

Pass by Value

```
static void I(int x, int y) {
    int temp = x;
    x = y;
    y = temp;
}
static void A(int[] x) {
    x[0] = x[1];
}
static void S (String x, String y) {
    x = y;
}
public static void main(String[] args) {
    int[] x = {1,2};
    String name = "ETH";
    I(x[0],x[1]);
    A(x);
    S(name, "EPFL");
    Out.println(x[0]+", "+x[1]+", "+name);
}
```

Was wird ausgegeben?

(1) 1,1,ETH

(2) 1,2,ETH

(3) 2,1,ETH

(4) 2,2,ETH

(5) 1,1,EPFL

(6) 1,2,EPFL

(7) 2,1,EPFL

(8) 2,2,EPFL

Erklärung I

```
static void I(int x, int y) {  
    Out.println("2: x=" + x + ", y=" + y);  
    int temp = x;  
    x = y;  
    y = temp;  
    Out.println("3: x=" + x + ", y=" + y);  
}
```

```
public static void main(String[] args) {  
    int i = 1;  
    int j = 2;  
    Out.println("1: i=" + i + ", j=" + j);  
    I(i,j);  
    Out.println("4: i=" + i + ", j=" + j);  
}
```

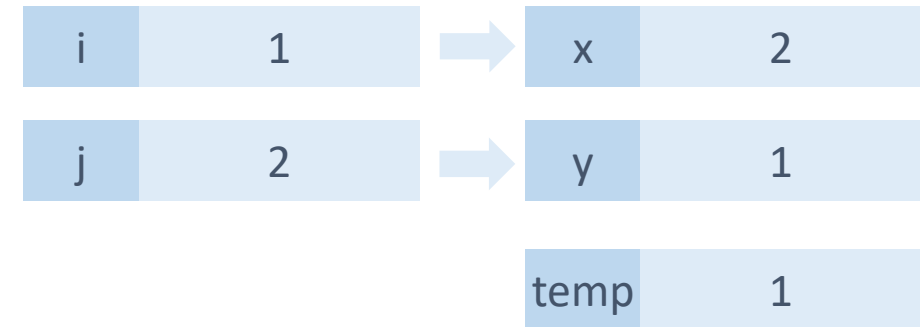
Ausgabe:

1: i=1, j=2

2: x=1, y=2

3: x=2, y=1

4: i=1, j=2



Erklärung II

```
static void A(int[] x) {
    x[0] = x[1];
}

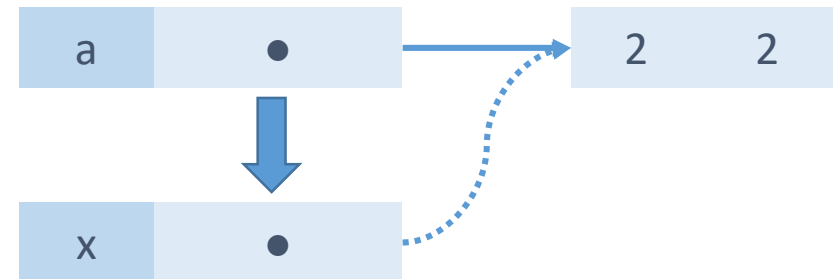
public static void main(String[] args) {
    int[] a = new int[2];
    a[0] = 1;
    a[1] = 2;
    Out.println("1: a[0] = " + a[0]
                + ", a[1] = " + a[1]);

    A(a);
    Out.println("2: a[0] = " + a[0]
                + ", a[1] = " + a[1]);
}
```

Ausgabe:

1: a[0] = 1, a[1] = 2

2: a[0] = 2, a[1] = 2



Erklärung III

```
static void S(String x) {  
    Out.println("2: x= " + x);  
    x = "EPFL";  
    Out.println("3: x= " + x);  
}  
  
public static void main(String[] args){  
    String name = "ETH";  
    Out.println("1: name= " + name);  
    S(name);  
    Out.println("4: name= " + name);  
}
```

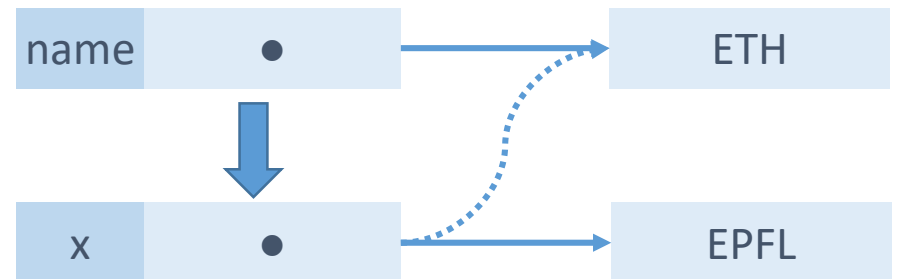
Ausgabe:

1: name= ETH

2: x= ETH

3: x= EPFL

4: name= ETH



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    x = y;
    y = temp;
}
static void A(int[] x) {
    x[0] = x[1];
}
static void S (String x, String y) {
    x = y;
}
public static void main(String[] args) {
    int[] x = {1,2};
    String name = "ETH";
    I(x[0],x[1]);
    A(x);
    S(name, "EPFL");
    Out.println(x[0]+", "+x[1]+", "+name);
}
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(8) 2,2,EPFL