Tutorial Sheet 9/Week 10

IMS1906: Business Software Fundamentals
Tutorial exercises
Week 10: Functions and Subroutines

These notes are available on the IMS1906 Web site http://www.sims.monash.edu.au
Please contact your tutor if you require assistance with these exercises. Tutor email address and consultation times are available on the subject’s Web page under Staff.

Aim
- To design modular algorithms
- To develop hierarchy charts
- To gain experience writing sub procedures and functions in VB.NET
- To gain further experience using loops

Exercise 1
a) Explain the difference between a Sub procedure and a Function procedure
b) Explain the difference between passing a variable by value and passing it by reference

Exercise 2
a) Given the following Function header, write VB.NET code

```vbnet
Private Function AddTwoNumbers(ByVal sngNum1 As Single, ByVal sngNum2 As Single) As Single
```

Write a line of VB.NET code that will invoke/call this Function. Then write the body of the function.

b) Given the following subroutine header:

```vbnet
Private Sub AddTwoNumbersSub(ByVal sngNum1 As Single, ByVal sngNum2 As Single, ByRef sngResult As Single)
```

Write a line of VB.NET code that will invoke/call this subroutine. Then write the body of the subroutine.

Exercise 3 Implementing sub procedures (You will need Zak Reloaded)
Complete the following questions on p276 Zak: Q3- Q6

Exercise 4 Implementing functions
Complete the following questions on p276 Zak: Q7- Q11
Exercise 5 - Coding modules with Sub Procedures

Write a VB.NET independent Sub Procedure which accepts three String parameters, and will sort and return the values stored in the variables passed as arguments to the procedure.

Exercise 6 - Coding modules with Functions

Write a VB.NET Function named isOdd which accepts an integer and returns TRUE if the number is odd and FALSE if the number is odd. Use the following Function header:

```
Private Function isOdd(ByVal intNumber As Single) As Boolean

End Function
```