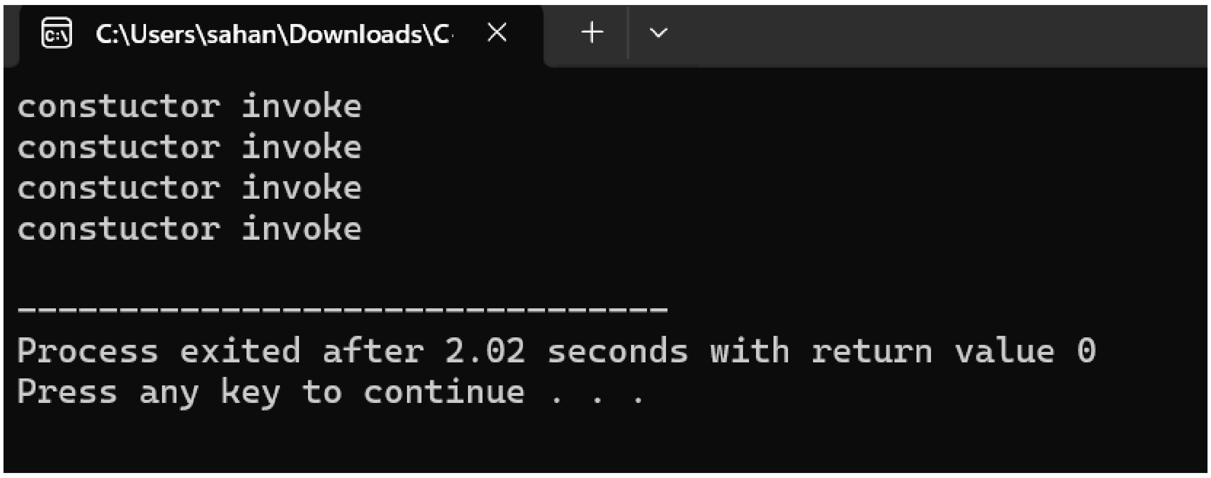
constructor with inheritance Multiple inheritance Hybrid one

1. Constructor with Inheritance

when a derived class object is created, the **base class constructor is called first**, followed by the **derived class constructor**.

```
#include <iostream>

using namespace std;


class Base {

public:

   Base()

          {

      cout << "Base constructor with inheritance called" << endl;

   }

};


class Derived : public Base

{

public:

   Derived()

          {

      cout << "Derived constructor with  inheritance  called" << endl;

   }

};


int main() {

   Derived obj;
```

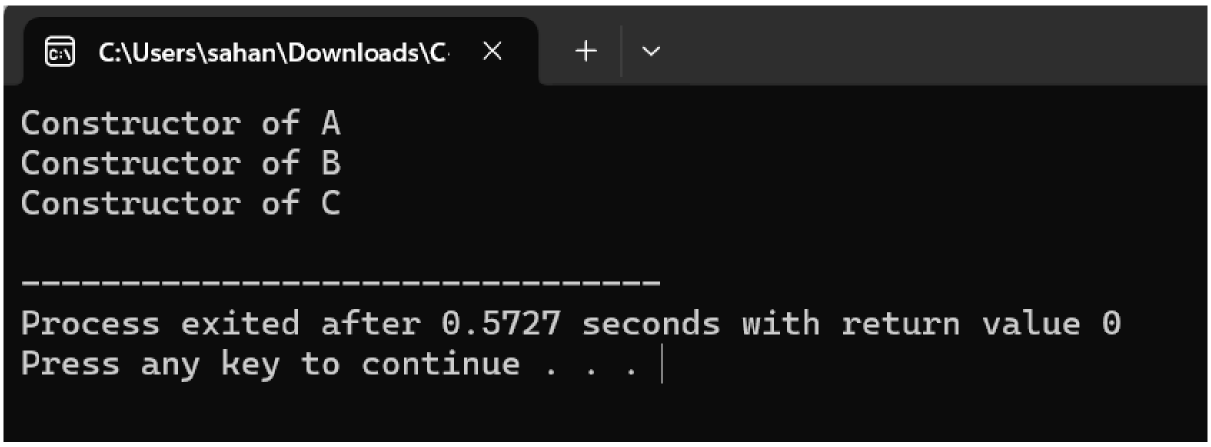
```
    return 0;
}
```



```
constuctor invoke
constuctor invoke
constuctor invoke
constuctor invoke

--------------------------------
Process exited after 2.02 seconds with return value 0
Press any key to continue . . .
```

