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## COMP1811 Lab Sheet 1.0.b

### Working with PyCharm IDE – Examine Sample Python Code

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#### Aim

This part of today's lab is about using the PyCharm IDE to read and run sample Python code. In pairs, try to figure out what each code snippet does and write your thoughts on a piece of paper. Then run the code in PyCharm and compare the results you get with what you have written on paper.

The purpose here is to encourage you to recognise clues in a program that suggest what its function is. We have not covered any Python syntax yet, and you may think this is a mean activity to give you, but you'll be surprised how much you'll gradually pick up and learn by looking at code this way. You are not expected to get it all right, so don't worry if you can't figure out the code function. You will recognise the syntax when we cover it.

#### Tasks

**Complete this part of the lab tasks in your assigned programming pair. 20-30 minutes.**

#### 1. Examine sample Python code

For each of the following exercises, examine the sample code given. Explain what each line of code does and write your thoughts in an MSWord file or on a piece of paper. Before moving onto the next exercise, cut-and-paste the code into a new Python file in PyCharm and give the file an appropriate name. Use the project you created for the exercises in lab sheet 1.a or create a new project. Run the Python script you've just copied and compare the results you get with what you have written on paper. Document what you have learnt. Repeat this process for each of the 3 exercises below. Alternatively, you can download the [python files](#) and practice opening those files and adding them to the Python project you created above. Please ask your lab tutor, if you are stuck.

##### a. Exercise 1

*# Sample code 1: what is this code trying to do?*

```
print("number1 is", 3 + 1)
```

##### b. Exercise 2

*# Sample code 2: what is this code trying to do?*

```
number1 = input("number1 ")  
number2 = input("number2 ")
```

```
number3 = float(number1) + float(number2)
```

```
print("number3 is ", number3)
```

*# What do you think are the differences between this code and that in exercise 1?*

### c. Exercise 3

*# Sample code 3: what is this code trying to do?*

```
number1 = 10
number2 = 14
number3 = 12

if (number1 >= number2) and (number1 >= number3):
    number4 = number1
elif (number2 >= number1) and (number2 >= number3):
    number4 = number2
else:
    number4 = number3

print("number4 ", number4)
```

## 2. Play the Connect4 game (OPTIONAL)

This is an advanced exercise that it is optional. You can opt to simply play connect 4 for now and revisit the code when we have covered Python syntax.

Download the [Connect4.zip](#) game and unzip it to your G: drive. Open the unzipped project in PyCharm in a new window, run the **game.py** file, then play the game. As an exercise, try and figure out how to modify the code as follows:

### a. Exercise 4

Change the colours of player chips.

For example: use blue instead of yellow and green instead of red.

### b. Exercise 5

Draw squares instead of circles on the playing board.