Operators

Arithmetic operators

#include <iostream>

using namespace std;

int main ()

{

int x=5, y=3,=0;

z=x+y;

cout << z;

}

Output

8

#include <iostream>

using namespace std;

int main ()

{

int a=5, b=3,c=0;

c=a-b;

cout << c;

}

Output

2

#include <iostream>

using namespace std;

int main ()

{

int a=5, b=3,c=0;

c=a\*b;

cout << c;

}

Output

15

#include <iostream>

using namespace std;

int main ()

{

int a=8, b=2,c=0;

c=a/b;

cout << c;

}

Output

4

#include <iostream>

using namespace std;

int main ()

{

int a=8, b=2,c=0;

c=a%b;

cout << c;

}

Output

0

Relational operators

#include <iostream>

using namespace std;

int main ()

{

int a = 10 ;

int b = 5 ;

cout << (a > b) << endl;

cout << (a < b) << endl;

return 0;

}

Output

/tmp/oKyo9X6m6M.o

1

0

#include <iostream>

using namespace std;

int main ()

{

int x = 15 ;

int y = 10 ;

cout << (x < y) << endl;

return 0;

}

Output

/tmp/oKyo9X6m6M.o

0

#include <iostream>

using namespace std;

int main ()

{

int x = 10 ;

int y = 10 ;

cout << (x > y) << endl;

cout << (x >= y) << endl;

return 0;

}

Output

/tmp/oKyo9X6m6M.o

0

1

#include <iostream>

using namespace std;

int main ()

{

int x = 10 ;

int y = 10 ;

cout << (x < y) << endl;

cout << (x <= y) << endl;

return 0;

}

Output

/tmp/oKyo9X6m6M.o

0

1

#include <iostream>

using namespace std;

int main ()

{

int x = 10 ;

int y = 10 ;

int z = 15 ;

cout << (x == y) << endl;

cout << (x == z) << endl;

return 0;

}

/tmp/oKyo9X6m6M.o

1

0

logical operators

### **AND**

#include <iostream>

using namespace std;

int main() {

int a = 10;

if ((a < 100) && (a%2 == 0)) {

cout << "a is even and less than 100." << endl;

}

return 0;

}

output

/tmp/LKdvxrcNgP.o

a is even and less than 100.

### **OR**

#include <iostream>

using namespace std;

int main() {

int a = 7;

if ((a < 10) || (a%2 == 0)) {

cout << "a is even or less than 10." << endl;

}

return 0;

}

output

/tmp/LKdvxrcNgP.o

a is even or less than 10.

### **NOT**

#include <iostream>

using namespace std;

int main() {

int a = 7;

if (!(a%2 == 0)) {

cout << "a is not even." << endl;

}

return 0;

}

output

/tmp/LKdvxrcNgP.o

a is not even.

conditional program

**1.if statements**

Prog1.

#include<iostream>

using namespace std;

int main()

{

int x;

cout<<"Enter number: ";

cin>>x;

if(x<5)

{

cout<<"Given input is smaller than 5: "<<x;

}

return 0;

}

Output

/tmp/9y3WGY8rCt.o

Enter number: 4

Given input is smaller than 5: 4

**2.nested if statements**

#include <iostream>

using namespace std;

int main(){

int num;

cout<<"Enter number: ";

cin>>num;

if( num < 100 ){

cout<<"number is less than 100"<<endl;

if(num > 50){

cout<<"number is greater than 50";

}

}

return 0;

}

Output

/tmp/9y3WGY8rCt.o

Enter number: 90

number is less than 100

number is greater than 50

**3.if else statements**

#include <iostream>

using namespace std;

int main(){

int num;

cout<<"Enter number: ";

cin>>num;

if( num%2==0 ){

cout<<"number is even no"<<endl;

}

else{

cout<<"number is odd no.";

}

return 0;

}

Output

/tmp/9y3WGY8rCt.o

Enter number: 8

number is even

**4.if else ladder statements**

#include <iostream>

using namespace std;

int main(){

int score;

cout << "Enter your score between 0-100\n";

cin >> score;

if(score >= 90){

cout << "YOUR GRADE : A\n";

} else if (score >= 70 && score < 90){

cout << "YOUR GRADE : B\n";

} else if (score >= 50 && score < 70){

cout << "YOUR GRADE : C\n";

} else {

cout << "YOUR GRADE : Failed\n";

}

return 0;

}

Output

/tmp/9y3WGY8rCt.o

Enter your score between 0-100

78

YOUR GRADE : B

Switch case statement

**1.break statement**

#include <iostream>

using namespace std;

int main(){

int num;

cout << "Enter the num value:\n";

cin >> num;

switch (num) {

case 1: cout<<"Case 1 "<<endl;

break;

case 2: cout<<"Case 2 "<<endl;

break;

case 3: cout<<"Case 3 "<<endl;

break;

default: cout<<"Default "<<endl;

}

cout<<"Hey, I'm out of the switch case";

return 0;

}

Output

Enter the num value:

7

Default

Hey, I'm out of the switch case

Loop program

**1.while loop**

#include <iostream>

using namespace std;

int main(){

int i=1;

while(i<=6){

cout<<"Value of variable i is: "<<i<<endl; i++;

}

}

Output

/tmp/9y3WGY8rCt.o

Value of variable i is: 1

Value of variable i is: 2

Value of variable i is: 3

Value of variable i is: 4

Value of variable i is: 5

Value of variable i is: 6

**2.do while loop**

#include <iostream>

using namespace std;

int main(){

int x = 1;

do{

cout << x << " ";

++x;

}

while (x <= 10);

return 0;

}

Output

1 2 3 4 5 6 7 8 9 10

**3.for loop**

#include <iostream>

using namespace std;

int main() {

for(int i=1;i<=10;i++){

cout<<i <<"\n";

}

}

Output

/tmp/5FBTS2UpZ0.o

1

2

3

4

5

6

7

8

9

10

Functions

#include <iostream>

using namespace std;

void swap(int a, int b) {

b = a + b;

a = b - a;

b = b - a;

cout<<"\nAfter swapping: ";

cout<<"a = "<<a;

cout<<"\tb = "<<b;

return;

}

int main()

{

int a,b;

cout<<"Enter the two numbers to be swapped: "; cin>>a>>b;

cout<<"a = "<<a;

cout<<"\tb = "<<b;

swap(a,b);

}

Output

/tmp/LKdvxrcNgP.o

Enter the two numbers to be swapped: 34 45

a = 34 b = 45

After swapping: a = 45 b = 34

Structure

#include <iostream>

using namespace std;

struct Person

{

char name[50];

int age;

float salary;

};

int main()

{

Person p1;

cout << "Enter Full name: ";

cin.get(p1.name, 50);

cout << "Enter age: ";

cin >> p1.age;

cout << "Enter salary: ";

cin >> p1.salary;

cout << "\nDisplaying Information." << endl;

cout << "Name: " << p1.name << endl;

cout <<"Age: " << p1.age << endl;

cout << "Salary: " << p1.salary;

return 0;

}

Output

/tmp/LKdvxrcNgP.o

Enter Full name: sumit

Enter age: 78

Enter salary: 67890

Displaying Information.

Name: sumit

Age: 78

Salary: 67890