**Introduction to Python exercises**

1. Output ‘My first Python program’ to the screen.
2. Assign a variable with the string value ‘Introduction to Databases’ and print out the contents of that variable to the screen.

3a.

Prompt the user to enter their name, age (as an integer) and their height in metres (as a floating point number) and output the details they’ve entered in the following format:

Your name is John , you are 42 years old and are 1.78 metres tall.

3b.

Still using only one print statement, modify your code to output the same details in the following format:

Your name is John , you’re 42 years old

You’re 1.78 metres tall

4a.

Prompt the user to enter an integer temperature value in Celsius, calculate and display the equivalent temperature in Fahrenheit (rounded to 1 decimal place) using the following formula:

Fahrenheit = (9/5 \* Celsius) + 32

For example,

Enter a temperature in Celsius: (user enters 22)

22 Celsius is equivalent to 71.6 Fahrenheit

4b.

Modify the code to print the output in the following format:

22C is equivalent to 71.6F

(You will need to use the format method to suppress the space after the numbers)

5a.

Modifying your code from question 4b, prompt the user to choose if they want to convert from Celsius to Fahrenheit or Fahrenheit to Celsius, then ask them to enter an integer value in their chosen unit of temperature, convert to the other temperature and display the converted value (rounded to 1 decimal place). If the user enters anything other than 1 or 2 to the conversion option, the program should do nothing.

The formula to convert Fahrenheit to Celsius is as follows:

Celsius = (Fahrenheit – 32) \* (5/9)

For example,

1. To convert Celsius to Fahrenheit
2. To convert Fahrenheit to Celsius

Enter the conversion you would like (1 or 2): (user enters 2)

Enter temperature value in Fahrenheit: (user enters 88)

88F is equivalent to 31.1C

5b.

Modify your code from 5a to print ‘Invalid option’ if the user doesn’t enter 1 or 2 to the conversion option.

1. Prompt the user to enter a word and output the word all in uppercase one letter on each line and diagonally. Add some comments into your code to explain what each part does. The output should look like the following:

Enter a word: (user enters Database)

D

A

T

A

B

A

S

E

1. Import the random module and use the random.randint(min,max) function to simulate the rolling of a six-sided dice. Keep rolling the dice and printing the result until you roll a six. Add some comments into your code to explain what each part does. The output should look like the following:

Rolling the dice…

You rolled a 5

Rolling the dice…

You rolled a 3

Rolling the dice…

You rolled a 6

1. Use the random.randint function again to generate six lottery numbers between 1 and 59. Each lottery number generated should be added to a list to check against to make sure the same number is not used more than once. Add some comments into your code to explain what each part does. Print the final list in the following format:

The selected lottery numbers are [56, 12, 5, 17, 19, 44]