Study Sheet

Dim Pass As String= "" Do While Pass <> Candy Pass= InputBox("Message") Pass= Pass.ToUpper Loop The loop control variable is pass since it is what is being tested in the loop

For a For Next Loop it will increment 1 by default but if you wanna do higher then 1, you must use the keyword step It can also go if done negative like Step - 1 or Step + 2

listbox.Items.Add() *Adds a value to a listbox; You can also use items collection or .count to loop through a Listbox ListBox.Items.Count - 1 For I As Integer = 0 to ListBox.Items.Count - 1 Returns a value of how many numbers are in the list since we start counting as zero

Dim swVar As IO.StreamWriter = _ IO.File.AppendText(filespec) 'You use the action of Appending text 'Side-note remember using the .Move or .Delete methods

Container object that stores a fixed number of value; A collection that VB can assign a list to Dim arrayname(NumberofElements) As String Sample: Dim Students(29) As String This array is sized 30 Students(0) = "Tom" Students(1) = "Samsung" And So On.... You can use bracketts to initialize arrays Populate an array: IO.File.ReadAllLines("AgesAtInaugural.txt") *This populates an array using a text file Prof.Dinsmoor's Numeric Array Example: Dim strAges() As String = IO.File.ReadAllLines("AgesAtInaugural.txt") Dim ages(strAges.Count - 1) As Integer For i As Integer = 0 To strAges.Count - 1 ages(i) = CInt(strAges(i)) Next Array Methods list: arrayName.Count number of elements arrayName.Max highest value arrayName.Min lowest value arrayName.First first element arrayName.Last last element Two dimensional arrays sample: Dim arrayName(rows, cols) As DataType Initialized with: Dim arrayName(,) As DataType = {{ROW0}, {ROW1}, {ROW2}, ..., {ROWN}} 'This was the sample that has been shown in class

Operator signs: a + b a-b a*b

Numeric value for anything on the keyboard, a basic numerical representation of characters.; Can hold true or false for Boolean data type;

A counter is a numeric variable that will keep track of the number of times something is ran (Keeps track of how many times a code or loop runs) Dim I As Integer For J As Integer= 0 to 4 Counter += 1 Next

Dim x as Double Dim (Name) as Data Type Double is another type of data type As well as integer or string You will use doubles as long as you have decimals Integer can only fit whole numbers

The syntax for an if statement is: If Then End If; You can also have an else if statement or if no then else using Boolean logic Also there is looping decisions for repetitions

'The scope of a variable is who can use that variable 'If you can make a variable inside a function, you can only use that variable inside that function (Local Variable Scope) 'Then you can create a public scope to use in more then one function

Do Statement(s) Loop Until Condition 'Post Do While when you wanna post at least once

Pre is before Post is after When doing a DoWhile loop Pre Example: Do While Condition Statment() Loop The difference would have while at the bottom so Do Statement() While Condition Loop

'You are creating/using a temporary variable For Each tmp As Integer In ages If tmp > max Then max = tmp End If Next 'Only works or used for in looping through arrays

For I as DataType = m To n Statement(s) Next A while will loop until a condition is met while For Next will loop a specific number of times

Functions return a value while a procedure does just all the code A function you can give it some value as well as procedure Function just returns something 'You don't need to say Dim in a function 'You need to say what it returns 'Procedures are given usually two values 'You would use sub and end sub for a procedure 'You can pass procedure values but you can't return anything 'Pass Value or Pass Reference ByVal or ByRef You can pass a function by a value or you can pass the reference to that variable (Reference can be a change)

X + = 1 X - = 1 'This was Prof.Dinsmoor's Join Sample Code that was used in class: Dim greatLakes() As String = {"Huron", "Ontario", "Michigan","Erie","Superior"} Dim lakes As String lakes = Join(greatLakes, ",") txtOutput.Text = lakes

.Click .Tick .Load .Close Handler procedure: .Load when the program loads .Close When you close it .Click for when a button is clicked .Tick for a timer started

Not: The opposite condition Or: One correct And: Both Correct Comparing conditions for true or false

OpenFileDialog1.FileName 'If you are in Prof.Dinsmoor's class refer to Example 9 of Chapter 7 in Slide 7: Private Sub btnSelect_Click(...) Handles _ btnSelect.Click Dim textFile As String OpenFileDialog1.Filter = “text files|*.txt” OpenFileDialog1.Filename = “” OpenFileDialog1.ShowDialog() If openFileDialog1.Filename <> “” then textFile = OpenFileDialog1.FileName ‘open the file and fill an array ‘fill the listbox Else MessageBox.Show(“Pick a file”) End If End Sub 'Side note, this is a sample for reading a file: 'Dim srVar As IO.StreamReader = 'IO.File.OpenText(filespec) 'Write data uses the extension .CreateText instead of Open

A control that allows a user to select a single choice from a series of options; While CheckBox is a control that lets you complete several choices

ReDim Preserve lets you keep the current values in an array and resize it to be larger and add more to the array or smaller to remove some values in the array starting from the end values ReDim Preserve arrayName(m) *Refer to IndexOf examples for another example of creating an array without using a database

< Greater Then > Less Then <> Not eqaul to <= Greater then equal to >= Less then equal to

Can use console control Dim num As Double = 0 Dim prompt As String = "Enter a nonnegative number. Enter -1 " & "to terminate entering numbers." num = CDbl(InputBox(prompt)) Do While num <> -1 '-1 is sentinel value . . num = CDbl(InputBox(prompt)) Loop

Messagebox.Show("Message"); InputBox("Input"); employees = line.Split(","c)

Flag: A variable that is changed or raised when a condition is met to tell a loop to stop Loop Until Flag = True Accumulator: Used to contain the results of a logical operation Accumulator sums in the loop Can be Sum Sum =+ 1 'That sum variable is an accumulator Counter: A set count for the times the code will run through lines

Substring (starting character) x.substring(0, 1) Turns back the first letter consisting of 1 character x.substring(1,1) Turns back the second character

Select case Selector Case ValueList1 Action1 Case Valuelist2 Action2 Case Else

Dim gr As Graphics = picBox.CreateGraphics gr.FillRectangle(Brushes.Color, x, y, w, h) 'This is when you wanna draw and fill graphics; PrintDocument1.Print() 'This is the print method

gr.FillPie(Brushes.Color, a - r, b - r, _ 2 * r, 2 * r, startAngle, sweepAngle)

'Use this line of code to determine if a file exists before opening it to avoid an error IO.File.Exists(filespec)

Use create graphics and fill click events for drawing; For solid rectangle Use x, y, w, and h;

• OpenText – open for input • CreateText – open for output • AppendText – open for append 'Don't use more then one method at the same time or run two different methods at the same time

In try catch you declare integers and strings and use: Try, Catch, Finally, End Finally

Procedure because its NOT returning a value; Function because its returning a value

And Or: Logical
>= Relationship
*Arithmetic