this and static

### C++ this Pointer

In C++ programming, this is a keyword that refers to the current instance of the class. There can be 3 main usage of this keyword in C++.

It can be used to pass current object as a parameter to another method.  
It can be used to refer current class instance variable.  
It can be used to declare indexers.

##### C++ this Pointer Example

#include <iostream>   
using namespace std;   
class Employee {   
 public:   
 int id; //data member (also instance variable)   
 string name; //data member(also instance variable)   
 float salary;   
 Employee(int id, string name, float salary)   
 {   
 this->id = id;   
 this->name = name;   
 this->salary = salary;   
 }   
 void display()   
 {   
 cout<<id<<" "<<name<<" "<<salary<<endl;   
 }   
};   
int main(void) {   
 Employee e1 =Employee(101, "Sonoo", 890000); //creating an object of Employee   
 Employee e2=Employee(102, "Nakul", 59000); //creating an object of Employee   
 e1.display();   
 e2.display();   
 return 0;   
}

Output

101 Sonoo 890000  
102 Nakul 59000

### C++ static

##### C++ static field example

#include <iostream>   
using namespace std;   
class Account {   
 public:   
 int accno; //data member (also instance variable)   
 string name; //data member(also instance variable)   
 static float rateOfInterest;   
 Account(int accno, string name)   
 {   
 this->accno = accno;   
 this->name = name;   
 }   
 void display()   
 {   
 cout<<accno<< "<<name<< " "<<rateOfInterest<<endl;   
 }   
};   
float Account::rateOfInterest=6.5;   
int main(void) {   
 Account a1 =Account(201, "Sanjay"); //creating an object of Employee   
 Account a2=Account(202, "Nakul"); //creating an object of Employee   
 a1.display();   
 a2.display();   
 return 0;   
}

Output

201 Sanjay 6.5  
202 Nakul 6.5