# COSC1284

## Programming Techniques

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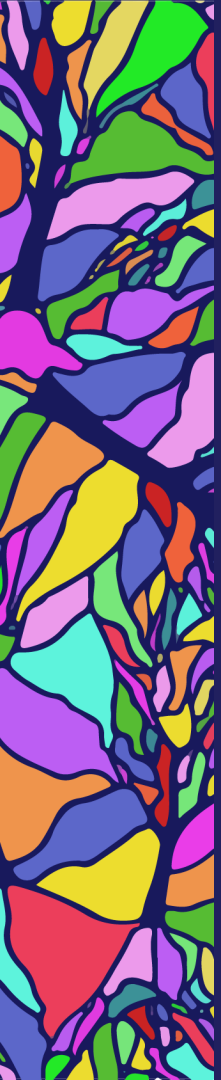
**What's next...**


RMIT UNIVERSITY

# Outline

- Announcements
- Assignment in Focus
- Feedback: Your questions answered
- Code Examples (Sumarise Concepts)



# Announcements & Discussions

# Announcements

## Remaining Assessments

- Online Test (15%) – Questions – Week 12
- Coding Task (30%) – Complete a program – Week 13
- Use the time you have to practice and review all the course material
  - Review weeks 1 – 11
  - Complete any tutorial exercises you did not finish
  - Go back to previous exercises and re-write or refactor them
  - Practice writing your own programs

# Announcements

## Online Test

- Online Test (15%) – Questions – Week 12
  - Will be open from 12th October (Monday 09:00 a.m.)
  - Will close 16th October (Friday 05:00 p.m.)
  - You should complete the task in one sitting.
  - The quiz is timed and must be completed within one hour.
  - You can only take the quiz once
  - Covers material from weeks 1 – 9
  - Three questions
  - No code writing required in the submission
    (You may want to type out the code in Visual studio for testing purposes)
  - Results will be published in canvas in week 13.

# Announcements

## Programming Techniques - Online Quiz

This is a preview of the published version of the quiz

Started: Sep 27 at 11:44am

### Quiz Instructions

### Course Title: Programming Techniques

### Course Code: COSC1284

### Task: Programming Techniques - Online Quiz

This online quiz will test your ability to modify, run and debug Java code.

You will be tested on Java fundamentals, including material from lectures and tutorials in week 1-9.

Follow the instructions below to complete your answers:

- You will be requested to answer three unrelated questions in random order.
- The overall numbers of marks awarded by this test is 15.
- Each question shows how many marks are awarded for a correct answer.
- You may be able to answer the questions without writing any code. However, it is recommended to type the code in the attached screenshots in Visual Studio Code, and to debug it to find the correct answers.

**PLEASE NOTE**: *You will only be able to take this quiz **once**, so double check your answers before submitting any question!*

Questions

- **Question 1**
- Question 2
- Question 3

Time Running: Hide

Attempt due: Oct 16 at 5pm

58 Minutes, 43 Seconds

# Announcements

## Time Limited Coding Task - Assignment #3 (Weeks 1 – 11)

- Designed to assess your independence as a programmer
  - Will be open from 19th October (Monday 09:00 a.m.)
  - Will close 22nd October (Thursday 09:00 a.m.)
  - The assessment is designed to be completed within 3 hours but you have three days to complete it.
  - There will only be very limited help available for the assessment.
  - No help on writing the code, only to clarify the requirements of the specification.

