P-5

1. ArrayList

```
class Collections {

public static void main(String[] args) {

ArrayList<String> l1 = new ArrayList<String>(4);

l1.add("something");

l1.add("hello");

// System.out.println(l1.get(0));

Iterator it = l1.iterator();

while (it.hasNext()) {

System.out.println(it.next());

}

}

}
```

2. Vector

```
import java.util.Vector;
public class MyVector {

public static void main(String[] args) {

Vector v1 = new Vector(8, 2);

v1.add(12);

v1.add(50);

v1.add("Hello");

System.out.println(v1.capacity());
```

```
System.out.println(v1.indexOf("hello"));

}

}
```

3. Stack

```
import java.util.Stack;
class MyStack {

public static void main(String[] args) {

Stack s = new Stack();

s.push(12);

s.push(1299);

s.pop();
System.out.println(s.peek());

}

}
```

4. Linked List

```
import java.util.Iterator;

import java.util.LinkedList;

class MyLinkedList {

public static void main(String args[]) {

LinkedList<String> list = new LinkedList<String>();

list.addFirst("hello");

list.add(1, "between");

// System.out.println(list.get(0));

list.addLast("last");

System.out.println(list.getFirst());
```

```
Iterator<String> itr = list.iterator();

while (itr.hasNext()) {

System.out.println(itr.next());

}

}

}
```

5. Hash Set

- duplication is not allowed
- HashSet doesn't preserve order of insertion
- HashSet uses hash table data structure
- null values are allowed
- The capacity can be incresed if the load factor reaches a value greater than 75%

```
import java.util.HashSet;

class MyHashSet {

public static void main(String args[]) {

HashSet h1 = new HashSet(20, 2);

HashSet h2 = new HashSet(20, 2);

h1.add("hello");

h1.add("world");

// h2 = h1.clone();

System.out.println(h1);

System.out.println(h1.size());


}

}
```

6. Linked Hash Set

- insertion order is preserved
- it uses hash table data structure
- It is implemented using doubly linked list internally

```
import java.util.ArrayList;
import java.util.LinkedHashSet;

class MyLinkedHashSet {
public static void main(String[] args) {

LinkedHashSet h1 = new LinkedHashSet();

ArrayList<String> l1 = new ArrayList<String>(4);

l1.add("something");

l1.add("hello");

h1.add("hello");

h1.add("world");

h1.add("coffee");

h1.add("bob");

System.out.println(h1);

System.out.println(h1.contains("hello"));

System.out.println(h1.hashCode());

h1.addAll(l1);

System.out.println(h1);



}



}
```