C++ Notes

// Write a program to take your name and age as input and display them.

/\*#include <iostream>

using namespace std;

int main()

{

string name;

int age;

cout<<"Enter your name: ";

cin>>name;

cout<<"Enter your age: ";

cin>>age;

cout<<"Name: "<<name<<endl;

cout<<"Age: "<<age<<endl;

return 0;

}

// Write a program to input two numbers and display their sum, difference, product, and division

#include<iostream>

using namespace std;

int main(){

int a,b;

cout<<"Enter First Number: ";

cin>>a;

cout<<"Enter Second Number: ";

cin>>b;

cout<<"Sum Is: "<<a+b<<endl;

cout<<"Diff Is: "<<a-b<<endl;

cout<<"Product Is: "<<a\*b<<endl;

cout<<"Division Is: "<<a/b<<endl;

}

// Declare an array of 5 integers and print all elements.

#include<iostream>

using namespace std;

int main(){

int arr[5]={15,45,65,85,45};

cout<<"Enter Elements: ";

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

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

}

}

// Take 5 numbers from the user and store them in an array

#include<iostream>

using namespace std;

int main(){

int arr[5];

cout<<"Array Elements are: ";

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

cin>>arr[i];

}

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

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

}

}

// Update the 3rd element of an array to 100 and print the array

#include<iostream>

using namespace std;

int main(){

int arr[5]={14, 25, 65, 43, 52};

arr[1]=2;

cout<<"Updated Array Is: ";

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

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

}

}\*/

// Find the smallest and largest element in an array

#include<iostream>

using namespace std;

int main(){

int arr[5]={5, 7, 2, 9, 8};

int min=arr[0];

int max=arr[0];

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

if(arr[i]<min)

min=arr[i];

if(arr[i]>max)

max=arr[i];

}

cout<<"Maximum: "<<max<<endl;

cout<<"Minimum: "<<min<<endl;

}

// find the 2nd maximum element in an array

#include <iostream>

using namespace std;

int main() {

int arr[5] = {10, 25, 7, 40, 30};

int first, second;

first = second = arr[0];

for (int i = 1; i < 5; i++) {

if (arr[i] > first) {

second = first;

first = arr[i];

}

else if (arr[i] > second && arr[i] != first) {

second = arr[i];

}

}

cout << "Second maximum element: " << second;

return 0;

}

int count=0;

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

for(int i=0;i<6;i++){

for(int j=i+1;j<6;j++){

if(arr[i]==arr[j])

count++;

}

}

cout<<count;

// Find a target element in the Array

#include <iostream>

using namespace std;

int main()

{

int target=1;

int arr[6]={2,1,3,4,5,7};

int flag=false;

for(int i=0;i<6;i++){

if(target==arr[i]){

flag=true;

break;

}

}

if(flag==true) cout<<"Target Is Found "<<endl;

else cout<<"Not Found "<<endl;

return 0;

}

// print the last occurance of target element in the Array

#include <iostream>

using namespace std;

int main()

{

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

int target=1;

for(int i=6;i>=0;i--){

if(target==arr[i]){

cout<<i;

break;

}

}

}

// print the first occurance of target element in the Array

#include <iostream>

using namespace std;

int main()

{

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

int target=1;

for(int i=0;i<6;i++){

if(target==arr[i]){

cout<<i;

break;

}

}

}

// Another approach of print the last occurance of target element in the Array

#include <iostream>

using namespace std;

int main()

{

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

int target=1;

int occ=-2;

for(int i=0;i<6;i++){

if(target==arr[i]){

occ=i;

}

}

cout<<occ;

}

// print the first and last occurance of target element in the Array

#include <iostream>

using namespace std;

int main()

{

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

int target=2;

int occ=-2;

for(int i=0;i<6;i++){

if(target==arr[i]){

cout<<"First Occurance Is: "<<i<<endl;

break;

}

}

for(int i=0;i<6;i++){

if(target==arr[i]){

occ=i;

}

}

cout<<"Last Occurance Is: "<<occ;

}

// Another way to print the first and last occurance of target element in the Array

#include <iostream>

using namespace std;

int main()

{

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

int target=2;

for(int i=0;i<6;i++){

if(target==arr[i]){

cout<<"First Occurance Is: "<<i<<endl;

break;

}

}

for(int i=6;i>=0;i--){

if(target==arr[i]){

cout<<"Last Occurance Is: "<<i<<endl;

break;

}

}

}

// Concept of Class

#include<iostream>

using namespace std;

class car{

public:

string color;

string company;

int model;

void display(){

cout<<"COLOR IS: "<<color<<endl;

cout<<"COMPANY IS: "<<company<<endl;

cout<<"MODEL IS: "<<model<<endl;

}

};

int main(){

car c1;

c1.color="Black";

c1.company="Suzuki";

c1.model=2015;

c1.display();

}

// Creating class of a student and check that schlorship availed or not

#include<iostream>

using namespace std;

class student{

public:

string name;

int rollno;

bool schlorship;

};

int main(){

student s1;

s1.name="Priya\_Rana";

s1.rollno=39;

s1.schlorship =true;

cout<<"NAME IS: "<<s1.name<<endl;

cout<<"ROLLNO. IS: "<<s1.rollno<<endl;

cout<<"Schlorship Status: ";

if(s1.schlorship==true){

cout<<"AVAILED";

}else{

cout<<"Not Availed";

}

}

// classes

#include <iostream>

using namespace std;

class animal{

public:

string breed;

string color;

void display(){

cout<<"Breed Is: "<<breed<<endl;

cout<<"Color Is: "<<color<<endl;

}

};

int main() {

animal cat;

cat.breed="chao\_chao";

cat.color="white";

animal dog;

dog.breed="laibra";

dog.color="black";

cat.display();

cout<<"For Cat: "<<endl;

dog.display();

return 0;

}

// creating class with declare function of canfly

#include<iostream>

using namespace std;

class Bird{

public:

string name;

int age;

bool canFly;

void display(){

cout<<"Name= "<<name<<endl;

cout<<"Age= "<<age<<endl;

cout<<"canFly= "<<(canFly?"yes":"no")<<endl;

cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;

}

};

int main(){

Bird b1,b2;

b1.name="spparow";

b1.age=2;

b1.canFly=true;

b2.name="parrot";

b2.age=3;

b2.canFly=false;

b1.display();

b2.display();

}