Προγραμματισμός Η/Υ

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Πράξης με Αλφαριθμητικά (1)

Συνένωση

```
String first, second, name;

first = “Pavlos”;
second = “Peppas”;
name = first+“ “+second;
```

‘Ελεγχος Ισότητας

```
String a, b;

a = “Pavlos”;
b = “pavlos”;
if ( a.equals(b) )
        System.out.println(“The strings are equal”);
if ( a.equalsIgnoreCase(b) )
        System.out.println(“The strings are almost equal”);
```

Πράξης με Αλφαριθμητικά (2)

Μετατροπή Κεφαλαίων/Πεζών

```
String a, b, c;

a = “Pavlos”;
b = a.toLowerCase();
c = a.toUpperCase();
```

Αντικατάσταση Χαρακτήρων

```
String a = “Athens is the Capital of Greece”;
String b;

b = a.replaceFirst(‘e’,’i’);
```

Πράξης με Αλφαριθμητικά (3)

Προσπέλαση και Μήκος

```
String a = “Athens is the Capital of Greece”;
char c;
int n;

n = a.length();
c = a.charAt(4);
```

Υποαλφαριθμητικά

```
String a = “Athens is the Capital of Greece”;
String x, y;

x = a.substring(14,21);
y = a.substring(25,31);
```

Πράξης με Αλφαριθμητικά (4)

Εντοπισμός

```
String a = “Athens is the Capital of Greece”;
int i, j, k;

i = a.indexOf(‘e’);
j = a.lastIndexOf(‘e’);
k = a.indexOf(‘e’, 6);
```

Παράδειγμα με Αλφαριθμητικά

Να γραφεί μέθοδο που να μετράει τον αριθμό εμφανίσεων της λέξης “the” στην πρόταση “Athens is the Capital of Greece”.

Παράδειγμα με Αλφαριθμητικά

Να γραφεί μέθοδο που να μετράει τον αριθμό εμφανίσεων της λέξης “the” στην πρόταση “Athens is the Capital of Greece”.

```
public static void main(String[] args)
{
    String a = “Athens is the Capital of Greece”;
    String b = “the”;
    int index, s, count=0;

    index = a.indexOf(b);
    while (index >= 0)
    {
        count++;
        s = index + b.length();
        index = a.indexOf(b,s);
    }

    System.out.println(“The text contains ” + count + “the”);

}
```

Παράμετροι σε Μεθόδους

```
public class Parameters
{
        public static void printAverage (int a, int b)
        {
                float ave;

                ave  = ((float) (a+b))/2;
                System.out.printf("Average = %.2f ", ave);
        }

        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                printAverage(x,y);
        }
}
```

Παράμετροι σε Μεθόδους

```
public class Parameters
{
        public static void printAverage (int a, int b)
        {
                float ave;

                ave  = ((float) (a+b))/2;
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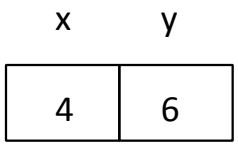
        }

        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                printAverage(x,y);
        }
}
```



