Final Exam: Option 2

Concept 1

Module: 1

Topic: Console Applications

Concept: Closing an application with Console.Readline

1. Whenever a program is published in Visual Studio, an executable file is made.

2. If a user tries to run a console application executable directly, the program may automatically close.

3. However, if we put “Console.Readline” at the end of our code, then our program will wait for the user’s input before closing.

Concept 2

Module: 2

Topic: Type of Conversions

Concept: Explicit Conversions

1. Explicit conversion is the conversion of a larger data type into a smaller data type.

2. While Implicit conversions are done automatically, an explicit conversion will require a special approach.

3. This type of conversion can be done using the “CType” function, or the “C...” function.

Concept 3

Module: 3

Topic: Input/Output

Concept: Input using the Console.Readline method

1. Input/output is a common feature when it comes to Visual Basic.

2. After taking the users input, a program can then use that input to find the output.

3. Input/output can be used for solving equations, collecting information, etc.

4. One of the most efficient ways to use input/output in a console application is by using the Console.Readline method.

Concept 4

Module: 4

Topic: Date and Time

Concept: Date and time in different countries

1.Date and Time is another useful feature in Visual Basic, as it allows the program to inform the user about the current date and time.

2. Apart from displaying the users local date and time, a program can also check the date and time for other regions and countries as well.

3. One way that this can be done is by using the "ConvertTimeBySystemTimeZoneId" method.

Concept 5

Module: 4

Topic: Comparing strings

Concept: Using the “StrComp” Function

1. Comparing strings can be done through binary or text comparisons.

2. If we use the “StrComp” function, we can choose which comparison we would want to use.

3. Binary comparisons will check for lowercase vs uppercase, while a text comparison will simply read the text that is written.

Concept 6

Module: 5

Topic: Iteration Statements

Concept: “For Each… Next” statement

1. Iteration statements allow the program to repeat a set of statements.

2. These statements can also be referred to as Loops, as they can loop through arrays and other collections.

3. For example, if a user uses the “For each” statement, they can loop through an array and display each necessary element.

Concept 7

Module: 6

Topic: Types of Procedures

Concept: Function Procedure

1. Function procedures allow a user to repeat a mathematical function more than once.

2. The main difference between a function and sub procedure is the fact that a function procedure will return a value.

3. Once a function procedure has been created, it can be called for at any time within the main procedure.

Concept 8

Module: 6

Topic: Passing Parameters

Concept: Using ByRef

1. If a user wants parameters to be printed, they would pass those parameters by reference.

2. If passed by value, parameters cannot change the value of arguments if they are already declared.

3. However, once the parameters are passed by reference, any arguments will be ignored and the parameters will be used.

Concept 9

Module: 7

Topic: Printing Arrays

Concept: Print arrays using the “For… Next” loop

1. Printing arrays can efficiently be done by using iteration statements.

2. When using a “For… Next” loop, a user will decide which array elements they would like to print.

3. If an array has 10 elements, then the user could put “0 to 9” or “0 to arrayname.Length - 1” because arrays start at 0.

Concept 10

Module: 8

Topic: Multidimensional Arrays

Concept: 2-dimensional arrays

1. Multi-dimensional arrays can be made by simply adding a second index within the array.

2. The user then has multiple dimensions to work with in a single array set.

3. In the case that a user needs to make two array sets, they can simply create a multidimensional array.