KIT100 Programming Preparation

Tutorial Six – Week 7

Teaching Team Consultation

- Your Lecturer: Son Tran
- Email: sn.tran@utas.edu.au
- Consultation Hour: 09.30AM-11.30AM Thursday
- Zoom ID: 85393279874

Teaching Team Consultation

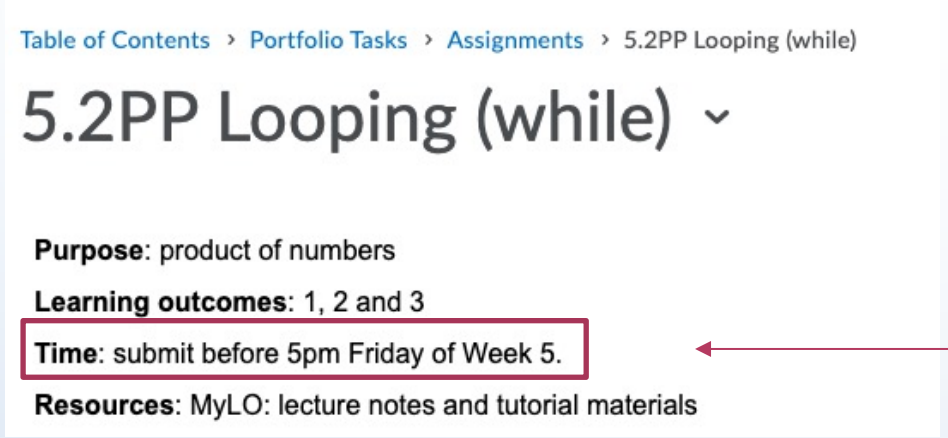
- Your Tutor: Jamal Maktoubian
- Email: jamal.maktoubian@utas.edu.au
- Consultation Hour: 01.00PM-03.00PM Wednesday
- Zoom ID: 84773628046

Recordings

- Lecture and tutorial recordings were uploaded on MyLO
- Tips to do the portfolio tasks were explained during the tutorials.

Portfolio Tasks Deadline

- Time



- We set the "**time**" commitment for weekly assigned portfolio task(s) that allows you to receive the "**early MyLO feedback**" and "**early grade**".
  - For example, the page of portfolio task 5.2 mentioned the time for submission is 5 pm of week 5, which indicates you can receive early feedback and grade if you are submitting your assignment by 5 pm of week 5.