Enter 2 numbers: 4 6

Παράμετροι σε Μεθόδους

```
public class Parameters
{
        public static void printAverage (int a, int b)
        {
                float ave;

                ave  = ((float) (a+b))/2;
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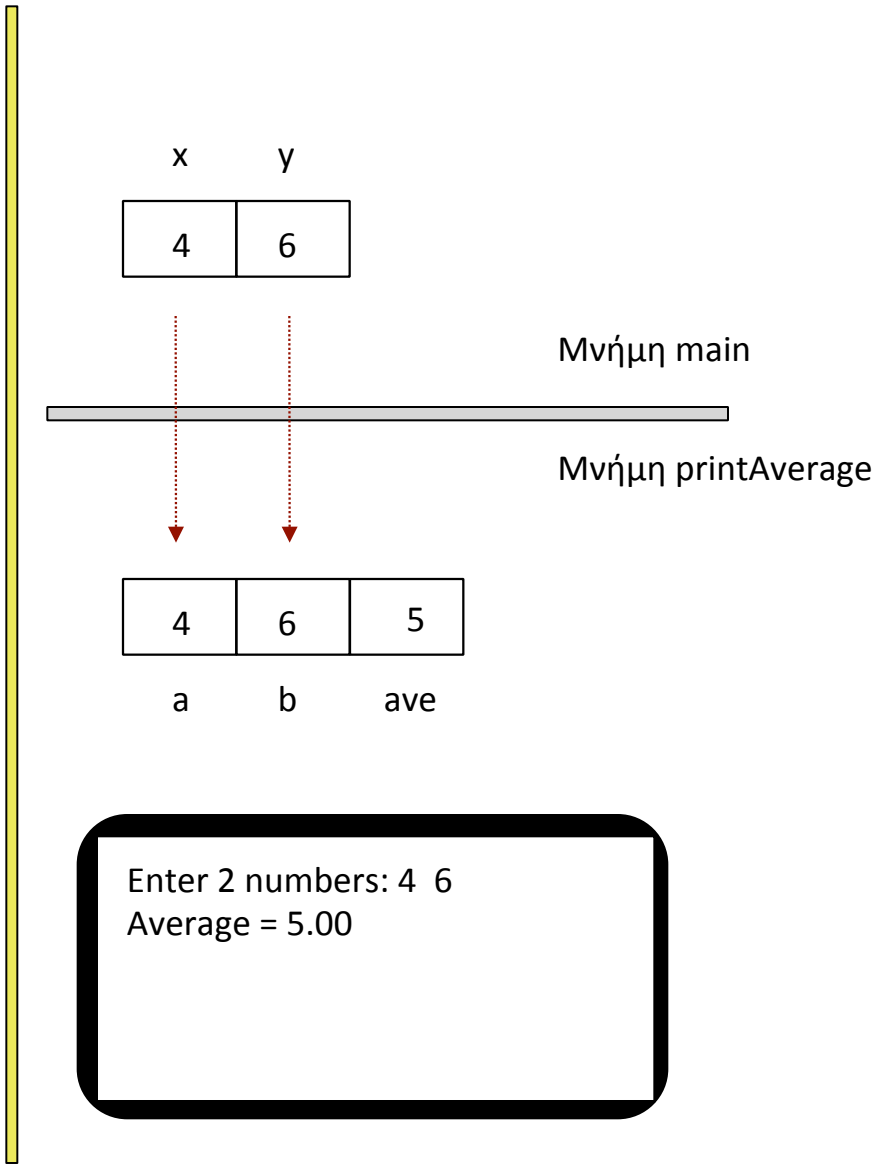
        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                printAverage(x,y);
        }
}
```



Παράμετροι σε Μεθόδους (2)

```
public class Parameters
{
        public static void swap (int a, int b)
        {
                int temp;

                temp = a;
                a = b;
                b = temp;
                System.out.printf("%d %d", a, b);
        }

        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;


                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                swap(x,y);
                System.out.printf("%d %d", a, b);
        }
}
```

Παράμετροι σε Μεθόδους (2)

```
public class Parameters
{
        public static void swap (int a, int b)
        {
                int temp;

                temp = a;
                a = b;
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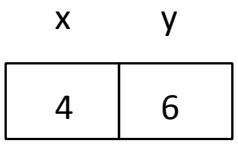
        }

        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                swap(x,y);
                System.out.printf("%d %d", a, b);
        }
}
```



