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;

}