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Logo: Cardiff Metropolitain University

School of Technologies

### Assessment

### Brief

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| Module Code | Module Title |
| CSE4002 | Fundamentals in Programming |
| Academic Year | Semester |
| 2025 | 1 |
| Module Leader email | |
| nisansala@icbtcampus.edu.lk | |

Content

[Assessment Details 2](#_Toc67665314)

[Submission Details 4](#_Toc67665315)

[Assessment Criteria 5](#_Toc67665316)

[Further Information 7](#_Toc67665317)

[Who can answer questions about my assessment? 7](#_Toc67665318)

[Referencing 7](#_Toc67665319)

[Submission problems 7](#_Toc67665320)

[Unfair academic practice 8](#_Toc67665321)

[How is my work graded? 8](#_Toc67665322)

# Assessment Details

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| Assessment title | Abr. | Weighting |
| Tourmate vehicle management system | WRIT1 | 100% |
| Pass marks are 40% for undergraduate work and 50% for postgraduate work unless stated otherwise. | | |

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| Task/assessment brief: | |
| **TOUR MATE** is a famous cab service in the city and the company management wants to create an application to manage their main processes.  Create an error free, effective one with user friendly interfaces (GUI/Console), appropriate messages, outputs and menu driven application using C++ programming language. Students can use appropriate data structures and text files to store information.  **Main requirements are.**   * View available Vehicle Details. * Add/Update/Delete Vehicle details. * Manage Sales details.   **Other requirements are.**   * User login. * Logout. * Exit. * View Company Details.   Systems developer should be responsible of developing an accurate system to fulfil above requirements.  Note: Make this as a menu driven program; Show the user’s choice and allow the user to make appropriate choice. Proper error handling techniques and easily navigating interfaces should be implemented to improve user friendliness of the system. Use an appropriate data storage mechanism (files, arrays, etc.) and suitable modularization techniques. System should be tested carefully to verify accuracy of operations.  Carefully investigate the given scenario and provide the proposed solution.  Attach softcopy of error free program with your documentation.  Keep all the backups  Tasks:   1. Design flow charts for the system including core functions according to given scenario. (25 marks) (LO1,LO2)    1. Explain the use of controlling structures(selection, repetition) during designing flow diagrams according to the given scenario. Describe advantages of modularization. (10 marks)    2. Use appropriate modularization to reduce the complexity of the design. Design flow charts using valid flow chart symbols and logical instruction flows. (15 marks) 2. Develop and submit a functional C++ program code, by following the design created above.   Effective modularization and controlling structures need to be used to improve code efficiency. Use files or arrays for storage and backup requirements. Focus on accuracy, user friendliness and competence of the software. (50 marks) (LO3)   1. Prepare a test document including test plan, test cases and test results. Conduct user acceptance testing and provide feedback with sample questionnaires used.Standard report structure should be followed. (25 marks) (LO4) | |
| Word count (or equivalent): | 3000 |
| This a reflection of the effort required for the assessment. Word counts will normally include source code, any text, tables, calculations, figures, subtitles and citations. Reference lists and contents of appendices are excluded from the word count. Contents of appendices are not usually considered when determining your final assessment grade. | |

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| Academic or technical terms explained: |
| SRS – System requirements specification  Modularization – Process of breaking complex tasks into manageable smaller units/modules.  **Explain** -  Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions,and stating main ideas.  **Design** –  Creating something new, whether it's a plan, a process, a product, or a solution to a problem. It requires using your understanding to generate something original and functional.  **Develop** –  Creating: This refers to taking an existing design and building upon it, refining it, or bringing it to life. This involves a high degree of originality and innovation.  Applying: This signifies using existing knowledge or skills to create something new, but not necessarily something completely original. It involves adapting and implementing existing concepts in a new context.  **Complie** –  Synthesize information together in a different way by combining elements in a new pattern or proposing alternative solutions. |

# Submission Details

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| Submission Deadline: | This will be provided on the Moodle submission point. | Estimated Feedback  Return Date | This will normally be 20 working days after initial submission. |
| Submission  Time: | By 2.00pm on the deadline day. |  | |
| Moodle/Turnitin: | **Any assessments submitted after the deadline will not be marked and will be recorded as a non-attempt unless you have had an extension request agreed or have approved mitigating circumstances. See the School Moodle pages for more information on extensions and mitigating circumstances.** | | |
| File Format: | The assessment must be submitted as a pdf document (save the document as a pdf in your software) and submit through the Turnitin submission point in Moodle.  **Your assessment should be titled with your:**  **student ID number, module code and assessment ID,**  **e.g. st12345678 CSE5013 WRIT1** | | |
| Feedback | Feedback for the assessment will be provided electronically via Moodle. Feedback will be provided with comments on your strengths and the areas which you can improve. View the [guidance](https://learn.cardiffmet.ac.uk/mod/glossary/showentry.php?courseid=8107&eid=9581&displayformat=dictionary) on how to access your feedback.  All marks are provisional and are subject to [quality assurance processes](https://outlookuwicac.sharepoint.com/:b:/s/QED/Ec3kYQQeEHdKrCbo_tJnr2kBomIiiLINmPebUgvTUljq9Q?e=a0G2z5) and confirmation at the programme Examination Board. | | |

