

Output:-

Call by value

in main() before : 10

in main() before : 20

in fun : 20

in fun : 10

in main() after : 20

in main() after : 10.

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7] Write a java program to illustrate parameter passing techniques.

// Value passing.

class ValuePass

{
int a, b;
void Swap(int x, int y)

{
int t;
t = x;
x = y;
y = t;
System.out.println("in fun : " + x);
System.out.println("in fun : " + y);
}

}
class ValuePassM

{
public static void main(String args[])

{
int a = 10, b = 20;
ValuePass vp = new ValuePass();
System.out.println("Call by Value");
System.out.println("in main() before : " + a);
System.out.println("in main() before : " + b);
vp.Swap(a, b);
System.out.println("in main() after : " + a);
System.out.println("in main() after : " + b);
}

Output:-

Call by Reference

in main() before: 10

in main() before: 20

in fun1: 20

in fun1: 10

in main() after: 20

in main() after: 10

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//Reference Passing.

class ValueRef

{ int a, b;

ValueRef(int i, int j)

{

a = i;

b = j;

void Swap(ValueRef v)

{

int t;

t = v.a;

v.a = v.b;

v.b = t;

System.out.println("in fun1 : "+v.a);

System.out.println("in fun2 : "+v.b);

}

}

class ValueRefM

{ public static void main(String args[])

{

int a=10, b=20;

ValueRef vr=new ValueRef(a,b);

System.out.println("call by Reference ");

System.out.println("in main() before : "+a);

System.out.println("in main() before : "+b);

vr.Swap(vr);

System.out.println("in main() after : "+vr.a);

System.out.println("in main() after : "+vr.b);

}

}

Output:-
enter num:-

5
120

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Title :

3] Write a program to illustrate Recursion and nested class

// Recursion.

```
import java.util.*;  
class Factorial
```

```
{  
    int fact(int n)
```

```
{  
        int r;
```

```
        if (n==1 || n==0)
```

```
            return 1;
```

```
        else
```

```
            return n*fact(n-1);
```

```
    }
```

```
}
```

```
class FactorialM
```

```
{  
    public static void main (String args[])
```

```
{  
        Factorial f=new Factorial();
```

```
        Scanner sc=new Scanner(System.in);
```

```
        System.out.println("enter num");
```

```
        int n=sc.nextInt();
```

```
        System.out.println(f.fact(n));
```

```
    }
```

Output:-

Hello

Hi

Title :

//Nested class

class Hello

{ void display()

{ System.out.println("Hello");

}

class Hi

{ void show()

{ System.out.println("Hi");

}

}

class HelloHiM

{ public static void main (String args[])

{ Hello h=new Hello();

h.display();

Hello Hi i=new Hi();

i.show();

}