

COIT12200 *Software Design & Development*

Term 1 - 2026

Profile information current as at 08/06/2026 03:47 pm

All details in this unit profile for COIT12200 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

Corrections

Unit Profile Correction added on 19-02-26

Section: IT Resources

Corrections to the versions of Java and NetBeans to be used. This Term students are to use:

- JDK 21 (not JDK 25)
- Apache NetBeans 20 (not Apache NetBeans 28)

General Information

Overview

This unit introduces object-oriented software design and implementation, including the use of complex data structures and algorithms. You will learn data structures, algorithms, and both theoretical and practical aspects of software engineering. The theory will focus on software processes, requirements engineering, modelling, architectural design, design patterns, software development methodology, testing, and quality assurance. You will also be introduced to the principles of software reuse, and development code management. You will develop multi-tiered software application consisting of presentation, application, and data persistence tiers. You will also learn test-driven software application development using appropriate tools, thus building solid foundations for software development.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites

Pre-requisites: (COIT11134 and COIT11237) OR (COIT11134 and COIT12167).

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

Offerings For Term 1 - 2026

- Brisbane
- Cairns
- Melbourne
- Online
- Rockhampton
- Sydney

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses

Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. Practical and Written Assessment

Weighting: 25%

2. Practical and Written Assessment

Weighting: 30%

3. Project (applied)

Weighting: 45%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure - Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure - International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback - Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Student evaluations, feedback from the teaching team and informal feedback from students.

Feedback

The new unit materials were relevant and helped student learning

Recommendation

Continue to provide teaching materials of a similar standard.

Feedback from Student feedback. Feedback from the teaching team.

Feedback

Assessments gave students relevant, practical experience with the concepts taught in the unit. Students found their tutorials and practical assignments engaging and helpful.

Recommendation

Continue with similar assessment tasks.

Feedback from Student feedback

Feedback

Assessment feedback was useful and helped students to learn and to improve the quality of their work.

Recommendation

Continue to aim for high-quality feedback that helps students improve the quality of their work.

Feedback from Student feedback

Feedback

A new LTS version of Java (25) has now been released. Students have asked when the new LTS version will be used in the university.

Recommendation

It is recommended that, if possible, the transition to the new LTS version be made in Term 2 or Term 3 of 2026.

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Create a software requirements specification in accordance with the principles of requirements engineering
2. Apply modelling techniques to document architectural and system models as per the requirements specification
3. Use complex data structures and algorithms in software application development
4. Design and implement a multi-tiered software application consisting of presentation, application and data persistence tiers
5. Conduct test-driven development, validation, verification testing, software project testing, and design walkthroughs in small teams.

Australian Computer Society (ACS) recognises the Skills Framework for the Information Age (SFIA). SFIA is a widely used and consistent definition of ICT skills. SFIA is increasingly being used when developing job descriptions and role profiles. ACS members can use the tool MySFIA to build a skills profile at <https://www.acs.org.au/professionalrecognition/mysfia-b2c.html>.

This unit contributes to the following workplace skills as defined by SFIA 8. The SFIA code is included:

- Requirements Definition and management (REQM)
- User Experience Analysis (UNAN)
- Software Design (SWDN)
- System Integration and Build (SINT)
- Programming/Software Development (PROG)
- Database Design (DBDS)
- Testing (TEST)
- Quality Assurance (QUAS)
- Quality Management (QUMG)

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level ● Introductory Level ● Intermediate Level ● Graduate Level ● Professional Level ● Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Practical and Written Assessment - 25%			●		
2 - Practical and Written Assessment - 30%	●	●		●	
3 - Project (applied) - 45%	●	●	●	●	●

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication	●	●			●
2 - Problem Solving	●	●	●	●	●
3 - Critical Thinking	●		●	●	●
4 - Information Literacy	●	●			●
5 - Team Work					
6 - Information Technology Competence	●	●		●	
7 - Cross Cultural Competence					
8 - Ethical practice					
9 - Social Innovation					
10 - First Nations Knowledges					
11 - Aboriginal and Torres Strait Islander Cultures					

Textbooks and Resources

Textbooks

COIT12200

Prescribed

Engineering Software Products: An Introduction to Modern Software Engineering

Edition: 1st (2019)

Authors: Ian Sommerville

Pearson Higher Ed

USA

ISBN: 9780135210642

Binding: Paperback

COIT12200

Prescribed

Java How to Program (EarlyObjects, Global Edition)

Edition: 11th (2018)

