

Array List-Coding Questions

Task 3: Code snippets

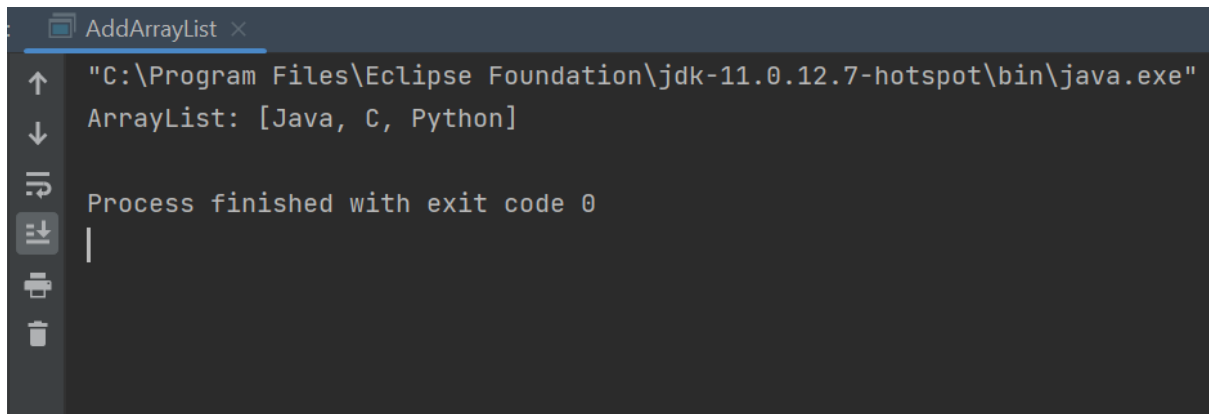
Q.1) Java Program to add elements to ArrayList.

Program:



```
1 import java.util.ArrayList;
2
3 class AddArrayList {
4     public static void main(String[] args){
5         // create ArrayList
6         ArrayList<String> languages = new ArrayList<>();
7         // add() method without the index parameter
8         languages.add("Java");
9         languages.add("C");
10        languages.add("Python");
11        System.out.println("ArrayList: " + languages);
12    }
13 }
```

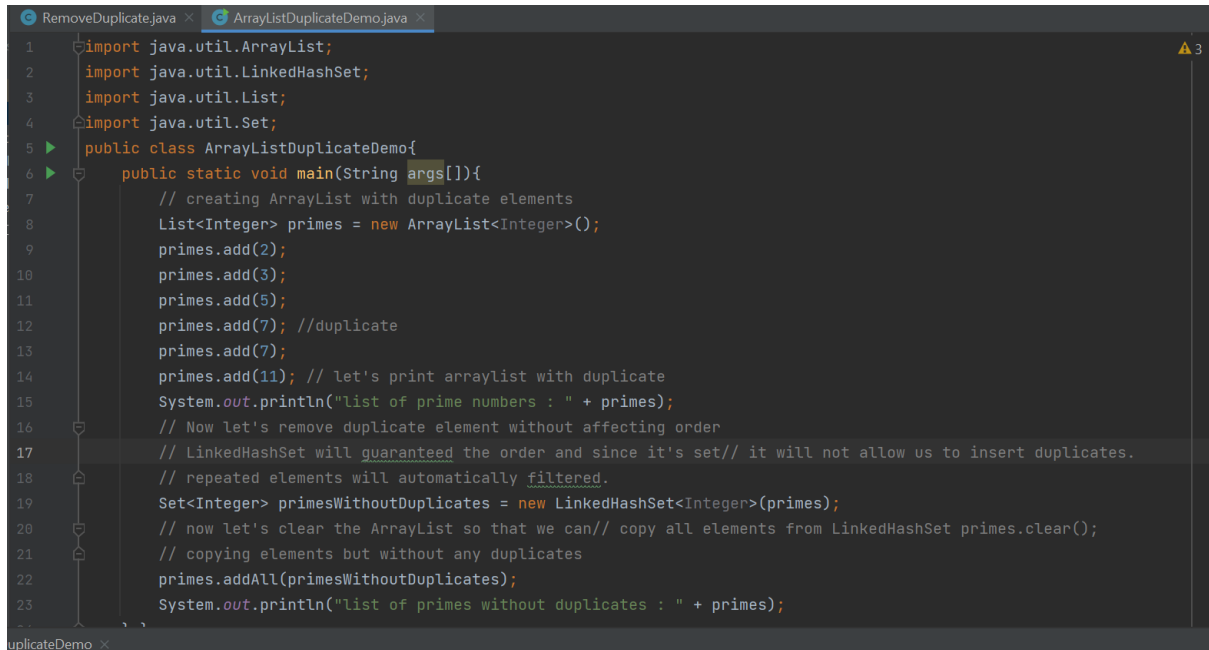
Output:



```
AddArrayList x
"C:\Program Files\Eclipse Foundation\jdk-11.0.12.7-hotspot\bin\java.exe"
ArrayList: [Java, C, Python]
Process finished with exit code 0
```


