**Homework 7**

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**Q1**

1. t [2][5] in this array there 2 rows and 5 columns. t is a 2D array of integer type. It has 10 separate memory locations and can store only integer literals.
2. 2
3. 5
4. 10
5. t[1][0]

t[1][1]

t[1][2]

t[1][3]

t[1][4]

1. t[0][3]

t[1][3]

1. t[1][2]=0
2. for(int i=0; i<2; i++)

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

t[i][j]=0;

1. int t[2][5];

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

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

cout<<”Input integer value for row”<<i+1<<”/column”<<j+1<<”:”;

cin>> t[i][j];

}

}

1. Int min=0;

min=t[0][0];

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

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

if(min>t[i][j])

min=num[i][j];

cout<<"Smallest number:"<<min<<endl;

1. for(int i=0; i<2; i++)

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

cout<<t[0][j];

1. Int Tot;

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

Tot=Tot+t[i][3];

}

Cout<<”total:”<<Tot<<endl;

1. #include<iostream>

using namespace std;

int main (){

int t[2][5];

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

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

cout<<"Input integer value for row"<<i+1<<"/column"<<j+1<<":";

cin>> t[i][j];

}

}

cout<<"\n Two Dimensional Array is : \n";

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

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

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

}

cout<<"\n";

}

return 0;

}

#include<iostream>

**Q2**

using namespace std;

int main(){

int s[10]; //define the array

int CI=0; //customer choice

int firstclass=0, economic=5;

//assign value of each seat is 0

for(int i=0;i<10;i++){

s[10]=0;

}

while(firstclass<5 || economic<10){

cout<<"Welcome to XYZ Airlines"<<endl;

cout<<".................................."<<endl;

cout<<"Please type 1 for first class or Please type 2 for economy: ";

cin>>CI;

while(!(CI==1 || CI==2)){

cout<<"Invalid Input Please enter again"<<endl;

cout<<"Please type 1 for first class or Please type 2 for economy: ";

cin.clear();

cin.ignore();

cin>>CI;

}

if(CI==1){

if(firstclass<5){

cout<<"Boarding Pass" <<endl;

cout<<"..............."<<endl;

cout<<"Seat number:"<<(firstclass+1)<<endl;

cout<<"Section: Firstclass"<<endl;

s[firstclass]=1;

firstclass++;

}

else if (economic<10){

char CI1='\0';

while(!(CI1=='Y'|| CI1=='y'|| CI1=='N' || CI1=='n')){

cout<<"Firstclass is filled. Do you like to book a seat in economic section?:"<<endl;

cout<<"If yes type 'Y', If no type 'N' :";

cin>>CI1;

if(!(CI1=='Y'|| CI1=='y'|| CI1=='N' || CI1=='n')){

cout<<"Invalid input please enter again:"<<endl;

cout<<"If yes type 'Y', If no type 'N' :";

cin.clear();

cin.ignore();

cin>>CI1;

}

if(CI1=='Y' || CI1=='y'){

cout<<"Boarding Pass" <<endl;

cout<<"..............."<<endl;

cout<<"Seat number:"<<(economic+1)<<endl;

cout<<"Section: Economic section "<<endl;

s[economic]=1;

economic++;

}

else if(CI1=='N'|| CI1=='n'){

cout<<"Next flight leaves in 3 hours"<<endl;

}

}

}

}

if(CI==2){

if(economic<10){

cout<<"Boarding Pass" <<endl;

cout<<"..............."<<endl;

cout<<"Seat number:"<<(economic+1)<<endl;

cout<<"Section: Economic section"<<endl;

s[economic]=1;

economic++;

}

else if (economic=10){

cout<<"Economic section is filled. Next flight leaves in 3 hours"<<endl;

}

}

}

}

#include<iostream>

**Q3**

#include<string.h>

using namespace std;

int main(){

char s[100];

char word;

cout<<"Enter a word:";

cin.getline(s,100);

cout<<endl<<endl;

int len=strlen(s);

for(int i=0; i<len; i++){

if(s[i]>=97 && s[i]<=122){

s[i]=s[i]-32;

}

}

cout<<"Text in uppercase:"<< s<< endl<<endl;

len=strlen(s);

for(int i=0; i<len; i++){

if(s[i]>=65 && s[i]<=90){

s[i]=s[i]+32;

}

}

cout<<"Text in lowercase:"<< s << endl<<endl;

}

#include<iostream>

**Q4**

#include<string.h>

using namespace std;

int main(){

char str1[100], str2[100];

cout<<"Input word1:";

cin.getline(str1,100);

cout<<"Input word2:";

cin.getline(str2,100);

int compare=strcmp(str1,str2);

if(compare==0){

cout<<" Words are equal"<<endl;

}

else if (compare==1){

cout<<"word1 is greater than word2"<<endl;

}

else if (compare==-1){

cout<<"word1 is less than word2"<<endl;

}

return 0;

}

#include <iostream>

**Q5**

#include <cstring>

using namespace std;

int main() {

char string[100], \*token;

int count = 0;

cout << "Enter a string:";

cin.getline(string, 100);

token = strtok(string, " ");

while(NULL != token) {

count++;

token = strtok(NULL, " ");

}

cout << "Word Count : "<<count<<endl;

return 0;

}

#include<iostream>

**Q6**

#include<string.h>

using namespace std;

int main(){

int distance[4][4]={0,30,212,300,30,0,195,225,212,195,0,200,300,225,200,0};

int total=0;

int i,j;

cout<<"Welcome to the trip advicer !!!!"<<endl;

cout<<"............................................."<<endl;

cout<<"Enter1-Negombo"<<endl;

cout<<"Enter2-Colombo"<<endl;

cout<<"Enter3-Kandy"<<endl;

cout<<"Enter4-Matara"<<endl;

int CL; //current location

cout<<"Please enter your current location:";

cin>>CL;

cout<<endl<<endl;

if(!(CL==1 || CL==2 || CL==3 || CL==4)){

cout<<"Invalid input please again enter current location:";

cin.clear();

cin.ignore();

cin>>CL;

}

int dest;//destination

cout<<"Please enter your destination:";

cin>>dest;

cout<<endl<<endl;

if(!(dest==1|| dest==2 || dest==3 || dest==4)){

cout<<"Invalid input please again enter detination";

cin.clear();

cin.ignore();

cin>>dest;

}

char more='\0';

while(!(more=='Y'|| more=='y'|| more=='N' || more=='n')){

cout<<"Do you wish to travel further( if yes 'y', if no 'n'):";

cout<<more;

if(!(more=='Y'|| more=='y'|| more=='N' || more=='n')){

cout<<"Invalid input please enter again:"<<endl;

cout<<"If yes type 'Y', If no type 'N' :";

cin.clear();

cin.ignore();

cin>>more;

}

int finaldest;

if(more=='Y' || more=='y'){

cout<<"please enter your final distance:";

cin>>finaldest;

cout<<endl;

for(i=0; i<4; i++){

for(j=0;j<4;j++){

total=distance[CL-1][dest-1]+distance[dest-1][finaldest-1];

}

}

cout<<"Total distance :"<<total<<"km"<<endl;

}

else {

for(i=0; i<4; i++){

for(j=0;j<4;j++){

total=distance[CL-1][dest-1];

}

}

cout<<"Total distance :"<<total<<"km"<<endl;

}

}

}