

# SIT771 Object Oriented Development

## Pass Task 5.1: Arrays

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### Overview

In this task you will create a simple program which will create an array with a user specified size. This array will then be populated with values, printed out to the console, and finally, we'll calculate the sum of the values entered.

### Submission Details

Submit the following files to OnTrack.

- The Program code (*Program.cs*)
- A screenshot of the running program

You want to focus on arrays, loops, and the different techniques we have to manipulate arrays.

### Instructions

We're going to create a program which will ask the user how many values they'd like to store in memory, then, for each value they'd like to store, we'll ask them for the value.

The first thing we'll need are some `public static` methods in the Program class which can read integers and doubles for us. We've provided the ReadInteger method here:

```

using System;

public class Program
{
    public static int ReadInteger(string prompt)
    {
        Console.Write(prompt);
        while (true)
        {
            try
            {
                return Int32.Parse(Console.ReadLine());
            }
            catch
            {
                Console.WriteLine("Please enter a valid integer");
            }
        }
    }

    public static void Main()
    {
    }
}

```

1. Add a `public static ReadDouble(string prompt)` method yourself.

Here's the pseudocode for Main:

- Create an `int` variable called `numberOfValues` which will store the number of values the user would like to enter.
- Create an array of `double`, with a size of `numberOfValues`:

```
double[] values = new double[numberOfValues];
```

- Loop over each element in `values`, and populate the array:

```

for (int i = 0; i < numberOfValues; i++)
{
    values[i] = ReadDouble($"Enter the {i + 1}st value: ");
}

```

- Using a for loop, iterate over each element in `values`, and write out each element to the console.
- Next, let's sum all of the values and write that out to the console. You will need to use a `double sum` variable to sum up each element in the array, before printing it out.

Take a screenshot of your program after it has run with a few values, and upload to OnTrack!