King Fahd University of Petroleum and Minerals
Information & Computer Science Department
ICS 103 – Computer Programming in C
Summer Semester 2008 (073)

Lab # 11 (Sorting and searching 1-D Arrays)

Objective:

1. Searching an array
2. Sorting an array

Exercise # 1:

Write a program that reads five numbers into an array **num** and target value and then passes the array along with the target value to a function **Search** that searches for target value in array elements and returns index of target or not found. Use sequential search algorithm described in page 357 of your textbook.

Sample Output 1:
```
Enter five numbers > 3 12 6 27 38
Enter target value > 6
The index of 6 is 2
```

Sample Output 2:
```
Enter five numbers > 3 12 6 27 38
Enter target value > 20
20 not found
```

Exercise # 2:

Write a program that reads five numbers into an array **num** and then passes it to a function **BubbleSort** that sorts the array in increasing order. Use bubble sort algorithm described in page 367 of your textbook.

Sample Output:
```
Enter five numbers > 9 18 6 5 24
The numbers sorted in increasing order: 5 6 9 18 24
```