# Question No. 1:

#include<iostream>

using namespace std;

int main()

{

char arr[] = "The most likely way for the world to be destroyed,\n\tMost experts agree,'is by accident'.\n\t\tThat where we come in;\nWe are computer professionals.We cause accidents'.";

for(int i = 0; arr[i] != 0; i++)

{

cout << arr[i];

}

}

# Output:

# Question No. 2:

#include<iostream>

using namespace std;

int main()

{

int count = 0;

char arr[] = "The most likely way for the world to be destroyed,\n\tMost experts agree,'is by accident'.\n\t\tThat where we come in;\nWe are computer professionals.We cause accidents'.";

for(int i = 0; arr[i] != 0; i++)

{

cout << arr[i];

count = count + 1;

}

cout << "\n\nTotal alphabets in the above string are: " << count << endl;

}

# Output:

# Question No. 3:

#include<iostream>

using namespace std;

int main()

{

char arr[100];

cout << "Enter a character array: ";

gets(arr);

for(int i = 0; arr[i] != 0; i++)

{

cout << arr[i];

}

}

# Output:

# Question No. 4:

#include<iostream>

using namespace std;

int main()

{

int count = 0;

char arr[] = "The most likely way for the world to be destroyed,\n\tMost experts agree,'is by accident'.\n\t\tThat where we come in;\nWe are computer professionals.We cause accidents'.";

for(int i = 0; arr[i] != 0; i++)

{

cout << arr[i];

}

for(int i = 0; arr[i] != 0; i++)

{

if(arr[i]=='a' || arr[i]=='e'|| arr[i]=='i' || arr[i]=='o' || arr[i]=='u')

{

count = count + 1;

}

}

cout << "\n\nTotal vowels in the above string are: " << count << endl;

}

# Output:

# Question No. 5:

#include<iostream>

using namespace std;

int main()

{

char arr[100];

int count = 0;

cout << "Enter a string: ";

gets(arr);

for(int i = 0; arr[i] != 0; i++)

{

cout << arr[i];

if(arr[i] != ' ')

{

count = count + 1;

}

}

cout << "\n\nTotal alphabets in the entered string are: " << count << endl;

}

# Output:

# Question No. 6:

#include<iostream>

using namespace std;

int main()

{

char arr[100];

cout << "Enter a character array: ";

gets(arr);

for(int i = 0; arr[i] != 0; i++)

{

if(arr[i] == ' ')

{

arr[i] = '\t';

}

cout << arr[i];

}

}

# Output:

# Question No. 7:

#include<iostream>

using namespace std;

int main()

{

char arr[20];

int sum = 0;

cout << "Enter your name: ";

gets(arr);

for(int i = 0; arr[i] != 0; i++)

{

sum = sum + 1;

}

for(int i = sum ; i >= 0; i--)

{

cout << arr[i];

}

}

# Output:

# Question No. 8:

#include<iostream>

using namespace std;

int main()

{

char arr[100];

cout << "Enter a character array: ";

gets(arr);

for(int i = 0; arr[i] != 0; i++)

{

cout << arr[i] << endl;

}

}

# Output:

# Question No. 9:

#include<iostream>

using namespace std;

int main()

{

char arr[20];

char arr1[20];

cout << "Enter your first name: ";

gets(arr);

cout<<"Enter your second name: ";

gets(arr1);

cout << endl;

cout << arr << " " << arr1 << endl;

}

# Output:

# Question No. 10:

#include<iostream>

using namespace std;

int main()

{

char arr[20];

cout << "Enter your name small and large alphabets: ";

gets(arr);

cout << "Your name is: ";

for(int i = 0; arr[i] != 0; i++)

{

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

{

arr[i] = arr[i] - 32;

}

cout << arr[i];

}

}

# Output:

# Question No. 11:

#include<iostream>

using namespace std;

void menu();

void input();

void output(int[], int choice);

void large(int[]);

void small(int[]);

void sortA(int[]);

void sortD(int[]);

void search(int[]);

const int Size=10;

int main(){

menu();

input();

return 0;

}

void menu(){

cout << "\*Menu\*" << endl;

cout << "1. Large" << endl;

cout << "2. Small" << endl;

cout << "3. Ascending Sort" << endl;

cout << "4. Descending Sort" << endl;

cout << "5. Search" << endl;