Authors: Paul Deitel & Harvey Deitel

Pearson

USA

ISBN: 978-1292223858

Binding: eBook

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Violet Uml editor 2.1.0 or later
- MySQL Community Server 8.0.29 or higher
- MySQL Workbench
- MySQL Connector/J 8.0.29 or higher
- SceneBuilder 23 (or higher) (available from <https://gluonhq.com/products/scene-builder>)
- JavaFX 23.0.1
- OpenJDK 25
- Apache NetBeans 28

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Ambi Jayal Unit Coordinator

a.jayal@cqu.edu.au

Schedule

Week 1 - 09 Mar 2026

Module/Topic

Chapter

Events and Submissions/Topic

Install and test software (Test by developing a simple JavaFX application using SceneBuilder. In this unit, follow the instructions in the NetBeans guide on the unit website. Note that you must use the versions of the software specified in this unit profile.)

Tutorial classes commence in week 1. Make sure that you register for a tutorial class.

Generic Collections; Selection Sort

Deitel & Deitel, (textbook) Chapter 16 and Section 19.6.1

Week 2 - 16 Mar 2026

Module/Topic	Chapter	Events and Submissions/Topic
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Testing Part 1; JUnit testing; Regular Expressions	Sommerville, Engineering Software Products (textbook) chapter 9; CQU content; Deitel & Deitel (textbook), Section 14.7	
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Week 3 - 23 Mar 2026

Module/Topic	Chapter	Events and Submissions/Topic
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Java Database Application Development (JDBC)	Deitel & Deitel (textbook) Chapter 24; CQU content	<p>Assessment 1 (Programming Assignment)- Phase 1 (GUI) - due Wednesday 9:00am (AEST). Note the completed assignment (all phases) is due in week 6)</p> <p>Tutorial - Assessment 2 Part A1- due in week 3 tutorial class (Assessment item 2 / Tutorial assessment submissions commence: this work is to be developed and submitted in weekly tutorial classes from week 3 -12)</p>
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In-class groups allocated in tutorial classes this week. Do NOT change your tutorial class after you are assigned to your group.

Week 4 - 30 Mar 2026

Module/Topic	Chapter	Events and Submissions/Topic
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Software Processes	Sommerville, Software Engineering (reference book): Extracts from chapters 1-5; Sommerville, Engineering Software Products (textbook), chapter 1; CQU content	Tutorial - Assessment 2 Part A2- due in week 4 tutorial class
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Week 5 - 06 Apr 2026

Module/Topic	Chapter	Events and Submissions/Topic
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Software Architecture	Sommerville, Engineering Software Products (textbook), chapter 4; Sommerville, Software Engineering (reference book), chapter 6; CQU content	Tutorial - Assessment 2 Part A3- due in week 5 tutorial class. Includes group work.
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Week 6 - 13 Apr 2026

Module/Topic	Chapter	Events and Submissions/Topic
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Software Design	CQU content	<p>Tutorial - Assessment 2 Part A4- due in week 6 tutorial class. Includes group work.</p> <p>Assessment 1 Due: Week 6 Friday (17 Apr 2026) 5:00 pm AEST</p>
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Vacation Week - 20 Apr 2026

Module/Topic	Chapter	Events and Submissions/Topic
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Check that you have no catch-up classes scheduled this week

Week 7 - 27 Apr 2026 Module/Topic	Chapter	Events and Submissions/Topic
Reliable Programming	Sommerville, Engineering Software Products (textbook), chapter 8; CQU content	Tutorial - Assessment 2 Part A5- due in week 7 tutorial class. Includes group work.
Week 8 - 04 May 2026 Module/Topic	Chapter	Events and Submissions/Topic
Security and Privacy; Testing Part 2	Sommerville, Engineering Software Products (textbook), chapter 7 and 9; CQU content	Tutorial - Assessment 2 Part A6- due in week 8 tutorial class Assessment 2: Part B (Tutorial group work - case study group report) - due Friday 5:00pm (AEST)
Week 9 - 11 May 2026 Module/Topic	Chapter	Events and Submissions/Topic
Recursion	Deitel & Deitel (textbook) chapter 18	Tutorial - Assessment 2 Part A7- due in week 9 tutorial class Assessment 3 Part A <u>Phase 2</u> - (Applied Project - Programming Assignment) - due Friday 9:00am (AEST). Note the completed assignment (all phases) is due in week 12)
Week 10 - 18 May 2026 Module/Topic	Chapter	Events and Submissions/Topic
Custom Data Structures	Deitel & Deitel (textbook) chapter 21	Tutorial - Assessment 2 Part A8- due in week 10 tutorial class
Week 11 - 25 May 2026 Module/Topic	Chapter	Events and Submissions/Topic
DevOps and Code Management	Sommerville, Engineering Software Products (textbook), chapter 10; CQU content	Tutorial - Assessment 2 Part A9- due in week 11 tutorial class
Week 12 - 01 Jun 2026 Module/Topic	Chapter	Events and Submissions/Topic
Algorithmic Efficiency	Deitel & Deitel (textbook) chapter 19 (sections 19.1-19.5); CQU content	Tutorial - Assessment 2 Part A10- due in week 12 tutorial class Assessment 3 Part A - (Applied Project - Programming Assignment) - complete assignment due Friday 11:30pm (AEST) Assessment 3 Part B - in class quiz (<i>held during the week 12 tutorial class</i>)
Exam Week - 08 Jun 2026 Module/Topic	Chapter	Events and Submissions/Topic
Vacation/Exam Week - 15 Jun 2026 Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Unit coordinator: Dr. J. Jarvis
j.jarvis@cqu.edu.au