# Assessment Criteria

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| Learning outcomes assessed |
| LO1. Explain structured programming concepts  LO2. Design a basic structured computer program  LO3. Developed a modularized computer programme for a prepared design  LO4. Compile software testing and documentation |
| Other skills/attributes developed  This includes elements of the Cardiff Met EDGE (Ethical, Digital, Global and Entrepreneurial skills) and other attributes developed in students through the completion of the module and assessment. These will also be highlighted in the module guidance, which should be read by all students completing the module. Assessments are not just a way of auditing student knowledge. They are a process which provides additional learning and development through the preparation for and completion of the assessment. |
| |  |  | | --- | --- | | ETHICAL | Understanding the importance of protecting user data adhering to authentication and data privacy regulations. | | DIGITAL | Use of controlling structures and application of modularization concept for breaking complex problems into smaller, manageable components in software development, ensuring scalability and reliability of application development. | | GLOBAL | - | | ENTREPRENEURIAL | Identifying opportunities to create new businesses or to enhance the existing process using fundamentals in software development. | |

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| Marking/Assessment Criteria |

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| **Task** | **Poor**  **< 40** | **Satisfactory**  **40 - 55** | **Good**  **55 -69** | **Excellent**  **70 -100** |
|  | **0-9** | **10-14** | **15-18** | **19-25** |
| System Design  (25 marks) | Lack of understanding about controlling structures used.  Poor use of design tools and symbols,  Design diagrams with invalid flows, incomplete diagrams with logical errors. | Average explantion of conroling structures, evidence of modularization witrh minor flows.  Average level design diagrams given with clear identification and application of symbols used in flow chart design with minor flows. | Demonstrate accurate use of selection repetition structures with relevant design examples.  Effective use of modularization visible.  Following standard notations in flow chart designing representing logical flow of instructions. | Excellent explanation of controlling structures and  Use of modularization concepts clearly visible providing clarity and reducing complexity of the design.  Excellent use of flow chart symbols, with accurate flow of instructions,  Supported with relevant assumptions. |
|  | **0-19** | **20-27** | **28-35** | **36-50** |
| System Development  (50 marks) | Lacking system development/ Poor development with syntax errors,  The application lacks core functionalities or is incomplete, failing to demonstrate the key requirements according to the given scenario, Learner demonstrate lack of knowledge of the language basics used for the development. | Operational system according to the requirements of the scenario,  Average use of data types and operators, control structures and modularization evident with minor flows,  Learner demonstrate satisfactory knowledge of the language basics used for the development. | Demonstrates good use of control structures with proper understanding,  Good use of modularized development according to the given design,  User friendly system development with onscreen help options and input validations.  Good use of techniques for storage and backup requirements. | Excellent system development with use of control structures improved coding efficiency,  Excellent Modularization with effective data passing between developed modules,  Use appropriate techniques for storage and backup requirements,  user input validation and user-friendliness of software,  Easy navigation between modules,  Accuracy, creativity and completeness of the system considered. |
|  | **0-9** | **10-14** | **15-18** | **19-25** |
| Testing and Documentation  (25 marks) | No testing is conducted, or only limited testing is performed on basic functionalities,  Lack of test plan, poor test cases,  Poor report formatting. | Basic testing is performed, but coverage is limited, and critical functionalities might not be tested. | Core functionalities are tested with use of detailed test plan,  Appropriate test cases were used with sample test data, test results and conclusion,  Good report structure and documentation. | Comprehensive testing strategies are implemented, including unit, integration, and functional testing. Testing results are analyzed and documented,  Excellent level documentation. |

# Further Information

## Who can answer questions about my assessment?

Questions about the assessment should be directed to the staff member who has set the task/assessment brief. This will usually be the Module Leader. They will be happy to answer any queries you have.

Staff members can often provide feedback on an assignment plan but cannot review any drafts of your work prior to submission. The only exception to this rule is for Dissertation Supervisors to provide feedback on a draft of your dissertation.

## Referencing and independent learning

Please ensure you reference a range of credible sources, with due attention to the academic literature in the area. The time spent on research and reading from good quality sources will be reflected in the quality of your submitted work.

