

Exercise 01 - Fundamentals: Functions

Create a cpp file named 'main01.cpp' that defines and test the following functions

1. Define a double function named **Hypotenuse()** that takes two double parameters. If both parameters are positive, it returns the square root of the sum of their squares; otherwise, it returns 0.
2. Define a Boolean function named **IsWord()** that takes a string parameter and returns true if all the parameter characters are letters.
3. Define an integer function named **Median()** that takes three integer parameters and returns the median of the parameters.

Note: The median of three values is the second largest.

4. The profit from the sale of a stock can be calculated as:

$$\text{Profit} = ((NS * SP) - SC) - ((NS * PP) + PC)$$

where:

- *NS* is the number of shares,
- *SP* is the sale price per share,
- *SC* is the sale commission paid
- *PP* is the purchase price per share,
- *PC* is the purchase commission paid.

Define a Boolean function named **madeProfit()** that takes a double parameter for each component in the above equation excluding profit, and returns true if all parameters are positive and the equation evaluates to a positive value; otherwise, it returns false.