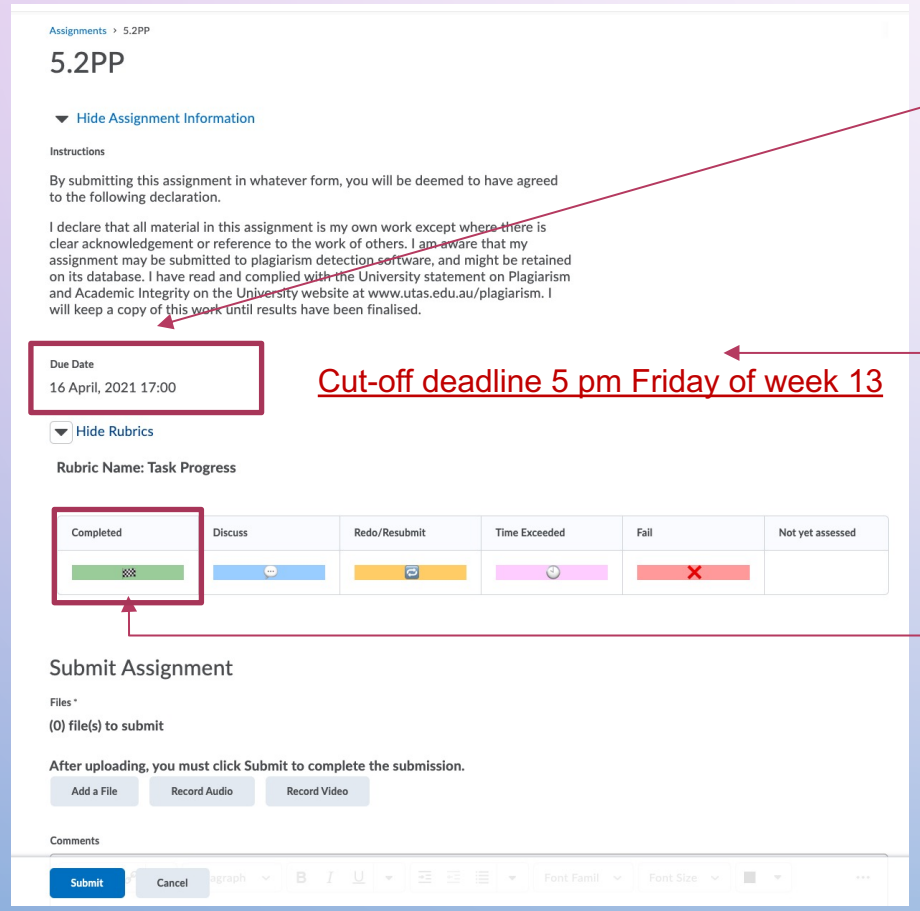
- Due Date

1.1PP Getting Prepared	4	46/58	43/58	43/58	08 April, 2022 17:00
1.2PP Hello World	6	47/58	42/58	42/58	08 April, 2022 17:00
3.1PP	14	44/58	39/58	39/58	08 April, 2022 17:00
3.2PP	13	43/58	39/58	39/58	08 April, 2022 17:00
4.1PP	20	36/58	28/58	28/58	08 April, 2022 17:00
4.2PP	22	34/58	19/58	19/58	08 April, 2022 17:00
5.1PP	23	21/58	0/58	0/58	08 April, 2022 17:00
5.2PP	18	18/58	0/58	0/58	08 April, 2022 17:00
6.1PP	6	4/58	0/58	0/58	08 April, 2022 17:00

- The "**due date**" sets on the MyLO assignment folder; by submitting this "due date" deadline, you can receive the "**formal MyLO feedback**" and "**formal grade**" for each portfolio task.
  - For example, portfolio tasks till 5.2 set the "due date" deadline 5 pm of week 7.

Portfolio Tasks Deadline

- Cut-off Deadline

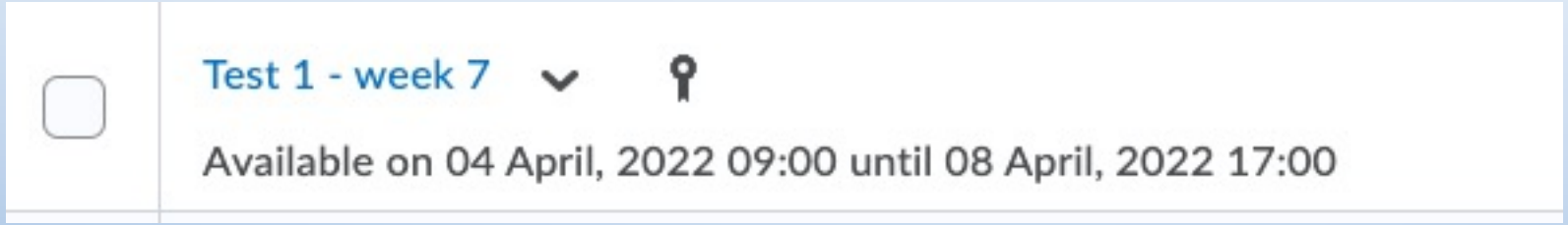


- If you miss the “due date” deadline, you still allow submitting your assignment to MyLO till **Friday of week 13**, but you will get "the grade only" **without MyLO feedback**.

- Please note **5 pm Friday of week 13** is the hard cut-off.
  - **ALL** tasks (including 12.1PP, the Learning Reflection Report) must be marked with '**completed**' on MyLO (for the grade you are aiming for), so you must submit prior with enough time for the tutor to mark your submission and have enough time for you to possibly re-submit.

