American University of Science & Technology

Department Of Computer Science

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

**Fall 2011/2012**

**Lab Work 2**

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**Problem 4:**

Write a program to input a line of text and store it in an array **Line.** The program should allow the user to choose from the following menu:

1. Count the number of words in **Line.**
2. Output the length of **Line.**
3. Append “\*\*\*” to **Line**.
4. Output the content of **Line.**
5. Exit.

#include <iostream>

using namespace std;

int countWords(char a[])

{

int count=0;

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

if (a[i]==' ') ++count;

++count; // to account for the last word in the line (usually it is not followed by a space but rather \0)

return count;

}

int getLength(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];

}

void appendStars(char a[])

{

int size = getLength(a);

a[size]='\*';

a[size+1]='\*';

a[size+2]='\*';

a[size+3]='\0';

}

int main()

{

const int size = 80;

char Line[size];

int action = 0;

cout << "Please enter a line of text : ";

cin.getline(Line, size);

while (action!=5)

{

cout << "Please choose one of the following actions : " << endl;

cout << "1- Count the number of words in Line." << endl;

cout << "2- Output the length of Line." << endl;

cout << "3- Append \"\*\*\*\" to Line." << endl;

cout << "4- Output the content of Line." << endl;

cout << "5- Exit." << endl << endl;

cin >> action;

switch (action)

{

case 1: cout << "The number of words in \"" << Line << "\" : " << countWords(Line)<< endl;break;

case 2:cout << "The length of \"" << Line << "\" : " << getLength(Line)<< endl;break;

case 3:cout << "Appending \"\*\*\*\" to \"" << Line << "\" : "; appendStars(Line); printArray(Line); cout << endl;break;

case 4:cout << "The line of text is \""; printArray(Line); cout << "\"" << endl;break; // or simply cout << Line

case 5:cout << "Exiting...Bye Bye" << endl;break;

default : cout << "Invalid choice!" << endl;

}

cout << endl;

}

system("pause");

return 0;

}