Enter 2 numbers: 4 6

Παράμετροι σε Μεθόδους (2)

```
public class Parameters
{
        public static void swap (int a, int b)
        {
                int temp;

                temp = a;
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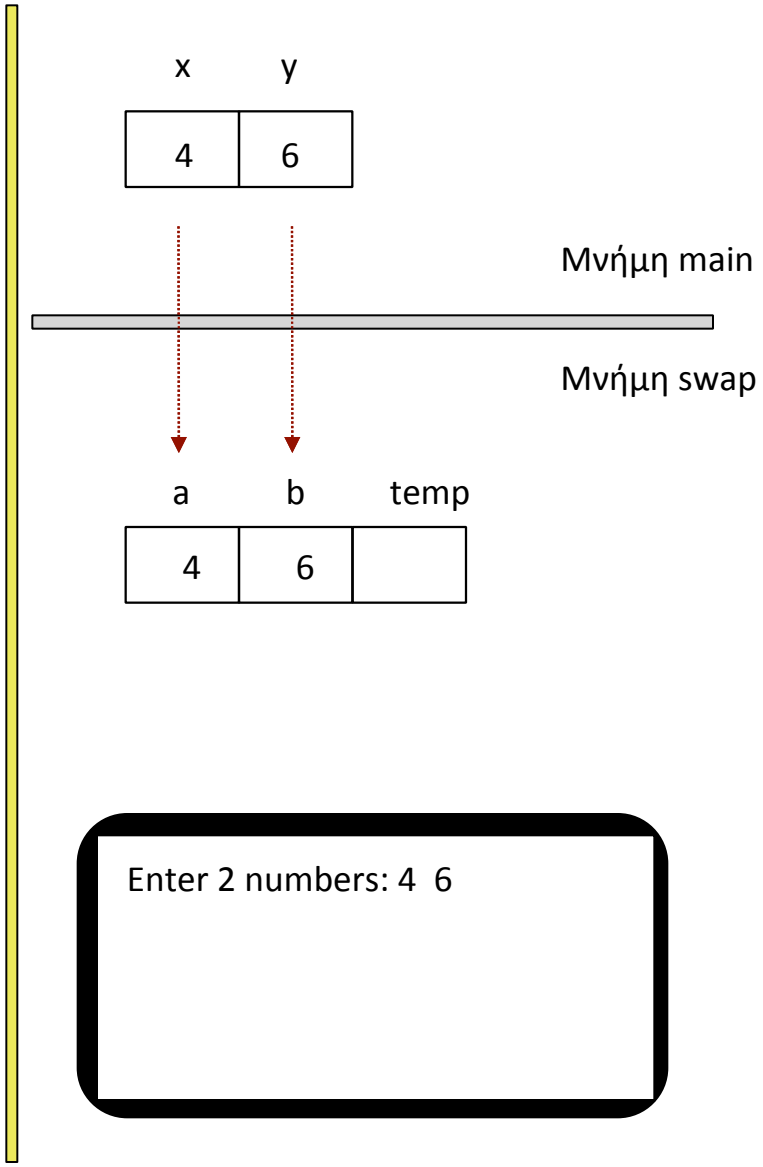
                b = temp;
                System.out.printf("%d %d", a, b);
        }

        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                swap(x,y);
                System.out.printf("%d %d", a, b);
        }
}
```