2. Multiple Inheritance with Constructor

```
#include <iostream>

using namespace std;

class A {

public:

    A() {

        cout << "Constructor of A" << endl;

    }

};

class B {

public:

    B() {

        cout << "Constructor of B" << endl;

    }

};

class C : public A, public B {

public:

    C() {
        cout << "Constructor of C" << endl;
    }};
int main() {
    C obj;
    return 0;
}
```



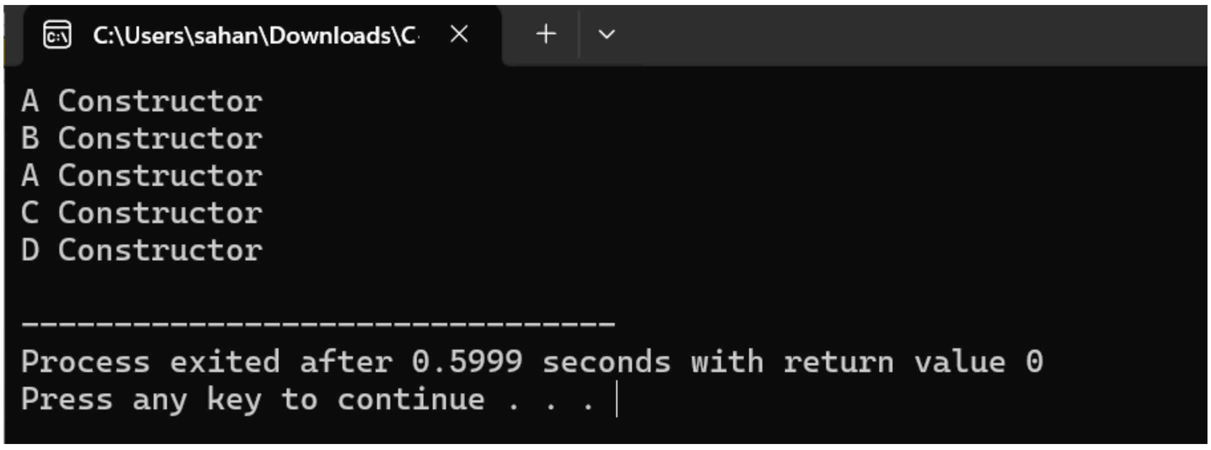
C:\Users\sahan\Downloads\C

```
Constructor of A
Constructor of B
Constructor of C

--------------------------------
Process exited after 0.5727 seconds with return value 0
Press any key to continue . . .
```

3. Hybrid Inheritance with Constructor

Hybrid = Combination of multiple + hierarchical inheritance.

```
#include <iostream>
using namespace std;

class A {
public:
    A() {
        cout << "A Constructor" << endl;
    }
};

class B : public A {
public:
    B() {
        cout << "B Constructor" << endl;
    }
};
class C : public A {
public:
    C() {
        cout << "C Constructor" << endl;
    }
};
class D : public B, public C {
public:
    D() {
        cout << "D Constructor" << endl;
    }
};
int main() {
    D obj;
    return 0;
}
```



```
A Constructor
B Constructor
A Constructor
C Constructor
D Constructor

--------------------------------
Process exited after 0.5999 seconds with return value 0
Press any key to continue . . .
```