

C++ in depth

Standard input and output



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Agenda

- ① Write your first C++ program
- ② cout and cin
- ③ iostream
- ④ namespace
- ⑤ endl

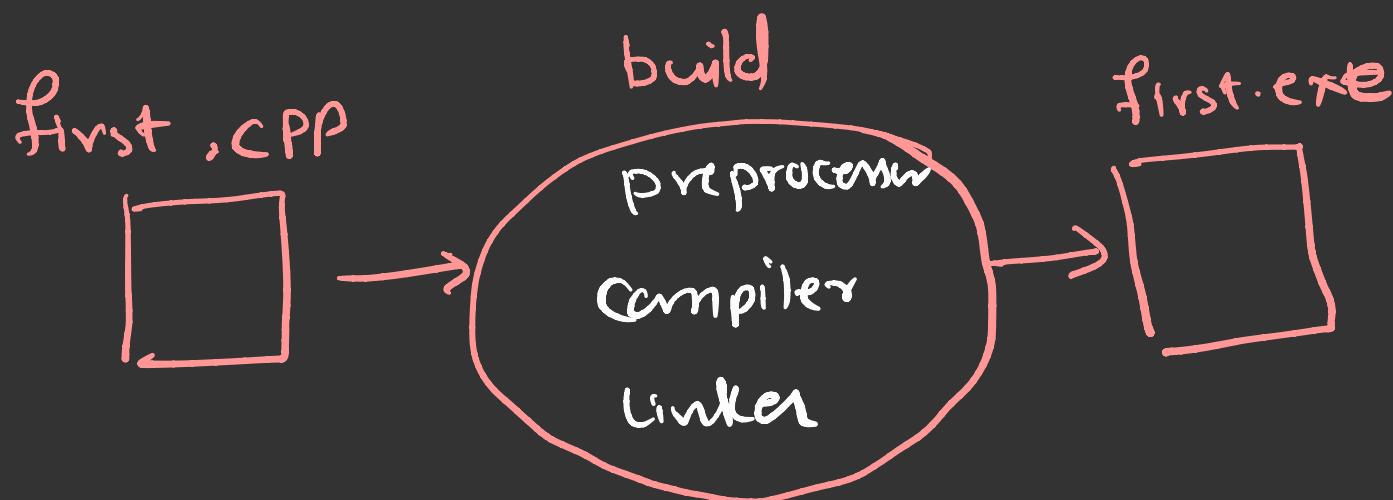
Write a C++ program to calculate
Square of a number.

① .c → .CPP

② gcc → g++

For first program of C++

- ① file extension must be . CPP
- ② g++ compiler
- ③ C++ is a superset of C



```
> g++ -std=c++17 -o first first.cpp
```

What is cout ?

printf() → predefined function

cout → predefined Object

<< → Insertion Operator

printf("Hello");

cout << "Hello";

printf("value of a is %d", a);

cout << "Value of a is " << a;

class

variables → properties
function → methods verb
operators

Object . variable

Object . functions

Object .

जादे में बताऊंगा

Object Operator

What is cin?

- scanf() → predefined function
- cin → predefined Object
- >> → extraction operator

scanf("%d", &x);

cin >> x;

scanf("%d %d", &a, &b);

cin >> a >> b;

iostream

iostream is a standard C++ header for declarations of cout and cin

iostream.h was old and non standard C++ way to declare cout and cin.

n1

int x;

float y;

f1()

f2()

f3()

class X

class Y

n2

int a;

int b;

int x;

f4()

f5()

f1()

class K;

class X

namespace

scope resolution
operator

n1::f1()

n2::f1()

namespace

```
namespace n1
{
    int a=5;
}

namespace n2
{
    int a=6;
}

int main()
{
    cout<< n1::a;
    cout<< n2::a;
}
```

namespace in C++
allowed us to group
named entities like
variables, functions
and classes.

namespace declarations
appear only at global
scope

endl

endl is a manipulator and does the same task as '\n' (newline) character during standard output.