Enter 2 numbers: 4 6

Παράμετροι σε Μεθόδους (2)

```
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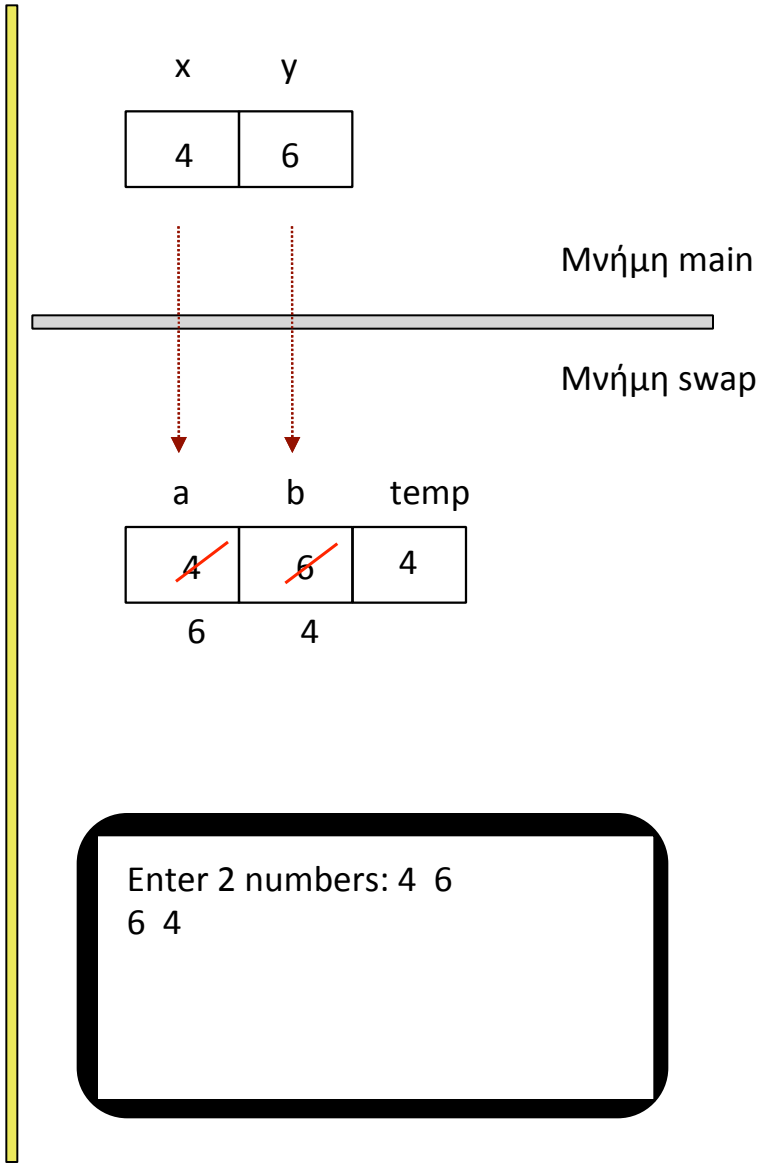
{
        public static void swap (int a, int b)
        {
                int temp;

                temp = a;
                a = b;
                b = temp;
                System.out.printf("%d %d", a, b);
        }

        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                swap(x,y);
                System.out.printf("%d %d", a, b);
        }
}
```




```
Enter 2 numbers: 4  6
6  4
```

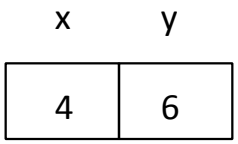
Παράμετροι σε Μεθόδους (2)

```
public class Parameters
{
        public static void swap (int a, int b)
        {
                int temp;

                temp = a;
                a = b;
                b = temp;
                System.out.printf("%d %d", a, b);
        }

        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                swap(x,y);
                System.out.printf("%d %d", a, b);
        }
}
```




```
Enter 2 numbers: 4  6
6  4
```

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```
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                int temp;

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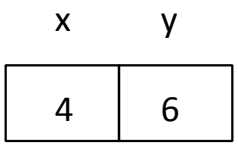
        public static void main (String[ ] args)
        {
                Scanner input = new Scanner( System.in );
                int x, y;

                System.out.print("Enter 2 numbers: ");
                x = input.nextInt();
                y = input.nextInt();
                swap(x,y);
                System.out.printf("%d %d", a, b);
        }                                       x, y
}
```




