How to initialize an ArrayList

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In the last post we discussed about class ArrayList in Java and it's important methods. Here we are sharing multiple ways to initialize an ArrayList with examples.

Method 1: Initialization using Arrays.asList

Syntax:

```java
ArrayList<Type> obj = new ArrayList<Type>(
        Arrays.asList(Object o1, Object o2, Object o3, ....so on));
```

Example:

```java
import java.util.*;
public class InitializationExample1 {
   public static void main(String args[]) {
        ArrayList<String> obj = new ArrayList<String>(
            Arrays.asList("Pratap", "Peter", "Harsh"));
        System.out.println("Elements are:"+obj);
   }
}
```

Output:

```
Elements are:[Pratap, Peter, Harsh]
```

Method 2: Anonymous inner class method to initialize ArrayList

Syntax:

```java
ArrayList<T> obj = new ArrayList<T>(){{
            add(Object o1);
            add(Object o2);
            add(Object o3);
            ...
            ...
            }};
```

Example:

```java
import java.util.*;
public class InitializationExample2 {
   public static void main(String args[]) {
        ArrayList<String> cities = new ArrayList<String>(){{
            add("Delhi");
            add("Agra");
            add("Chennai");
            }};
```

```
        System.out.println("Content of Array list cities:"+cities);
    }
}
```
Output:

```
Content of Array list cities:[Delhi, Agra, Chennai]
```
Method3: Normal way of ArrayList initialization

Syntax:

```
ArrayList<T> obj = new ArrayList<T>();
        obj.add("Object o1");
        obj.add("Object o2");
        obj.add("Object o3");
                    ...
                    ...
```

Example:

```
import java.util.*;

public class Details {
    public static void main(String args[]) {
        ArrayList<String> books = new ArrayList<String>();
        books.add("Java Book1");
        books.add("Java Book2");
        books.add("Java Book3");
        System.out.println("Books stored in array list are: "+books);
    }
}
```
Output:

```
Books stored in array list are: [Java Book1, Java Book2, Java Book3]
```
Method 4: Use Collections.ncopies

Collections.ncopies method can be used when we need to initialize the ArrayList with the same value for all of its elements. **Syntax: count** is number of elements and **element** is the item value

```
ArrayList<T> obj = new ArrayList<T>(Collections.nCopies(count, element));
```
Example:

```
import java.util.*;

public class Details {
    public static void main(String args[]) {
        ArrayList<Integer> intlist = new
ArrayList<Integer>(Collections.nCopies(10, 5));
        System.out.println("ArrayList items: "+intlist);
    }
}
```
Output:

```
ArrayList items: [5, 5, 5, 5, 5, 5, 5, 5, 5, 5]
```