}

void output(int array[Size], int choice){

switch(choice){

case 1:

large(array);

break;

case 2:

small(array);

break;

case 3:

sortA(array);

break;

case 4:

sortD(array);

break;

case 5:

search(array);

break;

default:

cout<<"Invalid choice";

}

}

void input(){

int choice, array[Size];

cout<<"Enter choice: ";

cin>>choice;

cout<<"Provide input: "<<endl;

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

cout<<"Enter "<<i+1<<" element: ";

cin>>array[i];

}

output(array, choice);

}

void large(int array[Size]){

int large;

large=array[0];

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

if(array[i]>large){

large=array[i];

}

}

cout<<"Largest element: "<<large<<endl;

}

void small(int array[Size]){

int small;

small=array[0];

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

if(array[i]<small){

small=array[i];

}

}

cout<<"Smallest element: "<<small<<endl;

}

void sortA(int array[Size]){

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

for(int j=i+1; j<Size; j++){

if(array[i]>array[j]){

int temp=array[i];

array[i]=array[j];

array[j]=temp;

}

}

}

cout<<"Array in Ascending Order: ";

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

cout<<array[i]<<"\t";

}

}

void sortD(int array[Size]){

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

for(int j=i+1; j<Size; j++){

if(array[i]<array[j]){

int temp=array[i];

array[i]=array[j];

array[j]=temp;

}

}

}

cout<<"Array in Descending Order: ";

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

cout<<array[i]<<"\t";

}

}

void search(int array[Size]){

int find;

bool flag=0;

cout<<"Enter a value to search: ";

cin>>find;

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

if(array[i]==find){

flag=1;

break;

}

}

if(flag){

cout<<find<<" is found";

}

else{

cout<<find<<" not found";

}

}

# Output:

# Question No. 12:

#include<iostream>

#include<cstdlib>

#include<ctime>

using namespace std;

void fun(int array[500]){

for(int i=0; i<100; i++){

cout<<array[i]<<endl;

}

}

int main(){

int array[500],randvalue;

for(int i=0; i<100; i++){

srand(time(NULL));

randvalue=1+rand()%1000;

array[i]=randvalue;

}

fun(array);

return 0;

}

# Output:

# Question No. 13:

#include<iostream>

using namespace std;

float average(float a, float b, float c){

float avg;

return (a+b+c)/3;

}

int main(){

float array[20]={1,2.3,3,4.5,6,7,8,9,10,13.56,14.87,23.98,13.4,14.8,15.67,16.90,18.99,17.54,20.43,19.33};

float a=array[0], b=array[9], c=array[19];

cout<<"Average is: "<<average(a,b,c);

return 0;

}

# Output:

# Question No. 14:

#include <iostream>

#include<cstring>

using namespace std;

void palindrome(char string1[20], char string2[20]){

int i, length1, length2;

int flag1 = 0, flag2 = 0;

// \*\*\*\*\*\*\*String 2 Palindrome\*\*\*\*\*\*\*

length1 = strlen(string1);

for(i=0;i < length1;i++){

if(string1[i] != string1[length1-i-1]){

flag1 = 1;

break;

}

}

if (flag1) {

cout << string1 << " is not a palindrome" << endl;

}

else {

cout << string1 << " is a palindrome" << endl;

}

// \*\*\*\*\*\*\*String 2 Palindrome\*\*\*\*\*\*\*

length2 = strlen(string2);

for(i=0;i < length2 ;i++){

if(string2[i] != string2[length2-i-1]){

flag2 = 1;

break;

}

}

if (flag2) {

cout << string2 << " is not a palindrome" << endl;

}

else {

cout << string2 << " is a palindrome" << endl;

}

}

int main(){

char string1[20], string2[20];

cout<<"Enter first string in small alphabets: ";

gets(string1);

cout<<"Enter second string in small alphabets: ";

gets(string2);

palindrome(string1, string2);

return 0;

}

# Output:

# Question No. 15:

#include <iostream>

using namespace std;

int main()

