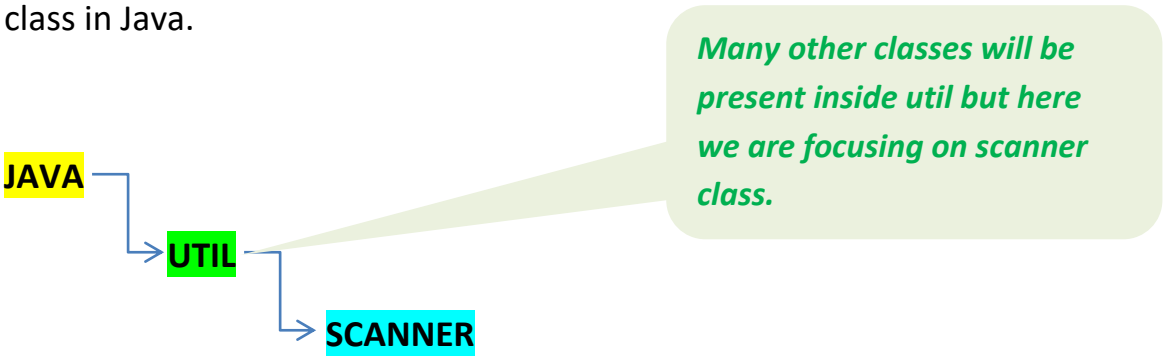
## How to take input from users???

After knowing arrays in java, let's move towards h*ow* take inputs from scanner class in Java.




**To import scanner class all you have to do is:**

1) **Import java.util.Scanner;** //Add this line at top of the code.
2) Create object of Scanner class by saying **:**
   **Scanner scan = new Scanner(System.in);**
3) To read different types of input, look at the table below:

| Method | Description |
|---|---|
| nextBoolean() | Reads a **Boolean** value from the user. |
| nextByte() | Reads a **Byte** value from the user. |
| nextDouble() | Reads a **Double** value from the user. |
| nextFloat() | Reads a **Float** value from the user. |
| nextInt() | Reads a **Integer** value from the user. |
| nextLine() | Reads a **Line** value from the user. |
| nextLong() | Reads a **Long** value from the user. |
| nextShort() | Reads a **Short** value from the user. |

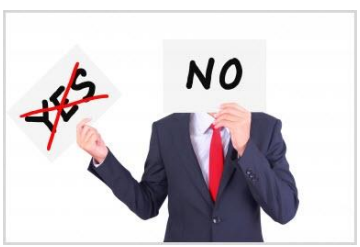
# Continuation with arrays….

Now that you know why we go for array approach and what are different types of arrays, let's start with how to make use of it.

**Example 1: Create an array to store the ages of 5 students**

**Solution:**

```
import java.util.Scanner;
class Demo
{
        public static void main(String[] args)
        {
                int a[] = new int[5];
                Scanner scan = new Scanner(System.in);
                System.out.println("Enter the age:");
                a[0] = scan.nextInt();
                System.out.println("Enter the age:");
                a[1] = scan.nextInt();
                System.out.println("Enter the age:");
                a[2] = scan.nextInt();
                System.out.println("Enter the age:");
                a[3] = scan.nextInt();
                System.out.println("Enter the age:");
                a[4] = scan.nextInt();
                System.out.println("Enter the age:");
                a[5] = scan.nextInt();
        }
}
```

**Whenever a set of instructions is repeating it's wise to use loops.**


Let's see how to make the code efficient with the help of for loop.

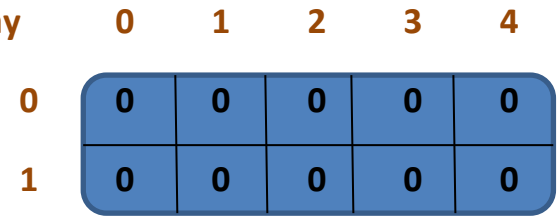
```
import java.util.Scanner;

class Demo

{

        public static void main(String[] args)

        {

                int a[] = new int[5];

                Scanner scan = new Scanner(System.in);

                for(int i =0; i<=4; i++)

                {

                        System.out.println("Enter the age:");

                        a[i] = scan.nextInt();

                }

        }

}
```


But instead of specifying array size in the for loop condition part we can make use of a built-in property called as length. Which will give the length of the array by saying **a.length-1 ( -1 because the array indexing starts from 0).**

**Let's see how length works for 2D, 3D array**

Consider we have a 2D array,

**int a[][] = new int[2][5];**




**a.length → Number of rows**

**a[0].length →Number of elements in a[0]**

**a[1].length →Number of elements in a[1]**

**a[i].length →Number of columns**

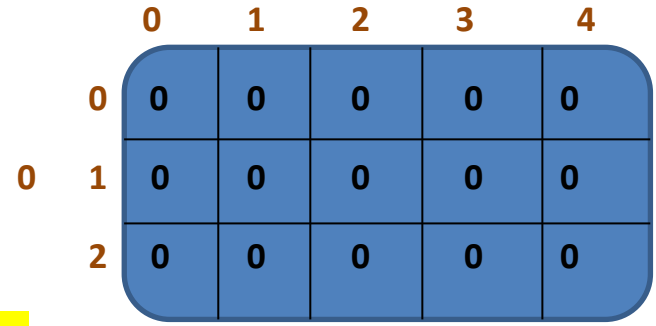
Let's now consider 3D array,

**int a[][][] = new int [2][3][5];**

**a.length → Number of blocks**

**a[i].length → Number of rows**

**a[i][j].length → Number of Columns**




## Let us now try to code a 2D array

```
import java.util.Scanner;
class Demo
{
        public static void main(String[] args)
        {
                int a[][] = new int[2][5];
                Scanner scan = new Scanner(System.in);
                for(int i =0; i<=a.length-1; i++)
                {
                        for(int j=0; j<=a[i].length-1; j++)
                        {
                                System.out.println("Enter the age of  class "+ i
                                +"student"+ j );
                                a[i][j] = scan.nextInt();
                        }
                }
        }
}
```