Q.2) Java Program to Remove duplicates from ArrayList.

Program:



```
1 import java.util.ArrayList;
2 import java.util.LinkedHashSet;
3 import java.util.List;
4 import java.util.Set;
5 public class ArrayListDuplicateDemo{
6     public static void main(String args[]){
7         // creating ArrayList with duplicate elements
8         List<Integer> primes = new ArrayList<Integer>();
9         primes.add(2);
10        primes.add(3);
11        primes.add(5);
12        primes.add(7); //duplicate
13        primes.add(7);
14        primes.add(11); // let's print arraylist with duplicate
15        System.out.println("list of prime numbers : " + primes);
16        // Now let's remove duplicate element without affecting order
17        // LinkedHashSet will guaranteed the order and since it's set// it will not allow us to insert duplicates.
18        // repeated elements will automatically filtered.
19        Set<Integer> primesWithoutDuplicates = new LinkedHashSet<Integer>(primes);
20        // now let's clear the ArrayList so that we can// copy all elements from LinkedHashSet primes.clear();
21        // copying elements but without any duplicates
22        primes.addAll(primesWithoutDuplicates);
23        System.out.println("list of primes without duplicates : " + primes);
24    }
25 }
```

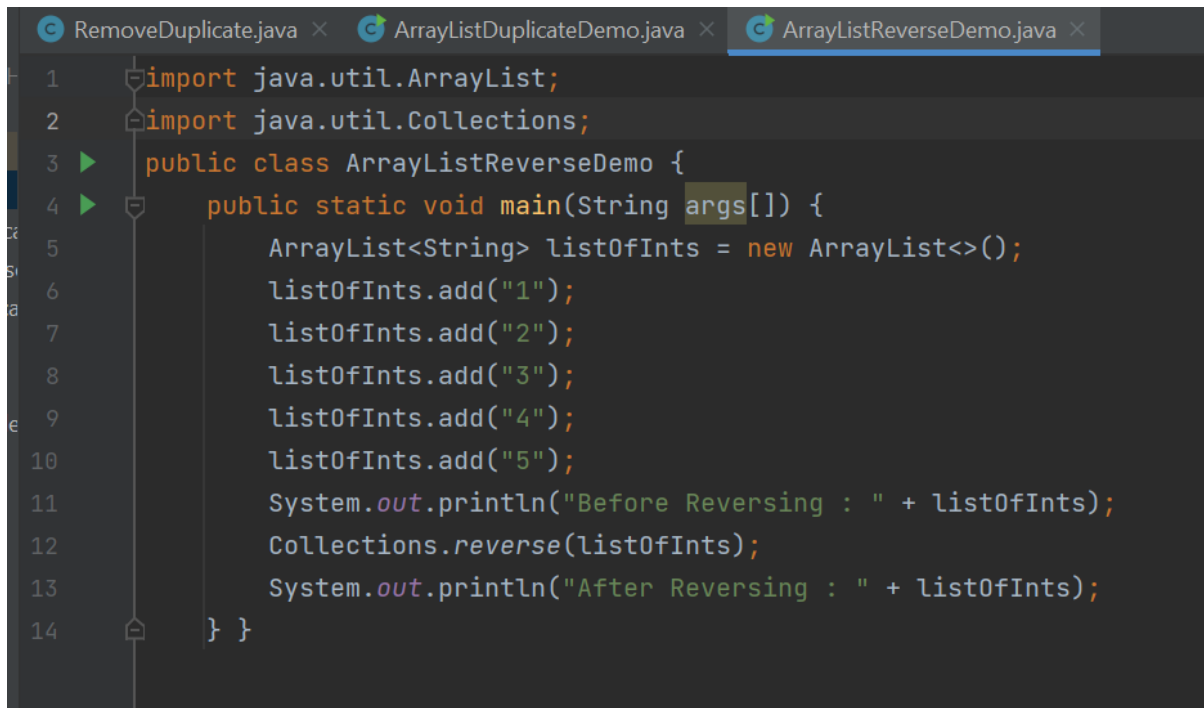
Output:



```
Run: ArrayListDuplicateDemo
"C:\Program Files\Eclipse Foundation\jdk-11.0.12.7-hotspot\bin\java.exe" "-javaagent:C:\Program Files (x86)\JetBrains\IntelliJ IDEA Community Edit
list of prime numbers : [2, 3, 5, 7, 7, 11]
list of primes without duplicates : [2, 3, 5, 7, 7, 11, 2, 3, 5, 7, 11]
Process finished with exit code 0
```