Assessment Tasks

1 Assessment 1

Assessment Type

Practical and Written Assessment

Task Description

This is an individual assignment.

Note: Re-attempts are not allowed for the final submission of this assessment item.

The Task

In this assignment, you will use the key constructs and concepts introduced in Weeks 1- 2 to develop and unit test a software application that employs a Graphical User Interface (a JavaFX GUI) and uses complex data structures and algorithms. You will be required to provide JUnit tests, an acceptance test plan and the results of the tests.

Further details are provided in the detailed Assignment 1 specification available on the Moodle unit website.

Note that:

1. A separate phase 1 submission is required early in the development period for this assignment.
2. All the phases are described in the detailed specification on the unit website. You are required to keep copies of all phases. You may be asked to provide copies of your individual phases before marks can be awarded. You must submit both phase 1 (early in the development) and your completed project. There is a submission area for phase 1 and a separate submission area for the final submission. The due dates and times are available in the submission areas.
3. You may be asked to demonstrate your understanding of the assignment to the unit coordinator before marks can be awarded.

AI ASSESSMENT SCALE - AI PLANNING

You may use AI for planning, idea development, and research. Your final submission should show how you have developed and refined these ideas.

Note: For programming assignments you can get examples and ideas from AI, but you must not include code in your program that was generated by AI. You must write the code in your application yourself. If asked, you must be able to explain any of the code submitted and you must be capable of writing similar code under invigilated, test conditions if required to do so. In addition, you must only use the language features and techniques covered in the unit (and course) so far. These are the concepts being tested by the assessment item.

Assessment Due Date

Week 6 Friday (17 Apr 2026) 5:00 pm AEST

Note that Phase 1 is due Wednesday at 9:00am (AEST) in week 3. The final submission is due on Friday of week 6 at 5:00pm(AEST).

Return Date to Students

Two weeks after the assignment is submitted

Weighting

25%

Assessment Criteria

This is an individual assignment and contributes to 25% of the total marks. This assignment will be assessed according to the following criteria:

- Design and Implementation (and functionality achieved)
- Language use including correct application of classes, data structures, algorithms, and programming good practices.
- Documentation
- Testing

Referencing Style

- Harvard (author-date)

Submission

Online

Submission Instructions

Submit a zip file with the NetBeans project and a separate Word file with the report.

Learning Outcomes Assessed

- Use complex data structures and algorithms in software application development

2 Assessment 2

Assessment Type

Practical and Written Assessment

Task Description

This assessment item will include both individual and group work. It has two parts, part A and part B described below.

Note:

1. This assessment is exempted from the 72-hour submission grace period and must be completed by the stated submission date/time (i.e. for on-campus students their weekly tutorial work must be submitted in the tutorial class and for distance education students their weekly tutorial work must be submitted by the due date specified in Moodle).
2. Re-attempts are not allowed for either part of this assessment item.

In this assessment item you will be required to demonstrate your ability to apply the principles of requirement engineering by eliciting the functional and non-functional requirements, documenting requirements specification, modelling the system, and designing the system architecture and implementation. In addition, you will be required to demonstrate an understanding of key topics covered each week.

