

# BSc (Hons) in Information Technology

## Year 1

### Tutorial 9

#### IT1010 – Introduction to Programming

Semester 1, 2020

---

#### Question 1

Define a function called `hypotenuse` that calculates the length of the hypotenuse of a right triangle when the other two sides are given. The function should take two arguments of type `double` and return the hypotenuse as a `double`. In your main program write three `assert` statements to debug your function for the following scenarios.

Triangle	Side 1	Side 2
1	3.0	4.0
2	5.0	12.0
3	8.0	15.0

#### Question 2

Modify the above program to have another function called `testHypotenuse()` which contains the three `assert` statements you wrote. Call `testHypotenuse()` function in your main program.

#### Additional Exercises

#### Question 3

Write a function **`qualityPoints`** that inputs a student's average and return 4 if it's 90-100 , 3 if it's 80-89 , 2 if it's 70-79, 1 if it's 60-69 , and 0 if the average is lower than 60.

Write another function called **`testQualityPoints( )`** which contains the `assert` statements to debug the above implemented function.