* Containership in C++

→ When we create an object of one class into another class and that object will be member of the class. this type of relationship between classes in known as Containership or has_a relationship

ex – class A → Contain class B as a member Variable then this type of relation is called Containership or has_a relationship.

A 'has-a' B

```
class A
{
  private:
    int a;
    B b;
};
```

↑ container class.

```
class B
{
    int b;
};
```

↑ contained class object.

→ The class which contains the object as a membess of another class then that class is called Container class.

→ In the above ex. class A is Container class

→ The Object that is part of another object is called contained object, whereas object that contains another object as its part or attribute is called container object.

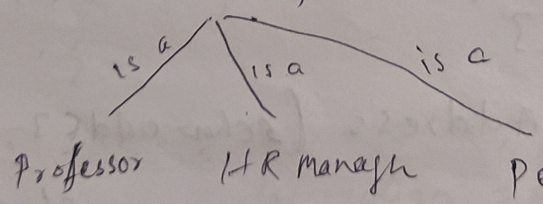
- In the above example Object b of k is Contained object

→ Difference between Containership and Inheritance

- Inheritance is a is_a Relationship where as Containership is a has_a relationship.

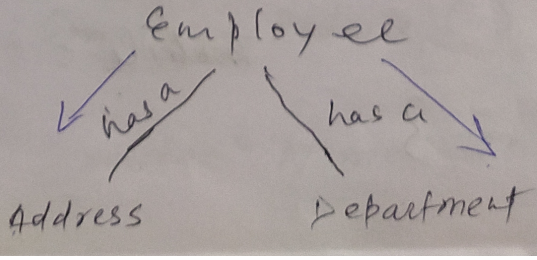
- Inheritance is a extention of a another class but Containership is a part of another Class

- ex – Inheritance



→ All employees will be in diff. classes.

- ex – Containership.



example of containership

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

class address
{
    Private:
        char add[50];
        char Pincode[6];
        char mobile[10];

    Public:
        Address ( )
        {
            add = "New Delhi";
            Pincode = "111111";
            mobile = "9999999999";
        }
        Address (char add[], char Pin[],
                 char mob[])
        {
            add = add;
            Pincode = Pin;
            mobile = mob;
        }
```

```
    PrintAddress ( )
    {
        cout<<" Address:" << add <<endl;
        Cout << "Pincode: " << Pincode << endl;
        Cout << " MobileNumber: " << mobile ;
    }
};

class Employee
{
    Private :
        char name[20] ;
        char designation[15] ;
        Address address ;

    Public :
        ~~Employee (name[ ], ch~~
        Employee (char n[ ], char de[ ], Address add)
        {
            name = n ;
            designation = de ;
            address = add ;
        }

    PrintEmployeeDetails ( )
    {
        cout<<" Name : "<<name<<endl;
```

```
        cout<<"Designation: "<<designation<<endl;
        cout<<"Address:
            address.PrintAddress();
    }
};

int main()
{
    Address add("shastri park, new Delhi",
                "110058", "98502567");
    Employee e1("XYZ", "professor", add)
    e1.PrintEmployeeDetails();
    return 0;
}
```

Output —

Name : XYZ
Designation : professor
Address : Shastri Park, new Delhi
Pincode : 110058
mobile Number : 98502567