```java
//Write a program using HashSet to store unique student roll numbers.
package Set_Interface;
import java.util.HashSet;
public class Challenge1 {
	public static void main(String[] args) {
		HashSet<Integer> sRolls = new HashSet<>();
		sRolls.add(1);
		sRolls.add(2);
		sRolls.add(3);
		sRolls.add(2);
		sRolls.add(1);
    System.out.println("Unique Student Roll Numbers:");
    for (Integer r : sRolls) {
       System.out.println(r);
    }
        }
}


//2. Demonstrate how to use TreeSet to automatically sort elements.
package Set_Interface;
import java.util.TreeSet;
public class Challenge2 {
	public static void main(String[] args) {
		TreeSet<String> names = new TreeSet<>();
    names.add("Raj");
    names.add("Ravi");
    names.add("Tom");
    names.add("Cat");
    System.out.println("Sorted Names:");
    for (String name : names) {
       System.out.println(name);
    }
        }
}


//3. Use LinkedHashSet to maintain insertion order and prevent duplicates.
package Set_Interface;
import java.util.HashSet;
import java.util.Scanner;
import java.util.Set;
public class Challenge3 {
	public static void main(String[] args) {
		Scanner sc = new Scanner(System.in);

    Set<String> fruits = new HashSet<>();

    System.out.print("Enter number of fruits to insert: ");
```

```
                int n = sc.nextInt();

    for(int i=0; i<n; i++) {
        System.out.print("Enter fruit name: ");
       String fruit = sc.next();
       fruits.add(fruit);
    }
    System.out.println("\nUnique Fruits are: ");
    for (String f : fruits) {
       System.out.println(f);
    }
    sc.close();
        }
}


//4. Design a program to store registered email IDs of users such that no duplicates are allowed.
package Set_Interface;
import java.util.HashSet;
import java.util.Scanner;
public class Challenge4 {
        public static void main(String[] args) {
                Scanner sc = new Scanner(System.in);

    HashSet<String> emails = new HashSet<>();

    System.out.print("Enter number of emails to store: ");
                int n = sc.nextInt();

    for(int i=1; i<=n; i++) {
        System.out.print("Enter email "+i+" : ");
       String email = sc.next();
       if(email.contains("@") && email.contains(".")) {
          emails.add(email);
       }
       else {
        System.out.println("Invalid email format");
       }
    }
    System.out.println("\nUnique emails are: ");
    for (String e : emails) {
       System.out.println(e);
    }
    sc.close();
        }
}
```

```java
//5. Create a program where a Set is used to eliminate duplicate entries from a list of city names entered by users.
package Set_Interface;
import java.util.HashSet;
import java.util.Scanner;
import java.util.Set;
public class Challenge5 {
	public static void main(String[] args) {
		Scanner sc = new Scanner(System.in);

	Set<String> cities = new HashSet<>();

	System.out.print("Enter number of city names to store: ");
		int n = sc.nextInt();

	for(int i=1; i<=n; i++) {
	  System.out.print("Enter city name "+i+" : ");
	 String city = sc.next();
	 cities.add(city);
	}
	System.out.println("\nUnique city names are: ");
	for (String c : cities) {
	 System.out.println(c);
	}
	sc.close();
	  }
}
```