CIV 257- COMPUTER PROGRAMMING
Lecture 4

CIVIL AND GEOMATIC ENGINEERING
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Repetition and Conditional Statements

- ***The select case statement***
- Select [Case] testexpression
- [Case expressionlist
- [statements]]
- [Case Else
- [elsestatements]]
- End Select

CASE SELECT STATMENT

- *testexpression*
- This is required, and the expression must evaluate to one of the elementary data types
- **(Boolean, Byte, Char, Date, Double, Decimal, Integer, Long, Object, SByte, Short, Single,**
- **String, UInteger, ULong, and UShort).**
- *expressionlist*
- Required in a **Case statement. List of expression clauses representing match values for**
- *testexpression. Multiple expression clauses are separated by commas. Each clause can*
- take one of the following forms:
- ☐ *expression1* ***To expression2***
- ☐ **[Is]** ***comparisonoperator expression***
- ☐ *expression*

EXAMPLE

```
Dim Number As Integer
    Number = 10

    Select Case Number
      Case 1 To 5
        Debug.WriteLine("Between 1 and 5, inclusive")
        ' Line above writes to the computer screen.
      o Case 9 To 10
        MsgBox("Hello World910")
'The following is the only Case clause that evaluates to True.
      Case Else
        Debug.WriteLine("Not between 1 and 10, inclusive")
    End Select
```

Repetition and Conditional Statements

- For *counter [As datatype] = start To end [Step step]*
- [*statements]*
- [Exit For]
- [*statements]*
- Next [*counter]*

```
If i = 2 Then
   g2 = i * 1000
   ElseIf i = 4 Then
   MsgBox("i=4")
End If
```

Functions (Visual Basic)

- Programmers seldom write programs as one long series of steps.
- They break the programming problem down into reasonable units, called modules.
- Programmers also refer to them as subroutines, procedures, functions, or methods.
- **a function takes a given a value and operates on it to return some value based on the function's definition.**
- For example the tan function calculates and returns the tangent of an angle within a right angle triangle (from first principles).

Functions (Visual Basic)

- [<*attributelist*>] [*accessmodifier*]
- Function name [(Of typeparamlist)] [(parameterlist)] [As returntype]
- [statements]
- [Exit Function]
- [statements]
- End Function

Keywords: Function, byVal, Exit Function, End Function

Functions (Visual Basic)

- *name*
- Required. Name of the procedure.

- *parameterlist*
- Optional. List of local variable names representing the parameters of this procedure

- *EndFunction*
- Terminates the definition of this procedure.

Functions (Visual Basic)

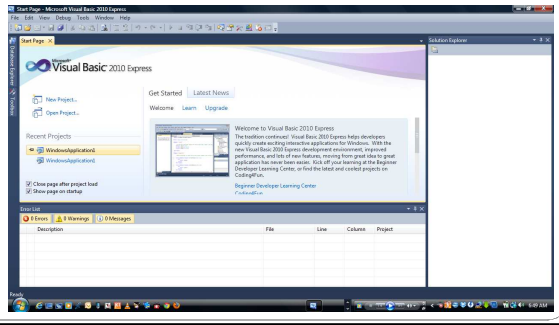
Example

```
Function myFunction(ByVal j As Integer) As Double
    myFunction = 3.87 * j
    Exit Function
End Function
```

In this function when myFunction is supplied with an argument in the variable j, it is multiplied by 3.87 and the return value is assigned to the function.

VB GRAPHICAL USER INTERFACE

Run Sample code



PRACTICE MAKES PERFECT

- *So just do it….*

Run Sample code