

# CS1580 Lab 09

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## Objective

This lab is to make you familiar with concept of arrays in C++.

## Assignment

In this assignment, you will calculate the BMIs of 5 people.

First, prompt the user to enter the heights and weights of those people.

Then, calculate the BMIs and display them.

Formula for BMI =  $703 * (\text{weight}) / (\text{height} * \text{height})$

## Sample output:

```
Welcome to the BMI calculator Program

Enter the heights and weights of 5 people to find their BMI
Person 1 height(in inches): 70
Person 1 weight(in lbs): 120

Person 2 height(in inches): 75
Person 2 weight(in lbs): 140

Person 3 height(in inches): 65
Person 3 weight(in lbs): 120

Person 4 height(in inches): 70
Person 4 weight(in lbs): 140

Person 5 height(in inches): 67
Person 5 weight(in lbs): 180

Bmi of person 1 is 17.2163
Bmi of person 2 is 17.4969
Bmi of person 3 is 19.9669
Bmi of person 4 is 20.0857
Bmi of person 5 is 28.1889
```

The code must contain the following:

- `void inputHeightAndWeight(float height[],float weight[], const int size)`
- `void calculateBmi(const float height[],const float weight[], const int size, float bmi[])`
- `void outputBmi(const int bmi[], const int size)`

Note: You need to declare an int array of constant size 5 in the main.

Grading Rubric:

- Properly formatted code header with Name, User name, Section, Instructor, Date, Assignment number and purpose (15 points)
- Proper declaration of variables and constants (if any) with descriptive names (20 points)
- Three Functions with description, pre and post conditions (40 points)
- Comments, indentation and spaces between each line of code (15 points)
- Correct output (10 points)