# COLLECTIONS

# ARRAYS

**Array** – is object that stores collection of values

Array can store 2 types of data:

* **A collection of primitive values** –
* **A collection of objects** – in fact it’s heap memory

Creating array involves 3 steps:

* **declaration** –

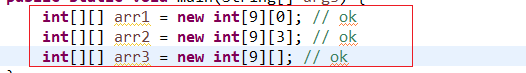
int[] arr1; - one dimensional array

int[][] arr2; - multidimensional array

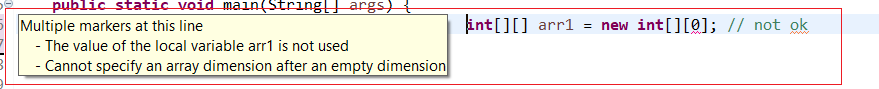
int[] arr2[]; - multidimensional array (another form)

* **allocation**

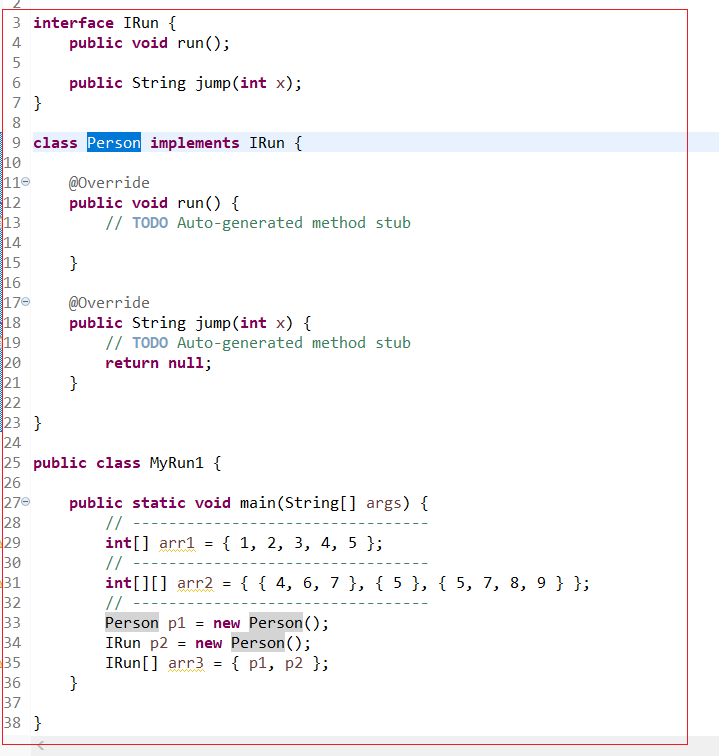
*example of right declaration:*



*example of not right declaration:*



* **initialization**



# ARRAYLIST

Array can’t change size once created. ArrayList does it automatically

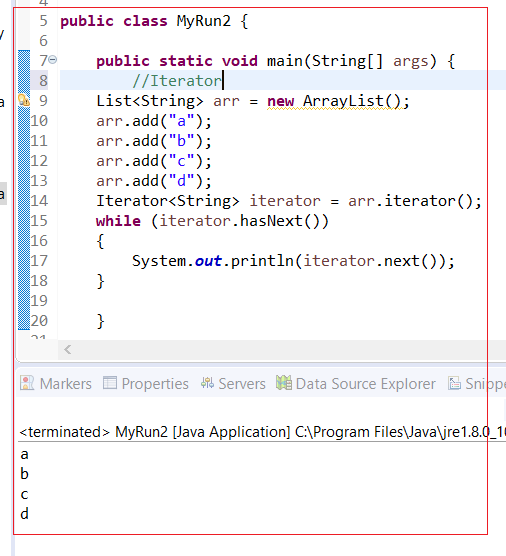
* Arraylist cannot contain primitives



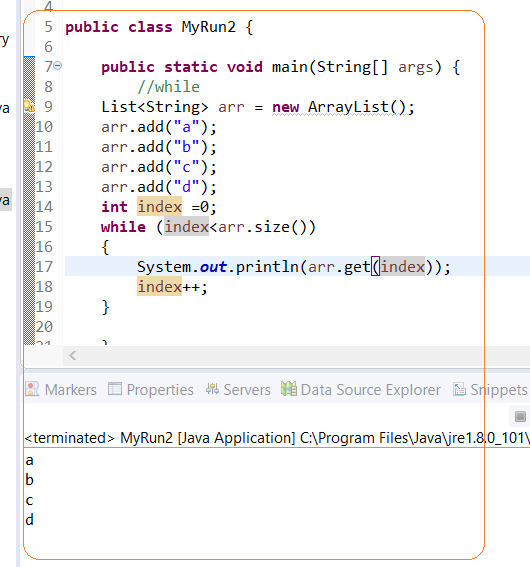
There are 5 ways to iterate through loop:

* **For Loop** -
* **ForEach** -
* **Iterator** -
* **While Loop** -
* **Collections’s stream() util (Java8)** –

**ITERATOR**

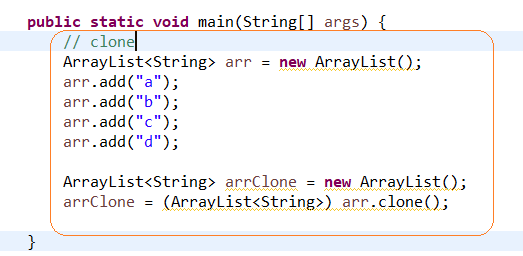


**WHILE**



**CLONE**

**Cloning –** it does not clone Object. It clones only reference of elements of object



# COLLECTIONS

**Collections interfaces:**

* List
* Set
* Map
* Queue

# GENERICS

Generics:

allows to avoid run time error and if there mistake throws error at compile step

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