

# **KIT100**

# **Programming**

# **Preparation**

Tutorial Six – Week 7

# Teaching Team Consultation

- Your Lecturer: Son Tran
- Email: [sn.tran@utas.edu.au](mailto: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](mailto: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

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### 5.2PP Looping (while) ▾

**Purpose:** product of numbers

**Learning outcomes:** 1, 2 and 3

**Time:** submit before 5pm Friday of Week 5.

**Resources:** MyLO: lecture notes and tutorial materials

- 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

<input type="checkbox"/>	<a href="#">1.1PP Getting Prepared</a> ▾ ⓘ	4	46/58	43/58	43/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">1.2PP Hello World</a> ▾ ⓘ	6	47/58	42/58	42/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">3.1PP</a> ▾ ⓘ	14	44/58	39/58	39/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">3.2PP</a> ▾ ⓘ	13	43/58	39/58	39/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">4.1PP</a> ▾ ⓘ	20	36/58	28/58	28/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">4.2PP</a> ▾ ⓘ	22	34/58	19/58	19/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">5.1PP</a> ▾ ⓘ	23	21/58	0/58	0/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">5.2PP</a> ▾ ⓘ	18	18/58	0/58	0/58	08 April, 2022 17:00
<input type="checkbox"/>	<a href="#">6.1PP</a> ▾ ⓘ	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

Assignments > 5.2PP

### 5.2PP

▼ Hide Assignment Information

Instructions

By submitting this assignment in whatever form, you will be deemed to have agreed to the following declaration.

I declare that all material in this assignment is my own work except where there is clear acknowledgement or reference to the work of others. I am aware that my assignment may be submitted to plagiarism detection software, and might be retained on its database. I have read and complied with the University statement on Plagiarism and Academic Integrity on the University website at [www.utas.edu.au/plagiarism](http://www.utas.edu.au/plagiarism). I will keep a copy of this work until results have been finalised.

Due Date  
16 April, 2021 17:00

▼ Hide Rubrics

Rubric Name: Task Progress

Completed	Discuss	Redo/Resubmit	Time Exceeded	Fail	Not yet assessed

Submit Assignment

Files \*

(0) file(s) to submit

After uploading, you must click Submit to complete the submission.



Comments

Cut-off deadline 5 pm Friday of week 13

- 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**.

<input type="checkbox"/>	<div>Test 1 - week 7  </div> <div>Available on 04 April, 2022 09:00 until 08 April, 2022 17:00</div>
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# 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

*definition*

```
def function_name():  
    indent statement  
    indent statement  
  
def functionName():  
    indent statement  
    indent statement
```

*both naming styles are ok..*

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

**Function Naming rules:** Lecture 6 slides pp9

# Functions - Example

def : keyword to define a function.

Function name

Function parameters

Function body

indentation

```
def welcome(first_name):  
    print("Welcome!", first_name)
```

# 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  $\pi * \text{radius} * \text{radius}$ .
- The area of a triangle is  $1/2 * \text{base} * \text{height}$  (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?**