{

int arr[3][5] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15};

cout << arr[0][0] << " ";

cout << arr[0][1] << " ";

cout << arr[0][2] << " ";

cout << arr[0][3] << " ";

cout << arr[0][4] << "\n";

cout << arr[1][0] << " ";

cout << arr[1][1] << " ";

cout << arr[1][2] << " ";

cout << arr[1][3] << " ";

cout << arr[1][4] << "\n";

cout << arr[2][0] << " ";

cout << arr[2][1] << " ";

cout << arr[2][2] << " ";

cout << arr[2][3] << " ";

cout << arr[2][4] << "\n";

}

# Output:

# Question No. 16:

#include <iostream>

using namespace std;

int main()

{

int arr[3][2] = {{1, 2}, {3, 4}, {5, 6}};

cout << "Before Swapping: " << endl;

cout << arr[0][0] << " ";

cout << arr[0][1] << "\n";

cout << arr[1][0] << " ";

cout << arr[1][1] << "\n";

cout << arr[2][0] << " ";

cout << arr[2][1] << "\n";

cout << "\\nAfter Swapping: " << endl;

cout << arr[0][0] << " ";

cout << arr[2][1] << "\n";

cout << arr[1][0] << " ";

cout << arr[1][1] << "\n";

cout << arr[2][0] << " ";

cout << arr[0][1] << "\n";

}

# Output:

# Question No. 17:

#include <iostream>

using namespace std;

int main()

{

int arr[5][5];

cout << "Enter Values for 5 x 5 Array: ";

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

{

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

{

cin >> arr[i][j];

}

}

cout << "Values of 5 x 5 Array are: " << endl;

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

{

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

{

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

}

cout << endl;

}

}

# Output:

# Question No. 18:

#include <iostream>

using namespace std;

int main()

{

int arr[3][5];

cout << "Enter Values for 3 x 5 Array: ";

for(int i = 0; i < 3; i++)

{

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

{

cin >> arr[i][j];

}

}

cout << "Values of 3 x 5 Array after addition of 10 are: " << endl;

for(int i = 0; i < 3; i++)

{

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

{

cout << arr[i][j] + 10 << " ";

}

cout << endl;

}

}

# Output:

# Question No. 19:

#include <iostream>

using namespace std;

int main()

{

int arr[4][3];

cout << "Enter 12 Values for 4 x 3 Array: ";

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

{

for(int j = 0; j < 3; j++)

{

cin >> arr[i][j];

}

}

for(int i = 0; i < 3; i++)

{

arr[0][i] = arr[0][i] - 7;

arr[3][i] = arr[3][i] - 7;

}

cout << "Values After Subtraction are: " << endl;

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

{

for(int j = 0; j < 3; j++)

{

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

}

cout << endl;

}

}

# Output:

# Question No. 20:

#include <iostream>

using namespace std;

int main()

{

int arr[4][4];

int arr1[4][4];

int subtract[4][4] = {};

cout << "Enter 16 Values for 4 x 4 Array 1: ";

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

{

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

{

cin >> arr[i][j];

}

}

cout << "Enter 16 Values for 4 x 4 Array 2: ";

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

{

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

{

cin >> arr1[i][j];

}

}

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

{

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

{

subtract[i][j] = arr1[i][j] - arr[i][j];

}

}

cout << "\nAfter subtraction Matrix 1 from Matrix 2 , Values are: " << endl;

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

{

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

{

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

}

cout << endl;

}

}

# Output:

# Question No. 21:

#include <iostream>

using namespace std;

int main()

{

int arr[5][5];

cout << "Enter Values for 5 x 5 Array: ";

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

{

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

{

cin >> arr[i][j];

}

}

cout << "Diagonal Values of 5 x 5 Array are: " << endl;

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

{

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

{

if(i == j)

{

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

}

else

cout << 0 << " ";

}

cout << endl;

}

}

# Output:

# Question No. 22:

#include <iostream>

using namespace std;

int main()

{

int arr[5][5];

int transpose[5][5];

cout << "Enter Values for 5 x 5 Array: ";

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

{

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

{

cin >> arr[i][j];

}

}

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

{

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

{

transpose[i][j] = arr[j][i];

}

}

cout << "Transpose of 5 x 5 Array is: " << endl;

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

{

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

{

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

}

cout << endl;

}

}

# Output: