ASSIGNMENT

B. LIKHITHA

Assignment 1

Title: Store and Display Elements Using ArrayList

Problem Statement:

Create an ArrayList to store 5 student names and display all names.

Requirements:

• Use ArrayList

• Use add() and get() methods

Expected Outcome:

All student names should be printed one by one.

Assignment 2

Title: Add and Remove Elements from ArrayList

Problem Statement:

Create an ArrayList of integers. Add 5 numbers and remove one number.

Requirements:

• Use add()

• Use remove()

Expected Outcome:

Updated list should be displayed after removal.

Assignment 3

Title: Find Size of Collection

Problem Statement:

Create an ArrayList of city names and find how many cities are stored.

Requirements:

• Use size() method

Expected Outcome:

Total number of cities should be displayed.

Assignment 4Title: Iterate Collection Using for-each Loop

Problem Statement:

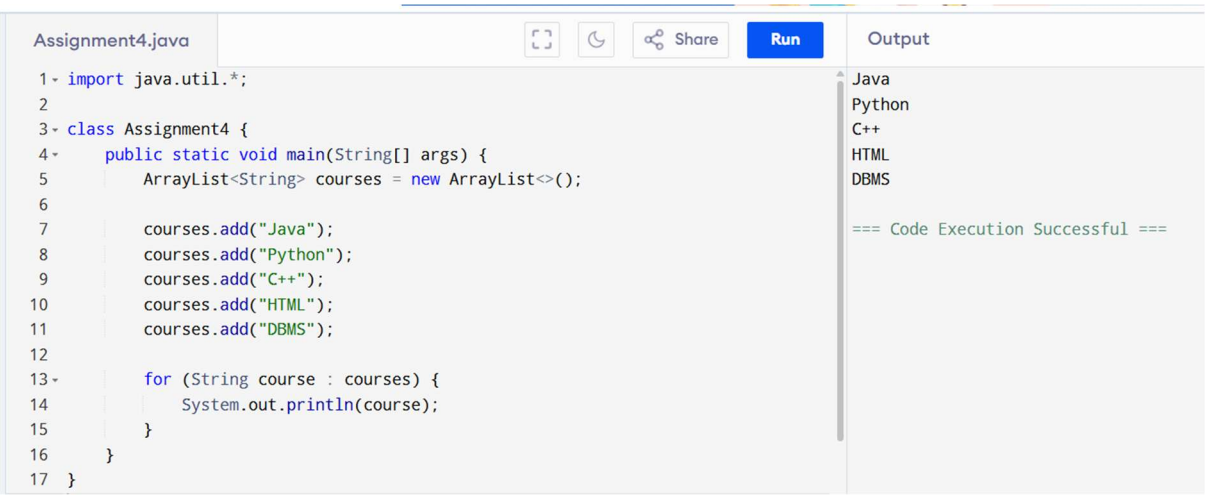
Store 5 course names in an ArrayList and display them using a for-each loop.

Requirements:

• Use enhanced for loop

Expected Outcome:

All course names printed successfully.



Assignment 5

Title: Check Element Exists in List

Problem Statement:

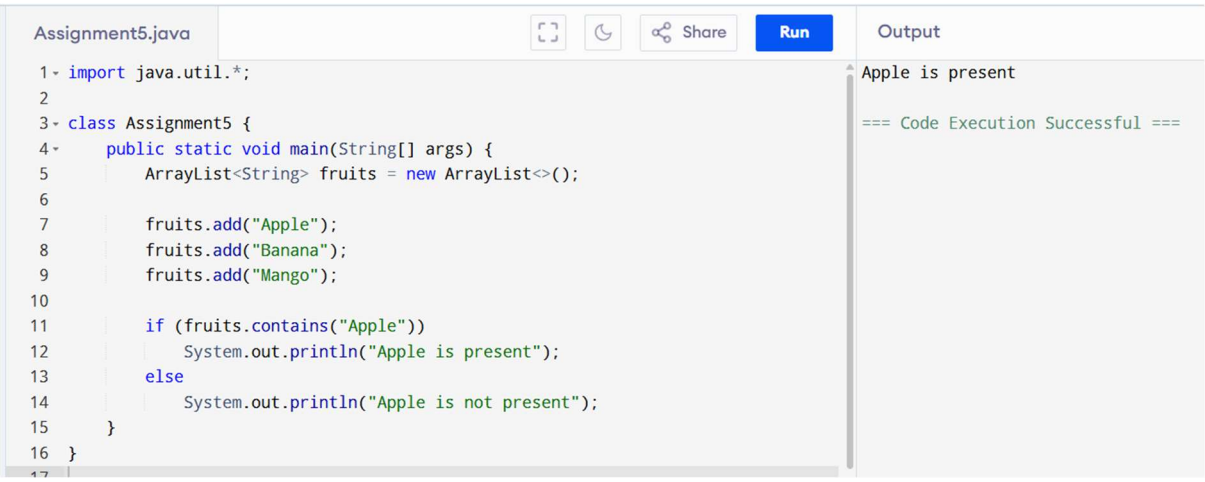
Create an ArrayList of fruits and check whether "Apple" exists.

Requirements:

• Use contains() method

Expected Outcome:

Program should print whether Apple is present or not.



Assignment 6

Title: Store Unique Elements Using HashSet

Problem Statement:

Create a HashSet and add duplicate numbers.

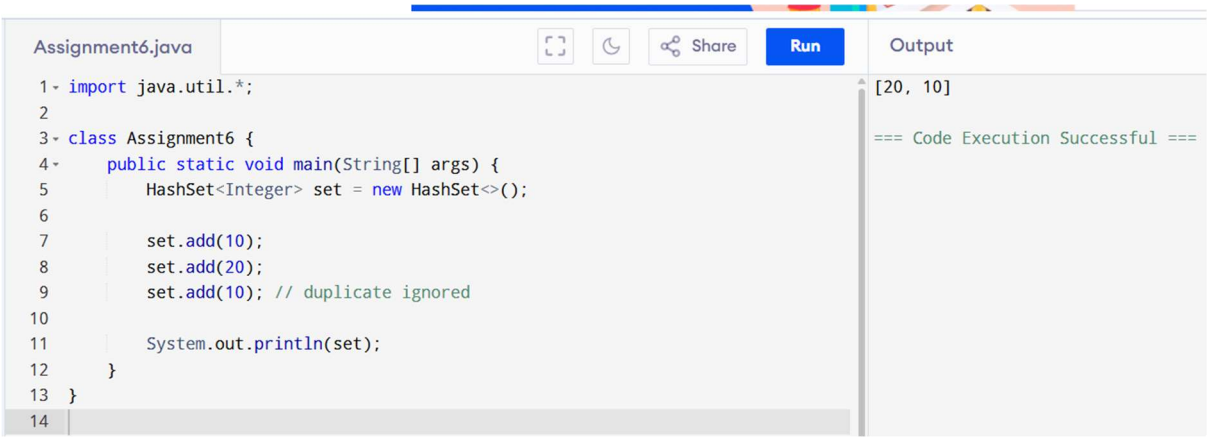
Requirements:

• Use HashSet

• Add duplicate values

Expected Outcome:

Duplicates should not be stored.



Assignment 7

Title: Display HashSet ElementsProblem Statement:

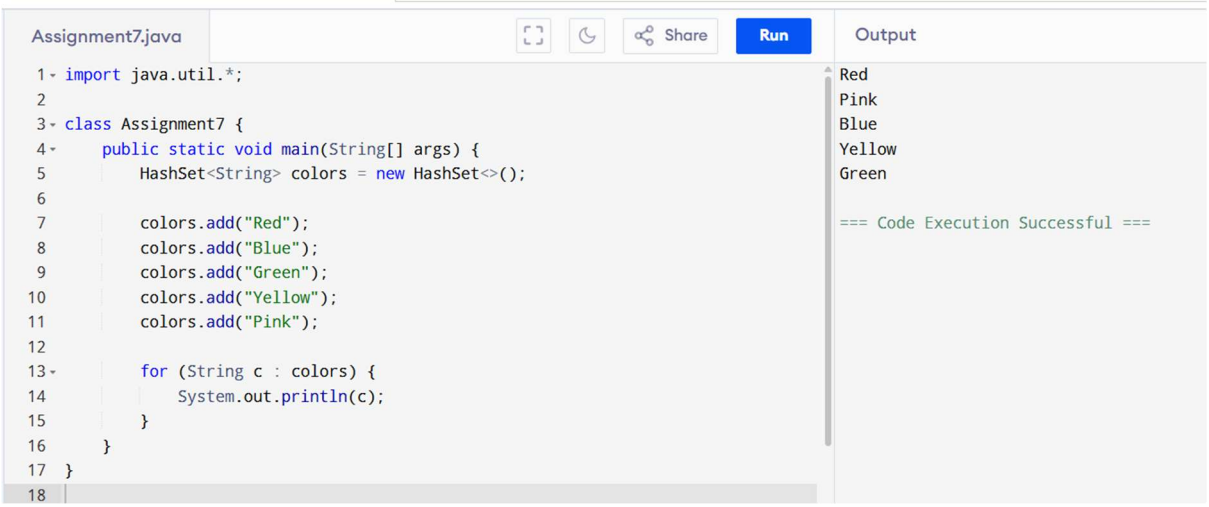
Store 5 colors in a HashSet and display them.

Requirements:

• Use for-each loop

Expected Outcome:

All colors printed (order not important).



Assignment 8

Title: Basic Key-Value Storage Using HashMap

Problem Statement:

Create a HashMap to store employee ID and employee name.

Requirements:

• Use put() and get()

Expected Outcome:

Employee details printed correctly.

Assignment 9

Title: Display All Keys and Values from HashMap

Problem Statement:

Store 3 country codes and country names in a HashMap.

Requirements:

• Use keySet() or entrySet()

Expected Outcome:

All keys and values printed.

Assignment 10

Title: Remove Entry from HashMap

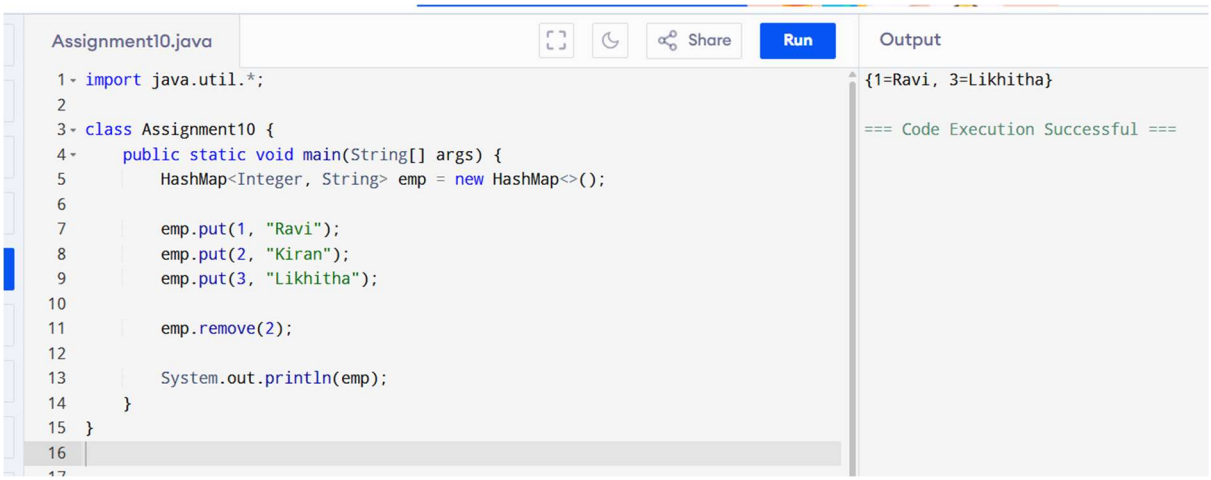
Problem Statement:

Remove one employee entry from a HashMap.

