

## Test 2 Study Guide:

Please keep in mind that this test builds off concepts established in the first lectures/chapters.

### Chapter 5: Decision Making

- Know what they are and how to use:
  - if/else if/else statements
  - Nested if statements
  - Compound boolean expressions
  - Logical operators (AND/OR/NOT)
  - Relational operators (<, >, <=, >=)
  - Equality operators (==, !=)
  - switch statement
  - break statement
  - Short circuit operators

### Chapter 6: Looping

- Know what they are and how to use:
  - Basic looping/iteration structure
  - while loops
  - Add/Subtract/Divide/Multiply and assignment operators
  - Prefix and postfix operators
  - for loops
  - do while loops
  - Nested loops

### Chapter 7: Strings

- Know what they are and how to use
  - The String datatype
  - The Character datatype

## In Class Lab for Test 2

Write these programs on paper and when finished, enter them into the computer and run them to see how you did.

1.)

Write a program that computes FizzBuzz for all numbers from 1 to 5000.

FizzBuzz is a pattern which follows these rules:

- If the number is divisible by 3, write “Fizz” to console
- If the number is divisible by 5, write “Buzz” to console
- If the number is divisible by both 3 and 5, write “FizzBuzz” to console
- If the number does not fall in the above categories, write the number to console.

The output should look like:

```
1
2
Fizz
4
Buzz
6
7
etc....
```

2.)

Write a program that takes in grades as input until the user enters a -1 into the console.

Compute the average of the grades.

The output should look like:

```
Please enter grade: 45
Please enter grade: 48
Please enter grade: 50
Please enter grade: -1
Average is: 47.666666666667
```