**Programming Solutions**

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

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| **Q / TASK** | **Code** | **Console Output** | **Comments/Problems** |
| Queue | Module Module1  Sub Main()  Dim list As System.Collections.Queue = New System.Collections.Queue()  list.Enqueue("1")  list.Enqueue("2")  list.Enqueue("3")  list.Enqueue("4")  Console.WriteLine("Current queue: ")  Dim c As Char  For Each c In list  Console.Write(c + " ")  Next c  Console.WriteLine()  list.Enqueue("5")  list.Enqueue("6")  Console.WriteLine("Current queue: ")  For Each c In list  Console.Write(c + " ")  Next c  Console.WriteLine()  Console.WriteLine("Removing some values ")  Dim ch As Char  ch = list.Dequeue()  Console.WriteLine("The removed value: {0}", ch)  ch = list.Dequeue()  Console.WriteLine("The removed value: {0}", ch)  Console.WriteLine("Current queue: ")  For Each c In list  Console.Write(c + " ")  Next c  Console.ReadKey()  End Sub  End Module |  |  |
| Stack | Module Module1  Sub Main()  Dim st As Stack = New Stack()  st.Push("4")  st.Push("3")  st.Push("2")  st.Push("1")  Console.WriteLine("Current stack: ")  Dim c As Char  For Each c In st  Console.WriteLine(" " + c)  Next c  Console.WriteLine()  st.Push("5")  Console.WriteLine("The next poppable value in stack: {0}", st.Peek())  st.Push("6")  Console.WriteLine("The next poppable value in stack: {0}", st.Peek())  Console.WriteLine("Current stack: ")  For Each c In st  Console.WriteLine(" " + c)  Next c  Dim ch As Integer  Console.WriteLine()  Console.WriteLine("Removing values ")  Console.WriteLine(st.Pop())  Console.WriteLine(st.Pop())  Console.WriteLine(st.Pop())  Console.WriteLine("Current stack: ")  For Each c In st  Console.WriteLine(" " + c)  Next c  Console.ReadKey()  End Sub  End Module |  |  |
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Note: Please make sure you save this document as ‘**if\_solution\_yourname.doc’**