Part A: Tutorial work (20%)

The Task

This part of the assessment is to be developed and submitted as part of your weekly tutorial sessions. It consists of a series of 10 tutorial submissions to be developed and submitted in the tutorial class in weeks 3-12 (inclusive). For on-campus students this work is due in the weekly tutorial, NOT on the due date shown in Moodle. Moodle cannot have multiple due dates to cater for different tutorial times so the date specified in Moodle is to allow for tutorials held at the end of the week or on weekends. For on-campus students no marks will be awarded for work submitted outside the tutorial class unless there are special circumstances and leave from a specific class is approved by the unit coordinator.

Note that the solutions to the tutorial exercises are released after the due date on Moodle. This means that for all students extensions after the due date on Moodle can only be granted in very special circumstances (with supporting documentation) and students with an extension will be required to complete a different set of exercises.

Some of the tutorial work will be individual and some will involve group work. You will be allocated your group in week 3. Some group work will be started in the tutorial class, but the group members will be required to finish work outside the class. It is important that all members of the group contribute equally to the group work. If any members of the group are not contributing to the work please discuss this with your tutor as soon as you are aware of the issue. It is very important to prepare for your tutorial by attending the lectures and/or reading the required materials prior to the tutorial class.

On-campus students

1. This assessment item must be developed and submitted in your weekly tutorial as and when you are directed to do so by your tutor.
2. Marks may be deducted if your tutor is not satisfied with your progress or understanding of the work or if you do not attend the whole tutorial. Make sure you are on time to class. Marks are not only awarded for the sample of work submitted during the class. Satisfactory participation in all the tutorial class activities is also required to be awarded marks for this assessment item.
3. If you have special circumstances that prevent you from attending a specific class, please contact your tutor and unit coordinator as soon as you are aware of the issue. You will be given instructions about how to complete the assessment tasks for that week.

Online/Distance Education students

1. You will also be required to submit a specified sample of your weekly work by the due date specified by the

coordinator. Late submissions will be awarded 0 marks unless you have been given approval for a late submission due to special circumstances.

2. The unit coordinator or a member of the teaching team may make special arrangements to discuss aspects of the weekly work with you before marks can be awarded.
3. You will also be required to work as part of a group for some of the tutorial work and to complete part B of this assessment item in your group.

All Students: Note that although you may only be required to submit a sample of your work in each tutorial, all the tutorial questions and exercises are important. Each week all the questions should be attempted and the answers checked. Any work not completed in the tutorial class should be completed outside class.

Each week's tutorial work is worth 2 marks. The total for this assessment item is 20%.

AI ASSESSMENT SCALE - AI PLANNING

You may use AI for planning, idea development, and research. Your final submission should show how you have developed and refined these ideas.

However, note that there should be no need to use AI when developing solutions to your tutorial exercises. You must be able to demonstrate your understanding of and ability to complete the tutorial work to your tutor.

Part B: Group Case Study and Report (Design) (10%)

The Task

Weeks 5 and 6 of the tutorial work will involve group work to determine the requirements and the partial design specification for an application. The final output from this exercise is to be a report that documents the design process and partial design documentation for the application. The report is to be submitted as part B of this assessment item. Note that groups are also expected to work on this task outside the tutorial class. All members of the group are to contribute to the work and all group members are to submit a copy of the group's final report in Moodle. More details about the requirements and a template for the report document can be found on the unit website.

AI ASSESSMENT SCALE - AI PLANNING

You may use AI for planning, idea development, and research. Your final submission should show how you have developed and refined these ideas.

However, note that this work should result in the group's own design and the group members must be able to explain their design and design decisions.

Assessment Due Date

Part A: This part of the task commences with an "in-class" submission of work in week 3 and continues with "in-class" weekly submissions until the end of week 12 (i.e. 10 weekly submissions). On-campus students must complete and submit the scheduled work in their weekly tutorial class. Part B: The group report is due on Friday of week 8 at 5:00pm (AEST)

Return Date to Students

Part A: Tutorial marks will be awarded within a week after the date of submission. Part B: The marks for the group report will be returned 2 weeks after submission.

Weighting

30%

Assessment Criteria

This assessment item involves both individual and group work. It contributes to 30% of the total marks. In this assessment item students are assessed on their ability to:

- Apply software design and development principles to the design of a 3-layered system.
- Complete appropriate documentation for requirements, system modelling, and design.
- Complete weekly tutorial questions and exercises that demonstrate an understanding of key topics covered each week.

