**Programming Solutions**

**Programming Concept: (e.g. Nested IFs)**

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| **Q / TASK** | **Code** | **Console Output** | | **Comments/Problems** | |
| Class  task 1 | Dim x, age As String  Console.WriteLine("what is ur age")  age = Console.ReadLine()  x = Integer.Parse(age)  If age >= 18 Then  Console.WriteLine("you are eligible to vote ")  Else  Console.WriteLine("you are a kid, no")  End If  Console.ReadLine() |  |  | |
| Class task 2 | Dim a, b As Integer  a = InputBox(“enter value of a”)  b = InputBox(“enter value of b”)  If a = 100 And b = 200 Then  MsgBox(“The value of a is 100 and b is 200”)  End If  Console.WriteLine("the value of a is {0} and b is {1}", a, b)  Console.ReadLine() |  | |  | |
| Class task 3 | Dim rate, work, total, workbonus As Single  Dim num As Integer  workbonus = 0  num = InputBox(“what is ur employee number ”)  rate = InputBox(“what is ur hourly rate”)  work = InputBox(“how many hours have you work for”)  If work > 40 Then  workbonus = work \* 0.5  End If  total = (work + workbonus) \* rate  Console.WriteLine(“your employee number: {0}”, num)  Console.WriteLine(“your work hour is {0} and your wages is {1}”, work, total)  Console.ReadLine() |  | |  | |
| challenge | Dim type As Char  type = "a"c  'c is to define the char?? -by the internet  type = InputBox(“enter a single character at the keyboard”)  If Char.IsDigit(type) = True Then  Console.WriteLine(“you typed {0} and that is a number”, type)  ElseIf Char.IsLetter(type) = False Then  Console.WriteLine(“you typed {0} and that is a symbol”, type)  ElseIf Char.IsLower(type) = False Then  Console.WriteLine(“you typed {0} and that is a uppercase letter”, type)  Else  Console.WriteLine(“you typed {0} and that is a lowercase letter”, type)  End If  Console.ReadLine() |  | |  | |
| Independemt work 1 | Dim a, b As Single  a = InputBox(“enter value of a”)  b = InputBox(“enter value of b”)  If a > b Then  Console.WriteLine(“A ({0}) is greater than B ({1})”, a, b)  ElseIf a <> b Then  Console.WriteLine(“A ({0}) is less than B ({1})”, a, b)  Else  Console.WriteLine(“A ({0}) and B ({1}) is equal ”, a, b)  End If  Console.ReadLine() |  | |  | |
| Independent work 2 | Dim a, b, c, delta, SR, x1, x2 As Single  a = InputBox(“enter x2 value”)  b = InputBox(“enter x value”)  c = InputBox(“enter constant value”)  delta = b \* b - (4 \* a \* c)  If delta < 0 Then  Console.WriteLine(“the equation has no real root”)  ElseIf delta = 0 Then  Console.WriteLine(“the equation only have one real root”)  Else  Console.WriteLine(“the equation have 2 real root”)  End If  SR = Math.Abs(delta)  SR = Math.Sqrt(SR)  x1 = (-b + SR) / (2 \* a)  x2 = (-b - SR) / (2 \* a)  Console.WriteLine(“delta(b2-4ac): ” & delta)  If delta < 0 Then  Console.WriteLine(“the solution is {0}i and {1}i ”, x1, x2)  Else  Console.WriteLine(“the solution is {0} and {1}”, x1, x2)  End If  Console.ReadLine() |  | |  | |

Note: Please make sure you save this document as ‘**if\_solution\_yourname.doc’**