Test 1

- Don’t forget we have Test 1 **this week** on MyLO Quiz.
- You have to complete Test 1 by **5pm Friday 08 April**.



Portfolio Tasks

- The deadline to get the formal feedback of your portfolio tasks till 5.2PP is **5pm Friday 08 April**.
  - If you miss this deadline, you are still allowed to submit. Your submission will be marked but may not receive the MyLO feedback.

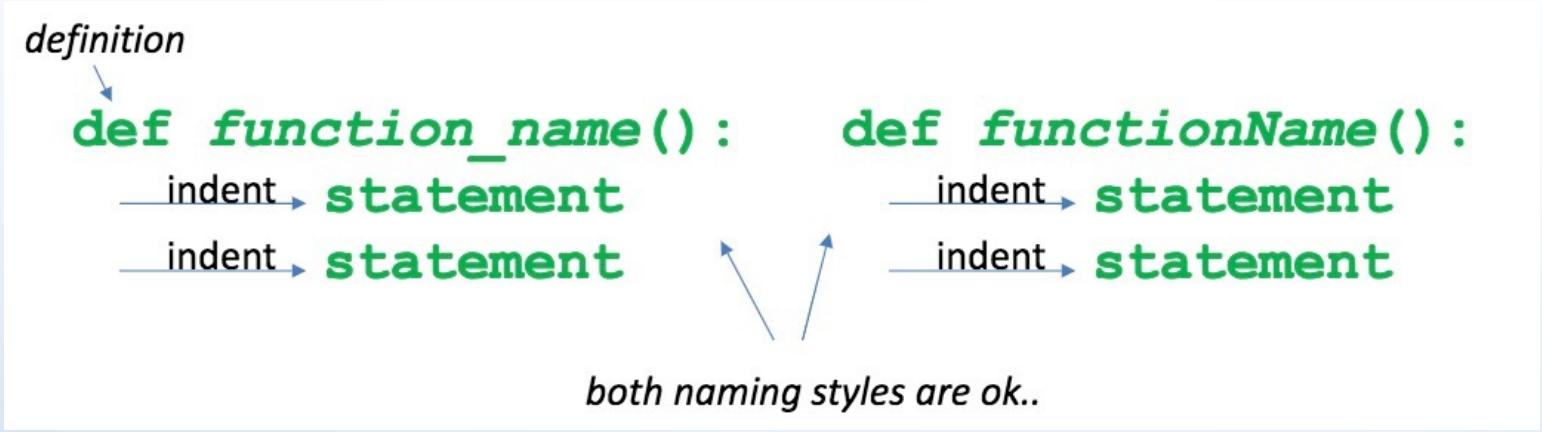
Today's Flow

- Walk through Portfolio Tasks PP7.1
- Complete Test 1

  and/or

- One-on-one session with me
  - to help you to resolve the programming concerns from the previous weeks

