**Lab-10**

**Instructions:**

* Indent your code properly.
* Use meaningful variable names. Follow the naming conventions.
* Use meaningful prompt lines/labels for all input/output that is done by your programs.
* You are not allowed to discuss your problems with your fellows. If you feel any problem in understanding then you may ask your teacher or TA.

**Task-00:**

First show all remaining tasks of Lab-09 if not negative marking in this lab of 30%.

**Task-01:**

Write a function that will print Fibonacci series up to n number, the n is entered by a user and passed to a function as an argument. By definition, the first two Fibonacci numbers are 0 and 1, and each remaining number is the sum

of the previous two.

**Fn = Fn‐1 + Fn‐2**

The Fibonacci series is 0, 1, 1,2,3,5, 8, 13, 21…

**Task-02:**

Following Code show how the arrays are pass into the function Donot perform copy paste:

void inputArray(int array[] , int size)

{

cout<<"Enter "<<size<<" Numbers:"<<endl;

for (int i = 0; i < size ; i++)

{

cin>>array[i];

}

}

void outputArray(int array[] , int size)

{

cout<<"This Array contains: ";

for (int i = 0 ; i < size ; i++)

{

cout<<array[i]<<" ";

}

}

int main ()

{

int arr[5];

int size = 5;

inputArray(arr,size);

outputArray (arr , size);

return 0;

}

**Task-03:**

Write a program that contains at least two functions.

a) inputArray(…) // It takes input for the array.

b) getMinIndex(…) // It finds minimum number from array and returns the index of the first occurrence of the maximum.

Your program takes input from user and displays the position of the

minimum number.

**Sample Run 1:**

Enter 10 Numbers:

10 12 13 4 23 5 11 34 4 12

First occurrence of the Maximum is found at index: 3

**Task-04:**

Modify the Task-03 so that it displays the positions of all occurrences of the mainimum

number.

**Sample Run 1:**

Enter 10 Numbers:

10 20 30 87 30 87 86 23 59 78

Total “2” occurrence(s) of the Minimum.

Found at index# 2 4

**Sample Run 2:**

Enter 10 Numbers:

45 67 89 34 17 12 34 56 92 34

Total “1” occurrence(s) of the Minimum.

Found at index# 5

**Task-05**

Write a program that lets the user enter a string into a character array. The program

should then convert all the lowercase letters to uppercase. (If a character is already

uppercase, or is not a letter, it should be left alone.) Hint: Consult the ASCII chart in

Appendix A. Notice that the lowercase letters are represented by the ASCII codes 97

through 122. If you subtract 32 from any lowercase character‟s ASCII code, it will yield

the ASCII code of the uppercase equivalent.

**Task-06**

Write and test the function whose prototype is:

**int frequency(float a[],int n,float x);**

This function counts the number of times the item x appears among the first n elements of the array a and returns  that count as the frequency of x in a.

**Task-07**

Write a program that reads in and sort the elements of an array of size 10 in ascending order.

**Sample Run:**

Original contents of array:     4    1   ‐1   0   2   3

Sorted contents of array:                    ‐1    0    1   2   3   4