American University of Science & Technology

Department Of Computer Science

**CSI 250L – Computer Programming-II Lab**

**Fall 2011/2012**

**Lab Work 1**

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**Part 3 - Review Functions and arrays of integers**:

Write a program to allow the user to input **N** positive integers and store them in an array, **arr,** of 100 cells.(*let N be the first input by the user*)

The program should print the content of **arr** sorted in ascending order**.**

#include <iostream>

using namespace std;

void printArray(int a[], int size)

{

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

 cout << a[i] << " ";

 cout<<endl;

}

void sortAscending(int a[], int size)

{

 int temp;

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

 for (int j=0;j<size-1;++j)

 {

 if (a[j]>a[j+1])

 {

 temp = a[j];

 a[j]=a[j+1];

 a[j+1]=temp;

 }

 }

}

int main()

{

 int N;

 int arr[100];

 cout << "Please enter the number of values to be entered : ";

 cin >> N;

 cout << "Please enter " << N << " numbers :" << endl;

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

 cin >> arr[i];

 sortAscending(arr, N);

 cout << "The array elements sorted in ascending order : " << endl;

 printArray(arr, N);

 system("pause");

 return 0;

}

**Part 4 - Review Functions and arrays of characters**:

Write a program that inputs a word into an array **S1**. The program should store in an array **S2** the reverse of **S1**, and in **S3** the content of **S1** converted to capital letters.

#include <iostream>

using namespace std;

int getArraySize(char a[])

{

 int i;

 for (i=0;a[i]!='\0';++i);

 return i;

}

void printArray(char a[])

{

 for (int i=0;a[i]!='\0';++i)

 cout << a[i];

 cout<<endl;

}

void reverse(char a[], char b[])

{

 int size = getArraySize(a);

 for (int i=0;a[i]!='\0';++i)

 b[i] = a[size-i-1];

 b[size]='\0';

}

void capitalize(char a[], char b[])

{

 int i;

 for (i=0;a[i]!='\0';++i)

 if (a[i]>='a' && a[i] <='z')

 b[i] = ('A' + (a[i]-'a'));

 else

 b[i] = a[i];

 b[i] = '\0';

}

int main()

{

 const int size = 25;

 char s1[size], s2[size], s3[size];

 cout << "Please enter a word : ";

 cin >> s1;

 reverse(s1, s2);

 cout << "The word in reverse order : ";

 printArray(s2);

 cout << endl;

 capitalize(s1, s3);

 cout << "The word in capital letters : ";

 printArray(s3);

 cout << endl;

 system("pause");

 return 0;

}