Referencing Style

- Harvard (author-date)

Submission

Online

Submission Instructions

Part A: Weeks 3 -12 require a weekly submission of a specified sample of work from the tutorial class. Part B: requires

the submission of the completed design document (group work)

Learning Outcomes Assessed

- Create a software requirements specification in accordance with the principles of requirements engineering
- Apply modelling techniques to document architectural and system models as per the requirements specification
- Design and implement a multi-tiered software application consisting of presentation, application and data persistence tiers

3 Assessment 3 (Applied Project and In-class Test)

Assessment Type

Project (applied)

Task Description

This assessment item consists of two parts - part A and part B.

Note:

1. Part B of this assessment item (week 12 quiz/test) is exempted from the 72-hour submission grace period and must be completed by the stated submission date/time, i.e. the quiz must be completed in your scheduled week 12 tutorial class.
2. Re-attempts are not allowed for either part of this assessment item.

Both parts of this assessment item are individual tasks.

Part A: Programming assignment (30%)

The Task

In this part of the assessment task, you are required to develop and unit test a 3-layered software application. This application will have a presentation layer (a JavaFX GUI), an application layer and a database access layer. You will be required to provide JUnit tests, an acceptance test plan and the results of the tests. You will be using the topics learned in weeks 1- 9 in this assignment. Complete task details are in the Assignment 3 Part A specification document available on the Unit website.

Note that:

1. A separate phase 2 submission is required early in the development period for this assignment. You are not required to submit phase 1 in this assessment item.
2. All the phases are described in the detailed specification on the unit website. You are required to keep copies of all phases. You may be asked to provide a specific phase of the assignment before marks can be awarded. You must submit both phase 2 (early in the development) and your completed project. There is a submission area for phase 2 and a separate submission area for the final submission. The due dates and times are available in the submission areas.
3. You may be asked to demonstrate your understanding of the assignment to the unit coordinator before marks can be awarded.

AI ASSESSMENT SCALE - AI PLANNING

You may use AI for planning, idea development, and research. Your final submission should show how you have developed and refined these ideas.

Note: For programming assignments you can get examples and ideas from AI, but you must not include code in your program that was generated by AI. You must write the code in your application yourself. If asked, you must be able to explain any of the code submitted and you must be capable of writing similar code under invigilated, test conditions if required to do so. In addition, you must only use the language features and techniques covered in the unit (and course) so far. These are the concepts being tested by the assessment item.

Part B: In-class test (15%)

The Task

This is an invigilated, closed book, online test. You will be required to complete the quiz in person in your week 12 tutorial. The quiz will consist of short-answer/written questions from weeks 1-11 of the term (inclusive)

- On-campus students must sit the test in their tutorial class in week 12.
- To sit the test, online/distance education students will be required to attend their week 12 online tutorial with their camera on.

This in-class test will be held in the first part of your week 12 tutorial class. You must complete the test in the tutorial class to be awarded the marks.

Note: This assessment item (the week 12 quiz/test) is exempted from the 72-hour submission grace period and must be completed by the stated submission date/time, i.e. the quiz must be completed in your scheduled week 12 tutorial class.

The second part of the week 12 tutorial class will cover tutorial questions related to the week 12 content. These will be submitted and marked as your final part of assessment item 2.

More details about the in-class test will be provided on the unit website during the term.

AI ASSESSMENT SCALE - NO AI

You must not use AI at any point during the assessment. You must demonstrate your core skills and knowledge.

Assessment Due Date

Part A: Phase 2 is due Friday of week 9 at 5:00pm (AEST). The complete assignment is due on Friday of week 12 at 11:30pm (AEST). Part B is an in-class test held in the week 12 tutorial.

Return Date to Students

As this is the final assessment item, results cannot be released until certification date.

Weighting

45%

Assessment Criteria

Part A:

In part A of this assessment item students are assessed on their ability to:

- Implement a 3-layered system that includes a graphical user interface (JavaFX GUI), application logic and database access objects.
- Rigorously test the software application.

Part B

Part B of this assessment item is an in-class test that assesses the student's knowledge and understanding of the content covered in weeks 1 - 11 inclusive.

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Submission Instructions

Part A: Submit a zip file with the NetBeans project and a separate Word file with the report. Part B: submit the answers to the in-class test. Submission details will be given in the class.

Learning Outcomes Assessed

- Create a software requirements specification in accordance with the principles of requirements engineering
- Apply modelling techniques to document architectural and system models as per the requirements specification
- Use complex data structures and algorithms in software application development
- Design and implement a multi-tiered software application consisting of presentation, application and data persistence tiers
- Conduct test-driven development, validation, verification testing, software project testing, and design walkthroughs in small teams.

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?



Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem