Module 10: Arrays

Arrays – Objectives

- Learn About The Basic Class That Allows the Collection of Other Objects.
- Understand How This Class Helps Apply Activity to Groups of Objects vs. One at a Time.
- The Benefits of This Process.
- Understand the Basic Properties of the Collection Type (Arrays).

Arrays –
Key Terms

- **Collection –** Multiple items grouped together, often of a similar or identical datatype.
- **Array –** A type-safe collection with a fixed-length.
- **Index –** The 0-based position of an item in a collection.
- **Length –** The 1-based total number of items in an array. The Length is always 1 greater than the final index in the array.

Arrays – Indexes

Dresser		
		String[]
Indexes: 0-based counting	dresser[0]	“tshirts”
	dresser[1]	“pants”
	dresser[2]	“shorts”
	dresser[3]	“socks”

CODE ALONG!

LAB!

Array Lab

LAB!

Input Lab

QUIZ!

Module 8-10 Quiz in Canvas

END MODULE 10

- Learn About The Basic Class That Allows the Collection of Other Objects.
- Understand How This Class Helps Apply Activity to Groups of Objects vs. One at a Time.
- The Benefits of This Process.
- Understand the Basic Properties of the Collection Type (Arrays).

Homework:

1. Quizlet Vocabulary
2. Complete any unfinished labs

Module 11:
Branching with If and Switch

Branching –
Objectives

- Discuss the concept of flow control
- Understand when to use branching logic
- Demonstrate how to implement an If Tree
- Demonstrate how to implement a Switch

Branching –
Key Terms

- **Branching –** A type of flow control used to make decisions on whether a block of code should run.
- **Ternary Operator –** A quick, single ling if / else statement.
- **Case** – A condition to check used in a switch statement.
- **Break –** Used in a switch statement to tell the compiler to jump out of the switch and continue on with code below it.

Branching –
Intro to Flow Control

- Branching –

  How decisions are made

  - If (Ranges)
  - Switch (exact matching)

- Looping –

  When code needs to be repeated

  - For (count)
  - While (Condition 0-?)
  - Do While (Condition 1-?)
  - Foreach (collections)

Branching –
IF Trees

```
if (condition)
{
    //Code to run
}
else if (condition)
{
    //Code to run
}
else
{
    //Code to run
}
```

- Only one block of code will run
- Executes the first true condition
- “else” will run if nothing else above did
- If trees are good for ranges

CODE ALONG!

Branching –
Switch - Case

```
switch (switch-on)
{
    case A:
        //code
        break;
    case B:
        //code
        break;
    default:
        break;
}
```

- Only one block of code will run
- Executes the first matching case.
- “default” will run if nothing else above did
- Switches are good for exact matching

CODE ALONG!

- Discuss the concept of flow control
- Understand when to use branching logic
- Demonstrate how to implement an If Tree
- Demonstrate how to implement a Switch

Homework:

1. Quizlet Vocabulary
2. Read Chapter 5