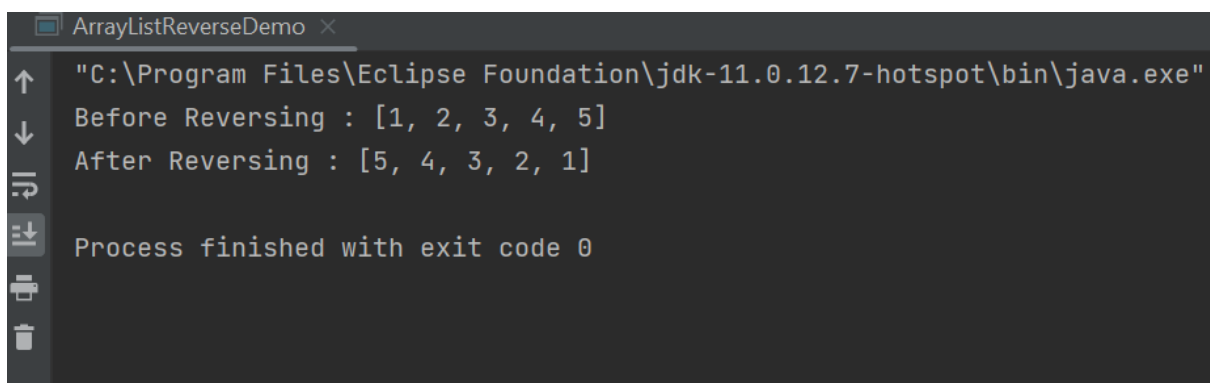
Q.3) Java Program to reverse ArrayList.

Program:



```
1  import java.util.ArrayList;
2  import java.util.Collections;
3  public class ArrayListReverseDemo {
4      public static void main(String args[]) {
5          ArrayList<String> listOfInts = new ArrayList<>();
6          listOfInts.add("1");
7          listOfInts.add("2");
8          listOfInts.add("3");
9          listOfInts.add("4");
10         listOfInts.add("5");
11         System.out.println("Before Reversing : " + listOfInts);
12         Collections.reverse(listOfInts);
13         System.out.println("After Reversing : " + listOfInts);
14     } }
```

Output:

