ENGG1330 Computer Programming

2018-19 2nd Semester

Tutorial 6

Deadline: 21/3 23:55

Aims and Objective:

1. Demonstrate working knowledge on array operation (declaration and data access)
2. Solve problem with array

1. Create a list with the following data

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1, 3, 5, 9, 7, 8, 2, 6, 3, 11
```

(a) Complete your program so that it accepts an integer *i* and returns the i^{th} element of the array. Your program should also check the validity of the input. The sample inputs and outputs are listed below:

Case	Input	Output
1	5	7
2	3	5
3	7	2
4	0	Error: Invalid Input

(b) Modify your program so that it accepts an integer *i* and returns the index of the first element with value equal to *i*. If no match element, output -1. The sample inputs and outputs are listed below:

Case	Input	Output
1	5	2
2	3	1
3	7	4
4	4	-1

1. Write a program that it first accepts an integer *n* (1<*n*<=20) which represents the number of students in a class. For each student, read the student's mark *m* (0<*m*<=50) and store them into an array.

   After all marks are read, the average mark (to 2 decimal places) and the bar chart of the marks are printed. You may assume that all the inputs are valid (i.e. correct data type and the integers are within the valid range).

   Example inputs(in red) and output

Case	Sample Input / Output
1	Number of students? 3 Student 1: 30 Student 2: 20 Student 3: 50 Average = 33.33 ****************************** ******************** **
2	Number of students? 5 Student 1: 40 Student 2: 45 Student 3: 50 Student 4: 30 Student 5: 33 Average = 39.60 ** *** ** ***************************** *********************************
3	Number of students? 2 Student 1: 49 Student 2: 38 Average = 43.50 ** **********************************