```
Enter 2 numbers: 4  6
6  4
4  6
```

Σειρές ως Παράμετροι σε Μεθόδους

```
public class Parameters
{
        public static void swap (int[ ] a, int i)
        {
                int temp;

                temp = a[i+1];
                a[i+1] = a[i];
                a[i] = temp;
        }


        public static void main (String[ ] args)
        {
                int x[ ] = {5, 8, 2};


                swap(x,1);
                System.out.printf("%d %d", x[1], x[2]);
        }


}
```

Σειρές ως Παράμετροι σε Μεθόδους

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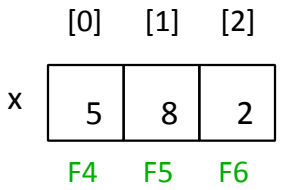

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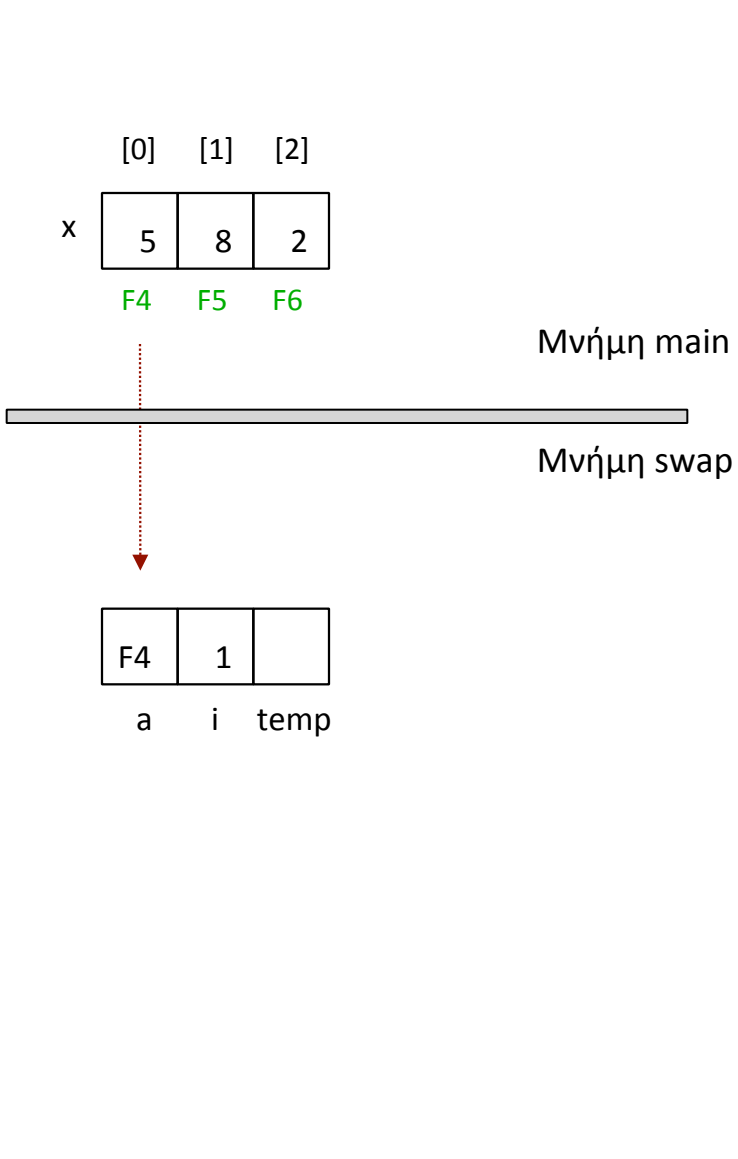

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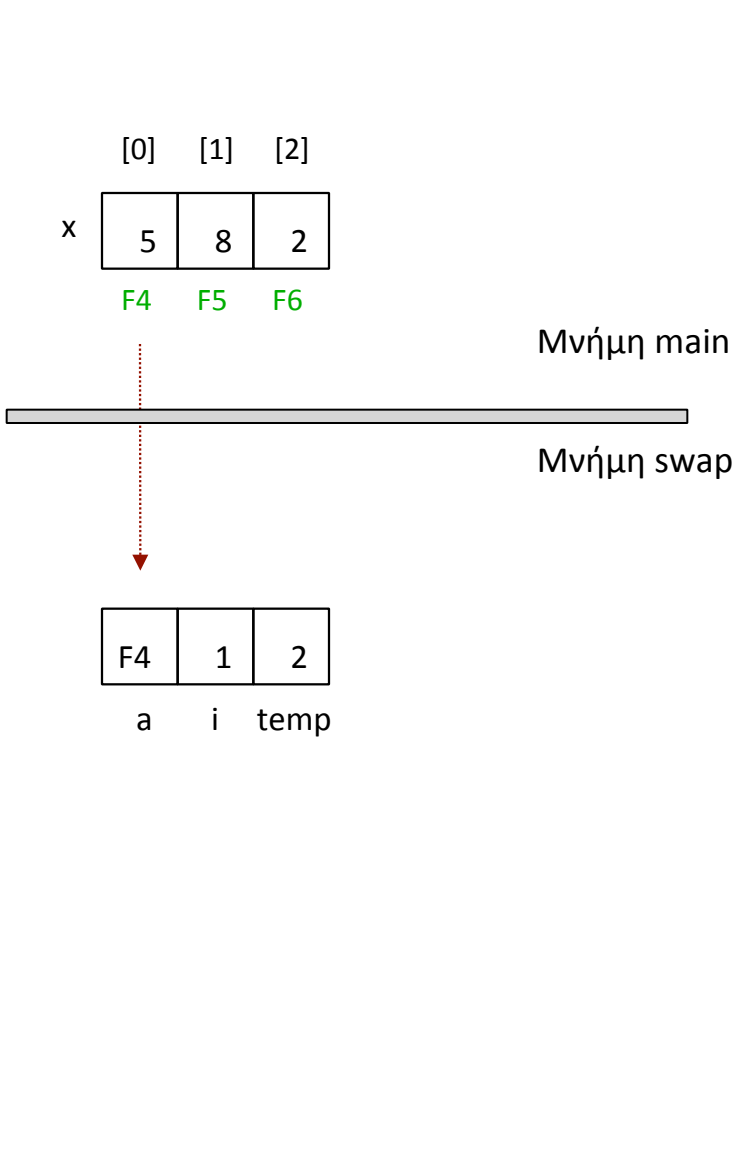

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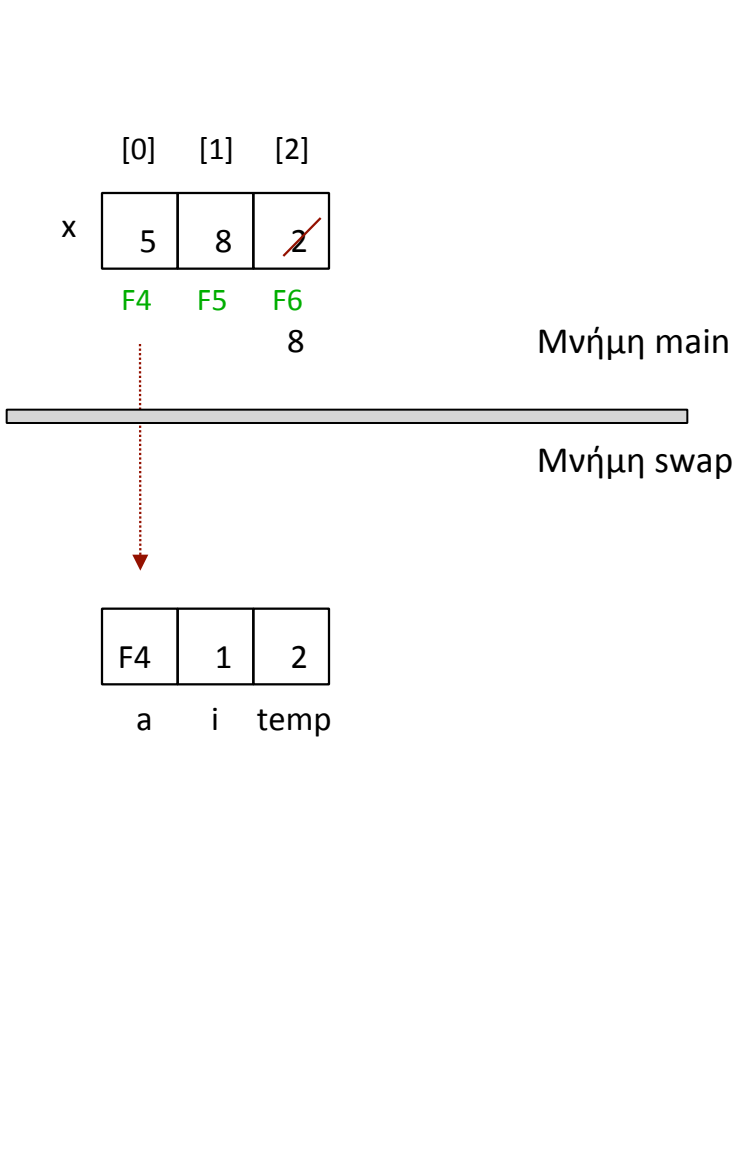

Σειρές ως Παράμετροι σε Μεθόδους

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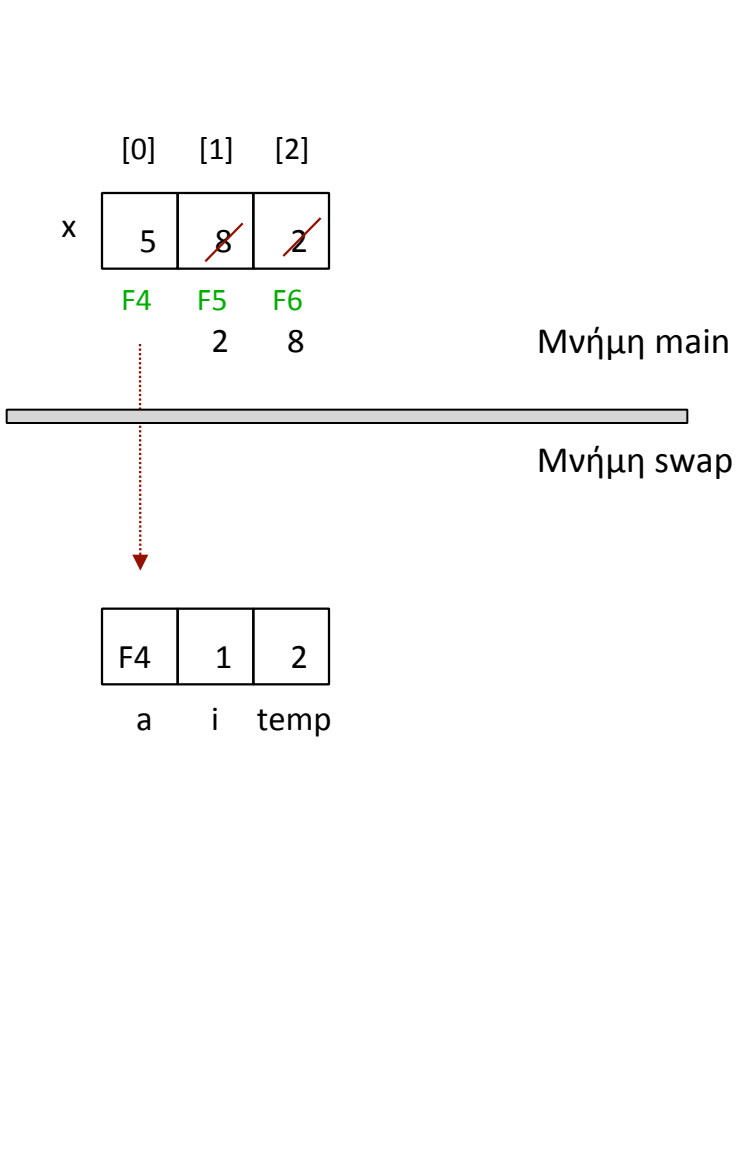

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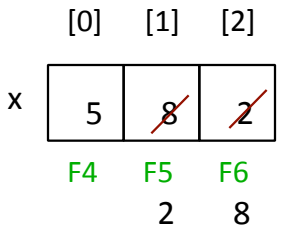
```



