attached. Excellent formatting can be seen throughout the report. Code comments, in code references, Proper naming conventions, Indentation and use of proper coding structures can be seen.	Report has some required details. Code is added to the report and clear descriptions are given. Added flow charts clearly. All the screenshots of outputs are clearly attached. Average formatting can be seen throughout the report. Code comments, Proper naming conventions, Indentation can be seen. Many Improvements on the given specification is evident.	Report has some required details. Some of the code is added to the report and descriptions are given. Added flow charts. Few screenshots are attached. Average formatting can be seen throughout the report. Code comments, Proper naming conventions, Indentation can be seen. At least one improvements on the given specification is evident.	Report has some required details. Some of the code is added to the report and descriptions are given. No flow charts added. No screenshots are attached. Formatting cannot be seen throughout the report. Code comments, Proper naming conventions, Indentation can be seen.	Incomplete report. Some of the code is added to the report and descriptions are not given clearly. No flow charts added. No screenshots are attached. No comments to be seen. indentation is not consistent. Major naming errors are visible.	No report or Incomplete report can be found. No description given. No codes and screenshots attached. No flow charts added. No comments to be seen. No indentation of the code. Has no idea on naming conventions.

Coursework received late will be regarded as a non-submission (NS) and one of your assessment opportunities will be lost.

What else is important to my assessment?

What is the Assessment Word Limit Statement?

It is important that you adhere to the Word Limit specified above. The Assessment Word Limit Statement can be found in Appendix 2 of the [RGU Assessment Policy](#). It provides detail on the purpose, setting and implementation of wordage limits; lists what is included and excluded from the word count; and the penalty for exceeding the word count.

What's included in the word count?

The table below lists the constituent parts which are included and excluded from the word limit of a Coursework; more detail can be found in the full Assessment Word Limit Statement. Images will not be allowed as a mechanism to circumvent the word count.

Excluded	Included
Cover or Title Page	Main Text e.g. Introduction, Literature Review, Methodology, Results, Discussion, Analysis, Conclusions, and Recommendations
Executive Summary (Reports) or Abstract	Headings and subheadings
Contents Page	In-text citations
List of Abbreviations and/or List of Acronyms	Footnotes (relating to in-text footnote numbers)
List of Tables and/or List of Figures	Quotes and quotations written within "..."
Tables – mainly numeric content	Tables – mainly text content
Figures	
Reference List and/or Bibliography	
Appendices	
Glossary	

What are the penalties?

The grade for the submission will be reduced to the next lowest grade if:

- The word count of submitted work is above the specified word limit by more than 10%.
- The submission contains an excessive use of text within Tables or Footnotes.

What else is important to my assessment?

What is plagiarism?

Plagiarism is “the practice of presenting the thoughts, writings or other output of another or others as original, without acknowledgement of their source(s) at the point of their use in the student’s work. All materials including text, data, diagrams, or other illustrations used to support a piece of work, whether from a printed publication or from electronic media, should be appropriately identified and referenced and should not normally be copied directly unless as an acknowledged quotation. Text, opinions or ideas translated into the words of the individual student should in all cases acknowledge the original source” ([RGU 2022](#)).

What is collusion?

“Collusion is defined as two or more people working together with the intention of deceiving another. Within the academic environment this can occur when students work with others on an assignment, or part of an assignment, that is intended to be completed separately” ([RGU 2022](#)).

For further information please see [Academic Integrity](#).

What if I'm unable to submit?

- The University operates a [Fit to Sit Policy](#) which means that if you undertake an assessment then you are declaring yourself well enough to do so.
- If you require an extension, you should complete and submit a [Coursework Extension Form](#). This form is available on the RGU [Student and Applicant Forms](#) page.
- Further support is available from your Course Leader.

What additional support is available?

- [RGU Study Skills](#) provide advice and guidance on academic writing, study skills, maths and statistics and basic IT.
- [RGU Library guidance on referencing and citing](#).
- [The Inclusion Centre: Disability & Dyslexia](#).
- Your Module Coordinator, Course Leader and designated Personal Tutor can also provide support.

What are the University rules on assessment?

The University Regulation '[A4: Assessment and Recommendations of Assessment Boards](#)' sets out important information about assessment and how it is conducted across the University.