

Study the following learning materials and fill in the blanks.

## Chapter 7A Structure

### 1. Common array manipulation tasks

#### Example 7-1

The monthly rainfall of a city in a certain year is stored in an array named **rainfall** as follows.

```
Dim month(12) As String
Dim rainfall(12) As Single
month(1) = "January"      : rainfall(1) = 28.5
month(2) = "February"    : rainfall(2) = 19.2
month(3) = "March"       : rainfall(3) = 51.5
month(4) = "April"       : rainfall(4) = 115.1
month(5) = "May"         : rainfall(5) = 209.7
month(6) = "June"        : rainfall(6) = 307.4
month(7) = "July"        : rainfall(7) = 233.8
month(8) = "August"      : rainfall(8) = 266
month(9) = "September"   : rainfall(9) = 196.1
month(10) = "October"    : rainfall(10) = 38.9
month(11) = "November"   : rainfall(11) = 24.7
month(12) = "December"   : rainfall(12) = 20.4
```

#### Task 1: Output the rainfall of a given month

##### Sample output

Which month ? 11

The rainfall of November is 24.7 mm

##### Code

```
Dim x As Integer
Console.WriteLine("Which month? ")
x = Console.ReadLine
Console.WriteLine_____
```

#### Task 2: Output the rainfall of each month

##### Sample output

```
1 28.5
2 19.2
:
12 20.4
```

##### Code

---

---

---



## 2. Structure

### Example 7-2

Besides the data types: integer, single, double, string, Boolean, etc., that have been used so far, Visual Basic allows a programmer to define his own user-defined data type called **structure**. Variables of different data types can be packaged in a single structure. A structure must be defined outside the scope of any sub-programs.

```
Module Module1
```

```
    Structure student
```

```
        Dim name As String
```

```
        Dim score As Integer
```

```
    End Structure
```

```
    Sub Main()
```

```
        Dim st(5) As student
```

```
        Dim temp As student
```

```
        st(1).name = "Wah"           :           st(1).score = 67
```

```
        st(2).name = "Tse"          :           st(2).score = 75
```

```
        st(3).name = "Yau"          :           st(3).score = 80
```

```
        st(4).name = "Ho"           :           st(4).score = 92
```

```
        st(5).name = "Tang"         :           st(5).score = 88
```

```
        For x = 1 To 4
```

```
            If st(x).score < st(x + 1).score Then
```

```
                temp = st(x)
```

```
                st(x) = st(x + 1)
```

```
                st(x + 1) = temp
```

```
            End If
```

```
        ' Check point
```

```
        Next
```

```
        For x = 1 To 5
```

```
            Console.WriteLine(st(x).name & " " & st(x).score)
```

```
        Next
```

```
    End Sub
```

```
End Module
```

Complete the following table to show the values of the following variables at the check point.

Pass		St(1)	St(2)	St(3)	St(4)	St(5)
Before entering into the loop	Name					
	Score					
1	Name					
	Score					
2	Name					
	Score					
3	Name					
	Score					
4	Name					
	Score					