

Ceng 241 Lab Work 1

Introduction to Visual C++: examine Visual C++ platform

Q1. Write a program that uses function strcmp to compare two strings input by the user. The program should state whether the first string is less than, equal to or greater than the second string.

Q2. The task of the following program is to find the mean and median values of an integer array grades.

Hint: Function mean computes and displays the average of elements in the array.

Median means the middle element in an ordered array. Function median, determines the median value by calling bubblesort function to sort array grades and picking and displaying the middle element. In a sorted array, if the array has odd number of elements, the median is the middle element, $\text{array}[\text{n}/2]$; if the array has even number of elements, the median is the average of the two middle elements, $(\text{array}[(\text{n}-1)/2] + \text{array}[\text{n}/2]) / 2$, where n is the number of elements.

Compile the program and if there any error correct them.

```
#include <iostream>

using std::cin ;
using std::cout;
using std::endl;

#include <iomanip>

using std::setw ;

void median(int[], int );
void mean (int [], int );

void bubblesort(int[], int );
void printarray(int[], int );

int main() {
    const int size=10;
    int x[size] = { 21, 60, 17, 38, 80, 94, 78, 54, 73, 10} ;
```

```

        cout<< "The unsorted array of grades is: " << endl;
        printarray (x, size );
        mean ( x , size);
        median(x , size);
        cout<< "The grades in ascending order: " << endl;
        printarray (x, size );

        return 0;
    }

void mean(int x[]){
    int sum=0;
    double average;

    for(int I=0; I<y , I++){
        sum=x[I];
    }

    average=sum/y;
    cout<<>>Average is :<<average<<endl;
}

void median (int x[],int y){
    int middle;

    bubblesory( x,y);
    if ((y % 2)==0)
        middle=( x[(y-1/2] + x[y/2] )/2;
    else
        middle=x[y/2];
    cout<<Median Value is<<middle
}

void printarray(int x[], inty ) {
    for (int I=0; I<y; I++)
        cout<<setw(3)<<I;
    cout<<endl;
    for (int I=0; I<y; I++)
        cout<<setw(3)<<x[I];
}

```

Q3. Write a program that initializes the array scores of 40 integers between 1 and 6, inclusive, using rand() function. There should be a function call to count() that accepts the array scores, its arraysize, and an integer search key value as its parameters, and returns the number of occurrences of the search key in the array. Function call statement should be as follows:

```
result = count( scores, size, key) ;   where   result is an integer variable in main ( )  
                                         size is the array size of the array scores,  
                                         key is the value to count in the array
```