

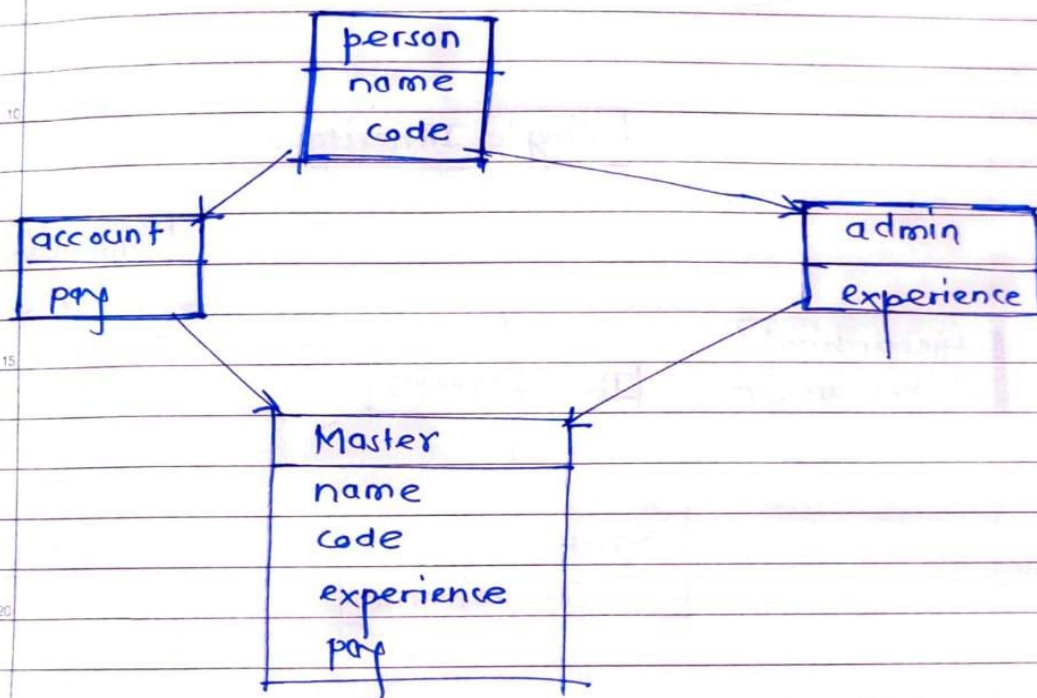
OOP Assignment No.- 06

Assignment No. 6

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AIM - Consider class network of given figure. The class master derive information from both account and admin classes which in turn derive information from the class person.

Define all the four classes and write a program to create, update and display the information contained in master objects.