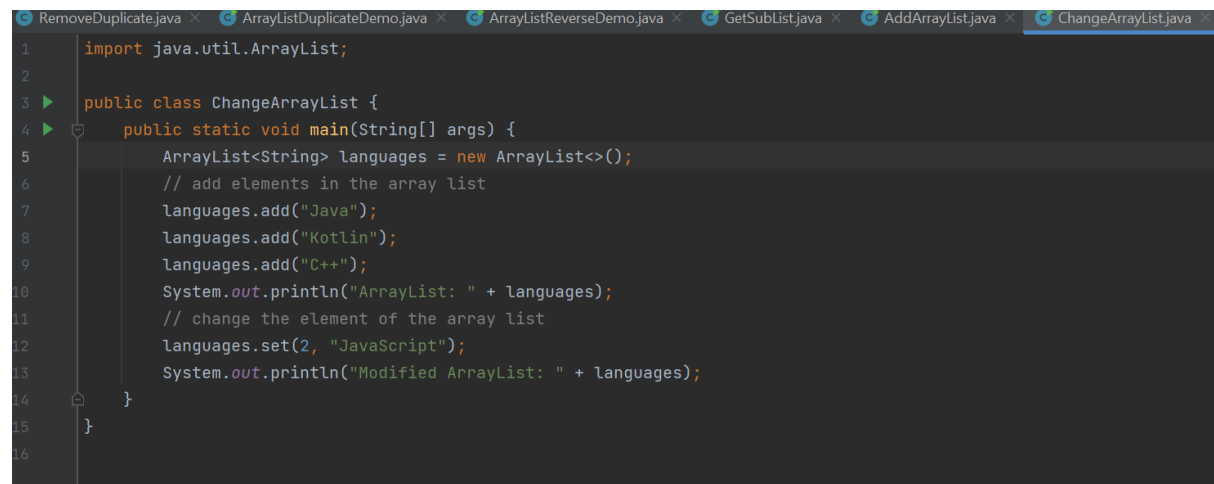


```
ArrayListReverseDemo x
"C:\Program Files\Eclipse Foundation\jdk-11.0.12.7-hotspot\bin\java.exe"
Before Reversing : [1, 2, 3, 4, 5]
After Reversing : [5, 4, 3, 2, 1]

Process finished with exit code 0
```


Q4) Java Program to change elements of an ArrayList

Program:



```
1 import java.util.ArrayList;
2
3 public class ChangeArrayList {
4     public static void main(String[] args) {
5         ArrayList<String> languages = new ArrayList<>();
6         // add elements in the array list
7         languages.add("Java");
8         languages.add("Kotlin");
9         languages.add("C++");
10        System.out.println("ArrayList: " + languages);
11        // change the element of the array list
12        languages.set(2, "JavaScript");
13        System.out.println("Modified ArrayList: " + languages);
14    }
15 }
16
```

Output:



```
ChangeArrayList x
"C:\Program Files\Eclipse Foundation\jdk-11.0.12.7-hotspot\bin\java.exe"
ArrayList: [Java, Kotlin, C++]
Modified ArrayList: [Java, Kotlin, JavaScript]
Process finished with exit code 0
```

Q5)Java Program to remove an element from ArrayList.

Program:

```
ArrayListDuplicateDemo.java x ArrayListReverseDemo.java x GetSubList.java x AddArrayList.java x ChangeArrayList.java x RemoveArrayList.java
1 import java.util.ArrayList;
2
3 public class RemoveArrayList {
4     public static void main(String[] args) {
5         ArrayList<String> animals = new ArrayList<>();
6         // add elements in the array list
7         animals.add("Dog");
8         animals.add("Cat");
9         animals.add("Horse");
10        System.out.println("ArrayList: " + animals);
11
12        // remove element from index 2
13        String str = animals.remove(index 2);
14        System.out.println("Updated ArrayList: " + animals);
15        System.out.println("Removed Element: " + str);
16    }
17 }
18
```

Output:

```
RemoveArrayList x
↑ "C:\Program Files\Eclipse Foundation\jdk-11.0.12.7-hotspot\bin\java.exe"
↓ ArrayList: [Dog, Cat, Horse]
↺ Updated ArrayList: [Dog, Cat]
↻ Removed Element: Horse
⌵
🖨 Process finished with exit code 0
🗑
```