Requirements:• Use remove() method

Expected Outcome:

Remaining entries printed.



Assignment 11

Title: Use LinkedList to Store Elements

Problem Statement:

Store 5 numbers using LinkedList and display them.

Requirements:

• Use add() method

Expected Outcome:

All elements printed.

Assignment11.java

Share Run Output

```java
import java.util.*;

class Assignment11 {
    public static void main(String[] args) {
        LinkedList<Integer> list = new LinkedList<>();

        list.add(5);
        list.add(15);
        list.add(25);
        list.add(35);
        list.add(45);

        for (int n : list) {
            System.out.println(n);
        }
    }
}
```

```
5
15
25
35
45

=== Code Execution Successful ===
```

Assignment 12

Title: Check Collection Is Empty

Problem Statement:

Create an ArrayList and check whether it is empty.

Requirements:

• Use isEmpty()

Expected Outcome:

Program should print true or false.

Assignment12.java

Share Run Output

```java
import java.util.*;

class Assignment12 {
    public static void main(String[] args) {
        ArrayList<String> items = new ArrayList<>();

        System.out.println("Is list empty? " + items.isEmpty());

        items.add("A");

        System.out.println("Is list empty? " + items.isEmpty());
    }
}
```

```
Is list empty? true
Is list empty? false

=== Code Execution Successful ===
```

Assignment 13

Title: Clear All Elements from Collection

Problem Statement:

Add elements to an ArrayList and remove all elements.

Requirements:

• Use clear() method

Expected Outcome:

List should be empty.

Assignment 14

Title: Store Different Data Types Using Wrapper Classes

Problem Statement:

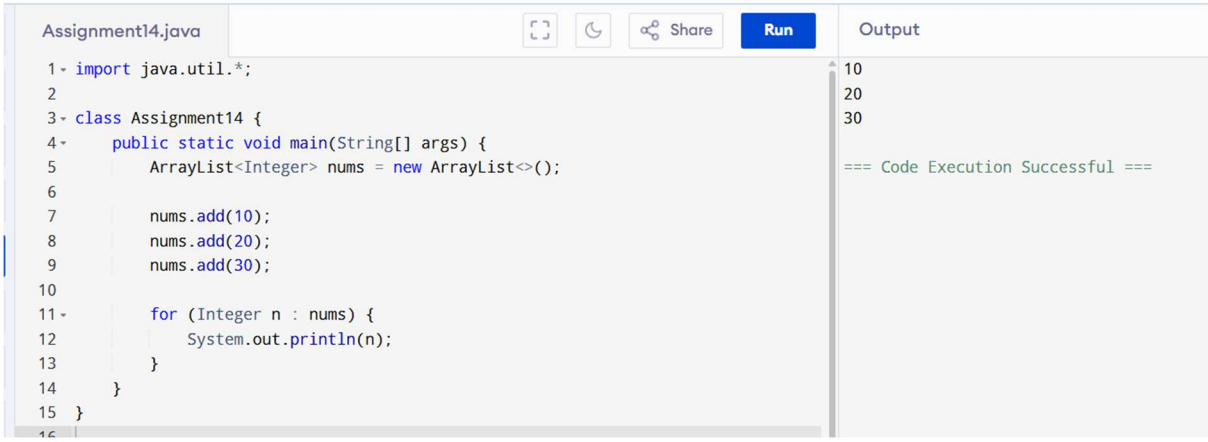
Store integer values using wrapper class in an ArrayList.

Requirements:

• Use Integer wrapper class

Expected Outcome:

Values stored and printed successfully.



Assignment 15

Title: Convert Collection to Array

Problem Statement:

Convert an ArrayList of strings to an array.

Requirements:

• Use toArray()

Expected Outcome:

Array elements printed.