**Homework 7**

**IM/2019/094 – H.P.S. Gandhira**

1. Consider a 2-by-5 integer array t.

a) Write a definition for t.

int t [2][5]

b) How many rows does t have?

2

c) How many columns does t have?

5

d) How many elements does t have?

10

e) Write the names of all the elements in the second row of t.

t[1][0] , t[1][1] , t[1][2] , t[1][3] , t[1][4]

f) Write the names of all the elements in the third column of t.

t[0][2] , t[1][2]

g) Write a single statement that sets the element of t in row 1 and column 2 to zero.

t[0][1] = 0

h) Write a nested for statement that initializes each element of t to zero.

For (int i=0; i<2; i++)

{

For (int j=0; j<2; j++)

{

t{i][j] = 0

}

}

i) Write a statement that inputs the values for the elements of t from the terminal.

int t[2][5];

int i, j;

cout<<"2D Array Input:"<<endl;

for(i=0;i<2;i++)

{

for(j=0;j<5;j++)

{

cout<<"["<<i<<"]["<<j<<"]= ";

cin>>t[i][j];

}

}

j) Write a series of statements that determine and print the smallest value in t.

k) Write a statement that displays the elements of the first row of t.

l) Write a statement that totals the elements of the fourth column of t.

m) Write a series of statements that print the array t in tabular format. List the column subscripts as headings across the top and list the row subscripts at the left of each row.

2.write a program to assign seats on each flight of the airline's only plane (capacity: 10 seats).

3.Write a program that inputs a line of text into char array s[ 100 ]. Output the line in uppercase letters and in lowercase letters.

4.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.

#include <iostream>

#include<stdio.h>

#include<string.h>

using namespace std;

int main()

{

char a[100], b[100];

cout<<"Enter the first string"<<endl;

cin>>a;

cout<<"Enter the second string"<<endl;

cin>>b;

if( strcmp(a,b) == 0 )

cout<<"Entered strings are equal."<<endl;

else

cout<<"Entered strings are not equal."<<endl;

return 0;

}

5. Write a program that inputs several lines of text and uses strtok to count the total number of words. Assume that the words are separated either by spaces or newline characters.

6. You are to write a Trip Distance Calculator that calculates the approximate driving distance for a trip that visits multiple cities.

The approximate driving distance between two cities is often depicted in a mileage chart. Mileage chart is a two-dimensional table that lists across rows and columns. To find the distance between two cities, find the cell that is the intersection between the origination city row and the destination city column (or vice versa). Write a program that lists a menu of cities, including an exit option, and keeps track of the total estimated driving miles as each city is chosen. When the user exits, the final total estimated driving miles are displayed. You could ask for city pairs, but it is preferred that you repetitively ask for a city, assuming that you are driving from the prior selection to the current selection.