

```
1)
public class factorial
{
    static int factorial(int n)
    {
        if(n==1)
        {
            return 1;
        }
        else
        {
            return n*factorial(n-1);
        }
    }
    public static void main(String[] args) {
        System.out.println("Hello World");
        int r;
        r=factorial(5);
        System.out.println(r);
    }
}
```

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2)
/*netsed methods*/
public class nested
{
    void display()
    {
        System.out.println("hio");
    }
    void disp()
    {
        display();
        System.out.println("hello");
    }
    public static void main(String[] args) {
        System.out.println("Hello World");
        nested m=new nested();
        m.disp();
    }
}
```

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3)

/*returning objects*/
public class Main
{
    int a;
    Main(int x)
    {
        a=x;
    }
    Main add()
    {
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        Main m=new Main(a+10);

        return m;
    }
    void display()
    {
        System.out.println(a);
    }
    public static void main(String args[])
    {
        Main m=new Main(10);
        Main m1;
        m1=m.add();
        m1.display();
    }
}
```