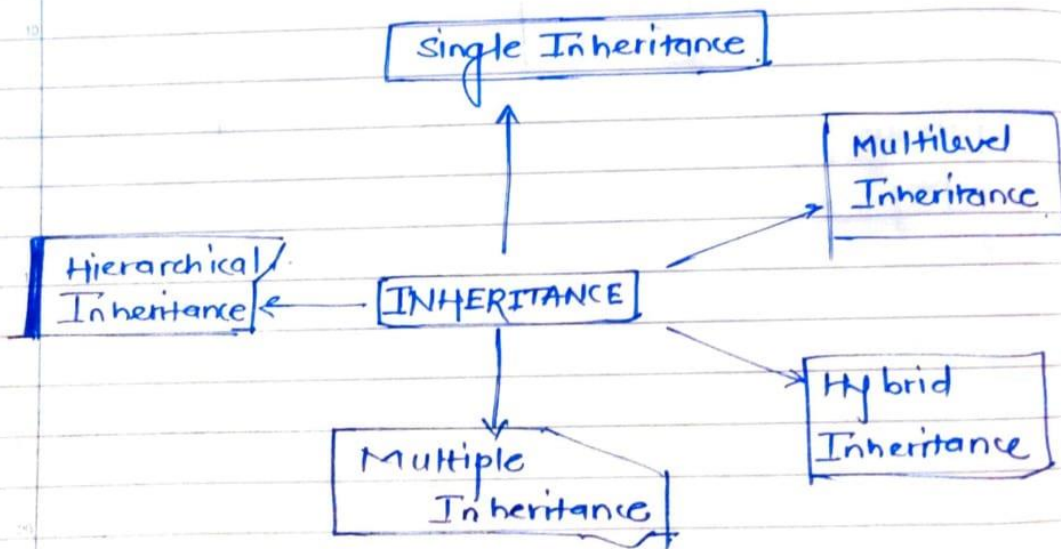
Theory → C++ Inheritance

In C++, inheritance is a process in which one object acquires all the properties and behaviours of its parent object automatically.

In such way, you can reuse, extend or modify the attributes and behaviours which are defined in the other class.

* C++ supports five types of inheritance →

- Single Inheritance
- Multiple Inheritance
- Hierarchical Inheritance
- Multilevel Inheritance
- Hybrid Inheritance.



Note →

- In C++, the default mode of visibility is private.
- The private members of base class are never inherited.

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Visibility of Inherited Members →

Base class visibility	Derived class visibility		
	Public	private	Protected
private	Not Inherited	Not Inherited	Not Inherited
protected	protected	private	protected
public	public	private	protected

Program code:

```
#include <iostream>

using namespace std;

class person
{
public:
    char name[400];
    int code;
    void input()
    {
        cout << "\n Enter the Details of Student for 'RK Group of
Companies...\n";
        cout << "\nEnter the name of the student : ";
        cin >> name;
        cout << endl
    }
}
```

```

        << "Enter the code of the student : ";
    cin >> code;
}
void display()
{
    cout << endl
        << "Student name is : " << name;
    cout << endl
        << "Student code is : " << code;
}
};
class account : virtual public person
{
public:
    float pay;
    void getpay()
    {
        cout << endl
            << "Enter the per anum payment for " << name << " in $:
";
        cin >> pay;
    }
    void display()

```

```

    {
        cout << endl
            << "Payment for " << name << " in $ is: " << pay;
    }
};

class admin : virtual public person
{
public:
    int experience;
    void getexp()
    {
        cout << endl
            << "Enter the no.of years experience of " << name << " : ";
        cin >> experience;
    }
    void display()
    {
        cout << endl
            << "Experience of " << name << " is : " << experience << "
years";
    }
};

class master : public account, public admin

```

```

{
public:
    char n[200];
    void gettotal()
    {
        cout << endl
            << "Enter the previous company name of " << name << ":
";
        cin >> n;
    }
    void display()
    {
        cout << endl
            << "Previous Company name of " << name << " was : " <<
n;
        cout << endl
            << "\nNow Welcome to RK Group of Companies....\n";
    }
};

int main()
{
    master m1;
    m1.input();

```

```
m1.getpay();  
m1.getexp();  
m1.gettotal();  
m1.person::display();  
m1.account::display();  
m1.admin::display();  
m1.display();  
  
return 0;  
}
```

Output:

```
PS R:\GHRCEM\DSA Lab\Assignment 4> cd "r:\GHRCEM\DSA Lab\Assignment 4\" ; if ($?) { g++ main.cpp -o main } ; if ($?) { .\main }  
  
Enter the Details of Student for 'RK Group of Companies...'  
  
Enter the name of the student : Rudraksh  
Enter the code of the student : 86  
Enter the per anum payment for Rudraksh in $: 1000000  
Enter the no.of years experience of Rudraksh : 5  
Enter the previous company name of Rudraksh: Google  
  
Student name is : Rudraksh  
Student code is : 86  
Payment for Rudraksh in $ is: 1e+006  
Experience of Rudraksh is : 5 years  
Previous Company name of Rudraksh was : Google
```