Μνήμη main

```
2 8
```

Σειρές ως Παράμετροι Μεθόδων (2)

```
public class PassArray
{
        public static void main( String[ ] args )
        {
                int[ ] array = { 1, 2, 3, 4, 5 }; int i;

                modifyElement( array[3] );
                System.out.printf("The new values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
                modifyArray( array );
                System.out.printf("\nThe modified values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
        }
        public static void modifyArray( int[ ] x )
        {
                int i;
                for (i=0; i<x.length; i++)
                        x[i] = 2*x[i];
        }
        public static void modifyElement( int a )
        {
                a = 2*a;
                System.out.printf("Updated Element: %d\n", a);
        }

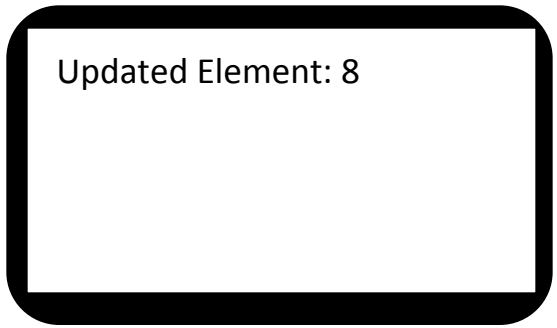
}
```

Σειρές ως Παράμετροι Μεθόδων (2)

```
public class PassArray
{
        public static void main( String[ ] args )
        {
                int[ ] array = { 1, 2, 3, 4, 5 }; int i;

                modifyElement( array[3] );
                System.out.printf("The new values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
                modifyArray( array );
                System.out.printf("\nThe modified values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
        }
        public static void modifyArray( int[ ] x )
        {
                int i;
                for (i=0; i<x.length; i++)
                        x[i] = 2*x[i];
        }
        public static void modifyElement( int a )
        {
                a = 2*a;
                System.out.printf("Updated Element: %d\n", a);
        }

}
```



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```
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        {
                int[ ] array = { 1, 2, 3, 4, 5 }; int i;

                modifyElement( array[3] );
                System.out.printf("The new values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
                modifyArray( array );
                System.out.printf("\nThe modified values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
        }
        public static void modifyArray( int[ ] x )
        {
                int i;
                for (i=0; i<x.length; i++)
                        x[i] = 2*x[i];
        }
        public static void modifyElement( int a )
        {
                a = 2*a;
                System.out.printf("Updated Element: %d\n", a);
        }

}
```

```
Updated Element: 8
The new values are:
1 2 3 4 5
```

Σειρές ως Παράμετροι Μεθόδων (2)

```
public class PassArray
{
        public static void main( String[ ] args )
        {
                int[ ] array = { 1, 2, 3, 4, 5 }; int i;

                modifyElement( array[3] );
                System.out.printf("The new values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
                modifyArray( array );
                System.out.printf("\nThe modified values are:\n");
                for (i=0; i<array.length; i++)
                        System.out.printf("%d ", array[i]);
        }
        public static void modifyArray( int[ ] x )
        {
                int i;
                for (i=0; i<x.length; i++)
                        x[i] = 2*x[i];
        }
        public static void modifyElement( int a )
        {
                a = 2*a;
                System.out.printf("Updated Element: %d\n", a);
        }

}
```

Updated Element: 8
The new values are:
1 2 3 4 5
The modified values are:
2 4 6 8 10