

1. Write a Java program to create an array list, add some colors (strings) and print out the collection.

```
-->import java.util.ArrayList;

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

        colors.add("Red");
        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        System.out.println("Colors: " + colors);
    }
}
```

2. Write a Java program to iterate through all elements in an array list.

```
-->import java.util.ArrayList;

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

        colors.add("Red");
        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        System.out.println("Iterating through the list:");
        for (String color : colors) {
            System.out.println(color);
        }
    }
}
```

3. Write a Java program to insert an element into the array list at the first position.

```
-->import java.util.ArrayList;

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

        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        colors.add(0, "Red");

        System.out.println("Updated List: " + colors);
    }
}
```

4. Write a Java program to retrieve an element (at a specified index) from a given array list.

```
--> import java.util.ArrayList;

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

        colors.add("Red");
```

```

        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        String color = colors.get(2);

        System.out.println("Element at index 2: " + color);
    }
}

```

5. Write a Java program to update an array element by the given element.  
 --> import java.util.ArrayList;

```

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

        colors.add("Red");
        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        colors.set(1, "Black");

        System.out.println("Updated List: " + colors);
    }
}

```

6. Write a Java program to remove the third element from an array list.

```

-->import java.util.ArrayList;

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

        colors.add("Red");
        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        colors.remove(2);

        System.out.println("Updated List: " + colors);
    }
}

```

7. Write a Java program to search for an element in an array list.  
 -->import java.util.ArrayList;

```

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

        colors.add("Red");
        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        String searchColor = "Green";
        if (colors.contains(searchColor)) {
            System.out.println(searchColor + " is in the list.");
        } else {

```

```

        System.out.println(searchColor + " is not in the list.");
    }
}

```

8. Write a Java program to sort a given array list.

```

-->import java.util.ArrayList;
import java.util.Collections;

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

        colors.add("Red");
        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        Collections.sort(colors);

        System.out.println("Sorted List: " + colors);
    }
}

```

9. Write a Java program to copy one array list into another.

```

-->import java.util.ArrayList;
import java.util.Collections;

public class CopyList {
    public static void main(String[] args) {
        ArrayList<String> list1 = new ArrayList<>();
        list1.add("Red");
        list1.add("Blue");
        list1.add("Green");
        list1.add("Yellow");

        ArrayList<String> list2 = new ArrayList<>(list1.size());

        for (int i = 0; i < list1.size(); i++) {
            list2.add(list1.get(i));
        }

        Collections.copy(list2, list1);
        System.out.println("Original List: " + list1);
        System.out.println("Copied List: " + list2);
    }
}

```

10. Write a Java program to shuffle elements in an array list.

```

--> import java.util.ArrayList;
import java.util.Collections;

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

        colors.add("Red");
        colors.add("Blue");
        colors.add("Green");
        colors.add("Yellow");

        Collections.shuffle(colors);
    }
}

```

```
        System.out.println("Shuffled List: " + colors);  
    }  
}
```