Functions - Syntax

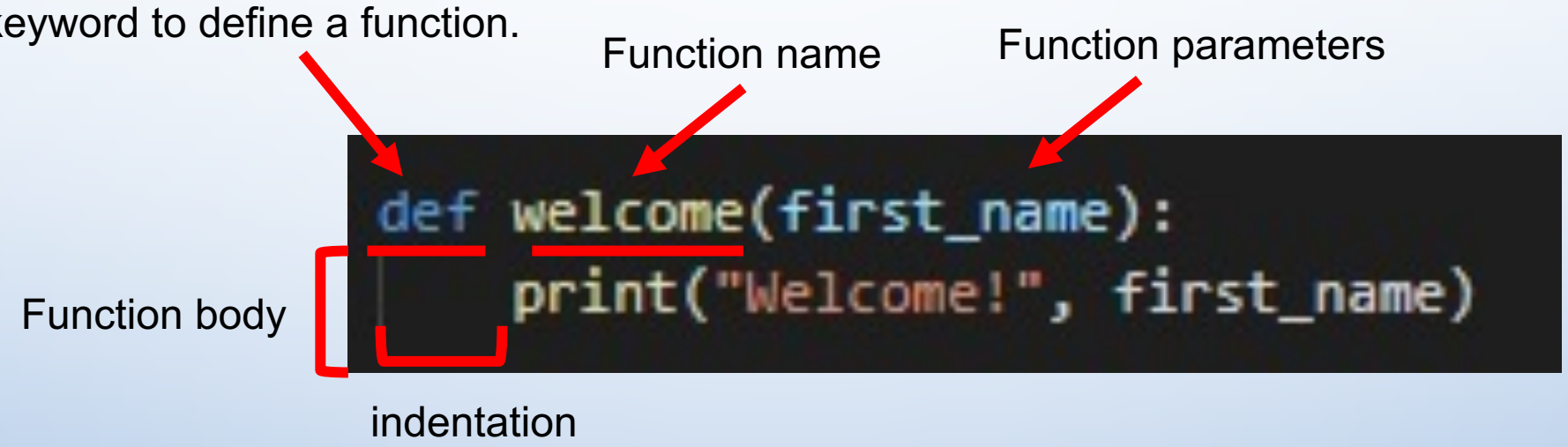



```
def myFunction(a,b):
    # statement
```

Function Naming rules: Lecture 6 slides pp9

Functions - Example

`def` : keyword to define a function.



Functions - Example

`def` : keyword to define a function.

Function name

Function parameters

Function body

```
def to_aud(currency, amount):
    fx_rate = 1.0

    if currency == "USD":
        fx_rate = 1.3938
    elif currency == "GBP":
        fx_rate = 1.8241
    elif currency == "EUR":
        fx_rate = 1.6457
    elif currency == "JPY":
        fx_rate = 0.0132

    result = amount * fx_rate

    return result
```

Portfolio Task

- **7.1PP Loops (function and parameters)**

Description:

An architect is trying to work out the cost of paint for an unusual facade sign (a triangle "hat" on a circular disk) she has designed for a building.

Task:

Write a function called `printPaintCost` that takes three named parameters: *`height`*, *`base`* and *`radius`*, which then calculates the area of a circle of the given radius, as well as the area of a triangle with the given height and base dimensions. The function prints the areas of each shape with proper messages to the output, as well as the overall paint cost where the cost is defined as $6.99 per square meter.

In the main code, the user should be asked for the values of the requested parameters (in meters), and the `printPaintCost` function is called with this data. The user should then be asked if they want to run the program again (answer 'y') and the program should repeat the entire process until they answer 'n' to the *run again* prompt.

Hint

You **must** define the function `printPaintCost`. Your main code will need a *while* loop that calls the `printPaintCost` function repeatedly until the user decides they don't want to run it any more.

- The area of a circle is pi * radius * radius.
- The area of a triangle is 1/2 * base * height (where height is measured at a right-angle from the base to the triangle apex)

You should define the value of pi (3.1415 will do) and the paint cost as **constants**.

Example output:

```
Enter the triangle height :4
Enter the triangle base   :5.5
Enter the circle radius   :6.5

The area of the circle is 132.73 meters squared
The area of the triangle is 11.00 meters squared
The total paint cost is $1004.66

Do you want to run this again? (y/n):y

Enter the triangle height :2
Enter the triangle base   :2
Enter the circle radius   :3.1

The area of the circle is 30.19 meters squared
The area of the triangle is 2.00 meters squared
The total paint cost is $225.01

Do you want to run this again? (y/n):n

Goodbye!
```

- What is the the name of the function?
- What are the parameters of the function?
- What does the function do?
  - Calculate the area of a circle;
  - Calculate the area of a triangle
  - Calculate the overall paint cost
  - Print the areas of each shape and the overall paint cost.
- What does the while loop do?

One-on-one session

Questions?