# DSA Week 14 activities

This week, you are required to complete the questionnaire and two labs.

***a.*** In this print out, answer all Week 14 questions.
***b.*** Also, in this print out, complete Week 14 lab 1 & 2 using the lab computers.

***Note:*** You can complete the activities in any order, however, make afford to complete and understand everything which prepares you for well for test 2 & Final Exam.

# DSA Week 14 Questions

1. What is the list ADT?

2. Discuss the six methods used with the list ADT.

3. A list has the elements (940, 880, 830).
    a. What happens to the list when you add(790)?
    b. What happens to the list when you remove(0) and add(750)?
    c. What happens to the list when you get(2)?

4. What is an iterator?

5. In your opinion, which looping technique is easier to learn and understand – iterators, traditional for loop or advanced for-each loop? Discuss why you chose one technique over the others.

# DSA Week 14 Lab Activity (Week10Lab1)

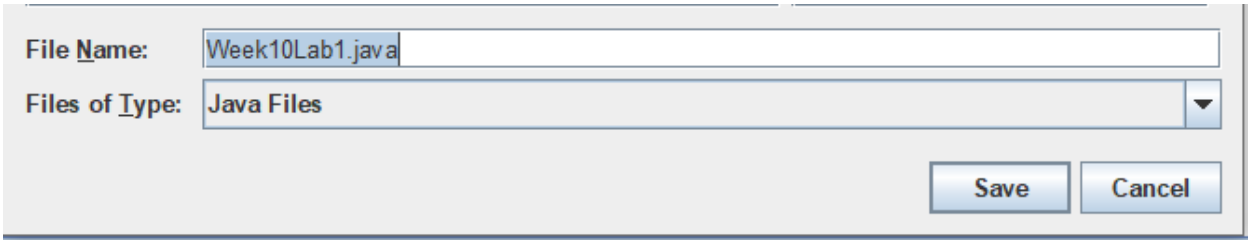
Using the lab computers create the following Java program using jGrasp!

**Step 1:** Login to your lab computer and create a new java file in jGrasp.


**Step 2:** When the window below appears. Type the following code into jGrasp.

```
1  /* DSA Week 10 Lab 1 */
2
3  import java.util.ArrayList; //import the ArrayList class
4
5  public class Week10Lab1 {
6
7     public static void main(String []args) {
8        ArrayList<Integer> intArray = new ArrayList<Integer>();
9        intArray.add(940);
10       intArray.add(880);
11       intArray.add(830);
12       intArray.add(790);
13       intArray.add(750);
14       intArray.add(660);
15       intArray.add(650);
16       intArray.add(590);
17       intArray.add(510);
18       intArray.add(440);
19
20       //print element 0 of the Arraylist
21       System.out.println("First element of the Arraylist is " + intArray.get(0));
22
23       //print the size of the ArrayList
24       System.out.println("Size of the Arraylist is " + intArray.size());
25
26       intArray.remove(0);
27
28       //loop through the element of the Arraylist
29       for(int i =0; i<intArray.size(); i++){
30          System.out.println(intArray.get(i));
31       }
32    }
33 }
```

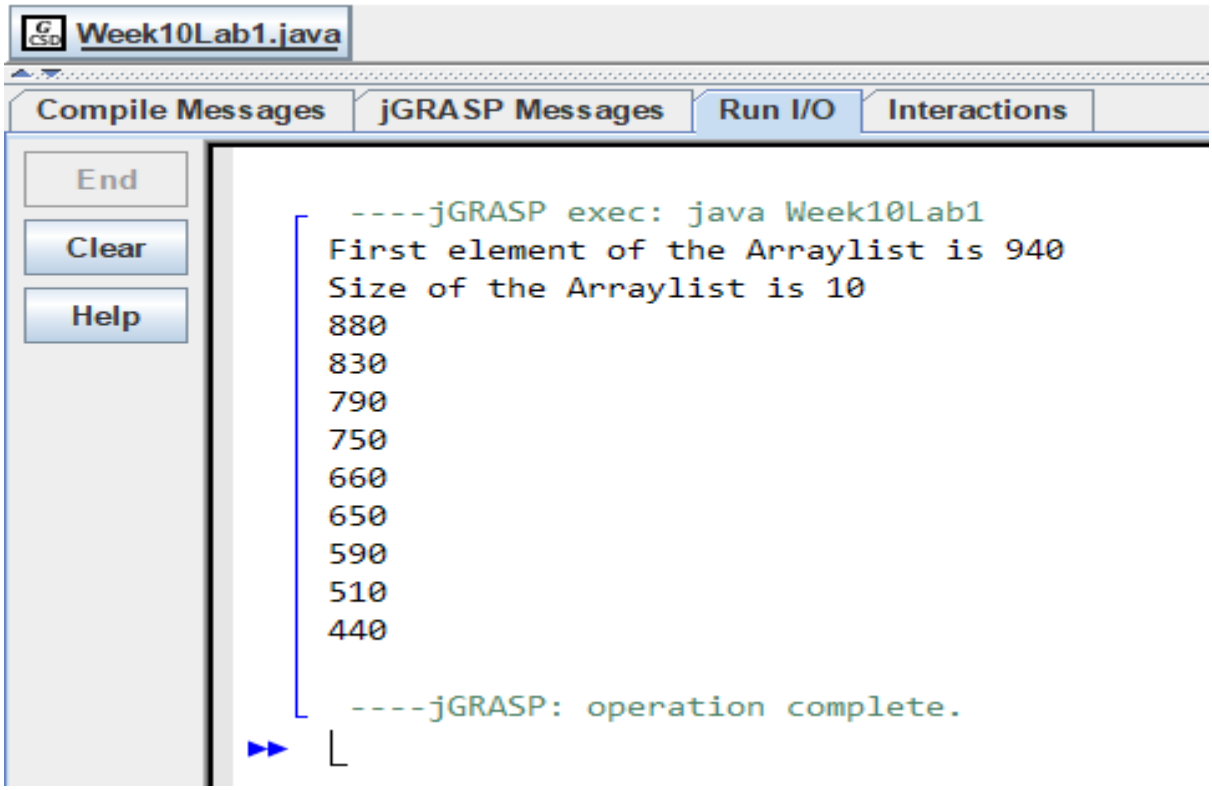
**Step 3:** Go to **file/save** to save your java program as **Week10Lab1**




**Step 4:** After saving, compile (**click on compile icon or on your keyword hold Ctrl + B**) to check for syntax errors.

**Step 5:** If compiling is successfully then run (**click on the find and run main method icon or on your keyboard hold Ctrl + R**) your program.

**Step 6:** If run is successful then you should see the following output in the console




**Step 7:** Week10Lab1 Completed! Save your file for future Java lab activities.