

THE UNIVERSITY OF THE WEST INDIES
Department of Computing
COMP1126–Introduction to Computing I
Tutorial 2B

Question 1

Write a function in Python, using a while loop, called `five_powers` that takes an integer as an argument and raises that integer to the following powers: 0, 1, 2, 3, 4. Print each calculated result,

```
e.g. five_powers(3)
      3 raised to 0 = 1
      3 raised to 1 = 3
      3 raised to 2 = 9
      3 raised to 3 = 27
      3 raised to 4 = 81
```

Question 2

Modify the previous question such that it takes two arguments. The first is an integer and second the number of powers that should be printed starting from 0. Name the procedure `power_list`. Note that this procedure is a generic form of `five_powers`. Write two (2) versions of your function. One using a while loop, the other using a for loop.

Question 3

Write a function `futureValue` which takes two arguments, a principal and an annual interest rate, and calculates the returns after five (5) years. After each year the principal is updated. For example, if the principal is 1000.00 and the interest rate is 10% then the value after the 1st year is 1100.00. The function returns the value that a person will get after 5 years. Use a *for loop* to write this function.

Year	Value
1	1100.00
2	1210.00
3	1331.00
4	1464.10
5	1610.51