Remember that what you get out of university depends on what you put in. Your teaching sessions typically represent between 10% and 30% of the time you are expected to study for your degree. A 20-credit module represents 200 hours of study time. The rest of your time should be taken up by self-directed study.

Unless stated otherwise you must use the **HARVARD** referencing system. Further guidance on referencing can be found in the Study Smart area on Moodle and at [www.citethemrightonline.com](http://www.citethemrightonline.com) (use your university login details to access the site). Correct referencing is an easy way to improve your marks and essential in achieving higher grades on most assessments.

## Technical submission problems

It is strongly advised that you submit your work at least 24 hours before the deadline to allow time to resolve any last minute problems you might have. If you are having issues with IT or Turnitin you should contact the IT Helpdesk on (+44) 2920 417000. You may require evidence of the Helpdesk call if you are trying to demonstrate that a fault with Moodle or Turnitin was the cause of a late submission.

## Extensions and mitigating circumstances

Short extensions on assessment deadlines can be requested in specific circumstances. If you are encountering particular hardship which has been affecting your studies, then you may be able to apply for mitigating circumstances. This can give the teachers on your programme more scope to adapt the assessment requirements to support your needs. Extensions and mitigating circumstances policies and procedures are regularly updated. You should refer to your degree programme or school Moodle pages for information on extensions and mitigating circumstances.

## Unfair academic practice

Cardiff Met takes issues of unfair practice **extremely seriously.** The University has procedures and penalties for dealing with unfair academic practice. These are explained in full in the University's Unfair Practice regulations and procedures under [Volume 1, Section 8](https://www.cardiffmet.ac.uk/registry/academichandbook/Pages/Ah1_08.aspx) of the Academic Handbook. The Module Leader reserves the right to interview students regarding any aspect of their work submitted for assessment.

Types of Unfair Practice, include:

**Plagiarism,** which can be defined as using without acknowledgement another person’s words or ideas and submitting them for assessment as though it were one’s own work, for instance by copying, translating from one language to another or unacknowledged paraphrasing. Further examples include:

* Use of any quotation(s) from the published or unpublished work of other persons, whether published in textbooks, articles, the Web, or in any other format, where quotations have not been clearly identified as such by being placed in quotation marks and acknowledged.
* Use of another person’s words or ideas that have been slightly changed or paraphrased to make it look different from the original.
* Summarising another person’s ideas, judgments, diagrams, figures, or computer programmes without reference to that person in the text and the source in a bibliography/reference list.
* Use of assessment writing services, essay banks and/or any other similar agencies (NB. Students are commonly being blackmailed after using essay mills).
* Use of unacknowledged material downloaded from the Internet.
* Re-use of one’s own material except as authorised by your degree programme.

**Collusion**, which can be defined as when work that that has been undertaken with others is submitted and passed off as solely the work of one person. Modules will clearly identify where joint preparation and joint submission are permitted, in all other cases they are not.

**Fabrication of data**, making false claims to have carried out experiments, observations, interviews or other forms of data collection and analysis, or acting dishonestly in any other way.

## How is my work graded?

Assessment grading is subject to thorough quality control processes. You can view a summary of these processes on the [Assessment Explained Infographic](https://outlookuwicac.sharepoint.com/sites/QED/Shared%20Documents/Forms/Front%20Page.aspx?id=%2Fsites%2FQED%2FShared%20Documents%2Fstudent%20guide%20%2D%20Is%20my%20mark%20fair%2Epdf&parent=%2Fsites%2FQED%2FShared%20Documents&p=true&originalPath=aHR0cHM6Ly9vdXRsb29rdXdpY2FjLnNoYXJlcG9pbnQuY29tLzpiOi9zL1FFRC9FYzNrWVFRZUVIZEtyQ2JvX3RKbnIya0JvbUlpaUxJTm1QZWJVZ3ZUVWxqcTlRP3J0aW1lPXFLb08zblB3MkVn).

Grading of work at each level of Cardiff Met degree courses is benchmarked against a set of general requirements set out in [Volume 1, Section 4.3](https://www.cardiffmet.ac.uk/registry/academichandbook/Documents/AH1_04_03.pdf) of our Academic Handbook. A simplified version of these Grade Band Descriptors (GBDs) with short videos explaining some of the academic terminology used can be accessed via the [Facilitation of Learning](https://outlookuwicac.sharepoint.com/sites/QED/SitePages/Facilitation-of-Learning.aspx) resource page.

We would strongly recommend looking at the [Study Smart](https://learn.cardiffmet.ac.uk/course/view.php?id=1416) area of Moodle to find out more about assessments and key academic skills which can have a significant impact on your grades. Always check your work thoroughly before submission.