  - Late penalties apply
  - For each 2 hour period after the submission deadline there is a 3 mark penalty.
  - If you submit after 09:00 a.m. on Thursday then you will receive a 3 mark penalty.
  - If you submit after 11:00 a.m. on Thursday then you will receive a 6 mark penalty.
  - No submissions will be accepted after 09:00 p.m. Thursday 22nd October.
  - Any extensions must go through the formal special consideration process.
  - Results of this will not be released until the official results of the semester are released (30th November)

# Announcements

Course Title: Programming Techniques
Course Code: COSC1284
Task: Programming Assignment #3

Key points to complete your **Assignment #3**:

- You are provided with skeleton code for this assignment on this page.
- This is skeleton code for **Visual Studio Code.**
- You need to complete the code, in response to **some questions provided to you in the assignment specification on this page.**
- **The specification also provides guidance on how will you be assessed.**
- You will be tested on Java fundamentals (material covered during lectures and tute/lab sessions 1 to 12).
- You will have **three days** to complete your assignment in **Week 13: 9am, Monday 19th October 2020 - 9 am, Thursday 22 October 2020**.

**Late penalties apply**

- For each 2 hour period after the submission deadline there is a 3 mark penalty.
- If you submit after 09:00 a.m. on Thursday then you will receive a 3 mark penalty.
- If you submit after 11:00 a.m. on Thursday then you will receive a 6 mark penalty.
- No submissions will be accepted after 09:00 p.m. Thursday 22nd October.
- Any extensions must go through the formal special consideration process.

For example if the last submission is made after 09:00 a.m. and before 11:00 a.m. on Thursday 22nd October, 2020 then a 3 mark deduction will apply.

If the last submission is made after 011:00 a.m. and before 01:00 p.m. on Thursday 22nd October, 2020 then a 6 mark deduction will apply.

Only the last submission will be marked.

Previous submissions cannot be marked to avoid late penalties.

*****IMPORTANT*****

**You can and should make multiple submissions during the assessment period.**

**DO NOT LEAVE YOUR SUBMISSION TO THE LAST MINUTE**

**ALWAYS DOWNLOAD YOUR LATEST SUBMISSION TO CONFIRM A SUCCESSFUL AND CORRECT SUBMISSION.**

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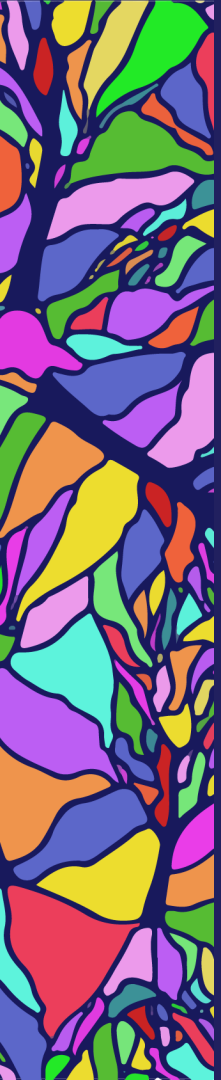
# Preparation

## Time Limited Coding Task - Assignment #3 (Weeks 1 – 11)

| Week | Topic |
|---|---|
| 1 | Basic syntax |
| 2 | Printing to console |
| 3 | Methods |
| 4 | Branching |
| 5 | Loops & Strings |
| 6 | Arrays |
| 7 | Objects vs Primitives |
| 8 | Classes |
| 9 | Program Structure & Exceptions |
| 10 | Classes: Search & Sort |
| 11 | Classes: Inheritance |



# Chapter 14

# Chapter 14 – Extending Classes

- There is a explanation of the program and its requirements.
- The chapter then proceeds to examine each of the classes and its relationships to one another
- Introduces the ArrayList. (not required for A3)

- An array can hold a collection of any type of objects.
  - Scanners
  - Cards
  - Network connections
  - Game Characters
  - Superheroes
  - e.t.c.

# Chapter 14 – Extending Classes

- Consolidation
  - Represent your data in an object oriented way
  - Using a series of classes to represent simple data.
  - Use a class to combine other classes together to represent more complex objects.
  - Make use of arrays to represent collections of objects.
  - Make use of static variables for better resource management.
  - Implement methods to encapsulate important logic such as being able to compare two objects.
  - Use constants to protect your data.
  - Use loops for constructing data.
  - Use loops for finding data.
  - Think algorithmically – binary vs sequential

# Code example

- Writing simple programs with best practice code.