Lab14-Assignment

1) Create a Book class with bookId, bookName and authorName.Create parameterized constructor to initialize the object. Create an ArrayList of type Book and store all book objects into collections and display all book details.

```
package com.wrapperclass.examples;
public class Book {
	private int bkid;
	private String bktitle;
	private String authorname;

	@Override
	public String toString() {
		return "Book [bkid=" + bkid + ", bktitle=" +
bktitle + ", Author name=" + authorname + "]";
	}

	public Book() {
		super();
		// TODO Auto-generated constructor stub
	}

	public int getBkid() {
		return bkid;
	}

	public String getBktitle() {
		return bktitle;
	}

	public String getauthorname() {
		return authorname;
	}
	public Book(int bkid, String bktitle, String
authorname) {
		super();
```

```
        this.bkid = bkid;
        this.bktitle = bktitle;
        this.authorname = authorname;
    }

}
```

```
package com.wrapperclass.examples;
import java.util.*;
public class ArrayListBook {
    public static void main(String[] args) {

        ArrayList<Book> al = new ArrayList<Book>();

        Book obj1 = new Book(1, "Oracle pl/sql",
"steven Feuerstein");
        Book obj2 = new Book(2, "SpringBoot - RESTAPI",
"william");
        Book obj3 = new Book(3, "SpringMVC", "Rod
Johnson");

        al.add(obj1);
        al.add(obj2);
        al.add(obj3);
        //for each loop
        for(Book b : al)
            System.out.println(b);

        Iterator it = al.iterator();
        //using iterator
        while(it.hasNext())
            System.out.println(it.next());

        }

}
```

Output:

```
1  package com.wrapperclass.examples;
2  import java.util.*;
3  public class ArrayListBook {
4      public static void main(String[] args) {
5
6          ArrayList<Book> al = new ArrayList<Book>();
7
8          Book obj1 = new Book(1, "Oracle pl/sql", "steven Feuerstein");
9          Book obj2 = new Book(2, "SpringBoot - RESTAPI", "william");
10         Book obj3 = new Book(3, "SpringMVC", "Rod Johnson");
11
12         al.add(obj1);
13         al.add(obj2);
14         al.add(obj3);
15         //for each loop
16         for(Book b : al)
17             System.out.println(b);
18
```

Problems Javadoc Declaration Console Coverage

<terminated> ArrayListBook [Java Application] C:\Users\USER\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_19.0.2.v20230129-1123\jre\bin\javaw.exe (Nov 14,

```
Book [bkid=1, bktitle=Oracle pl/sql, Author name=steven Feuerstein]
Book [bkid=2, bktitle=SpringBoot - RESTAPI, Author name=william]
Book [bkid=3, bktitle=SpringMVC, Author name=Rod Johnson]
Book [bkid=1, bktitle=Oracle pl/sql, Author name=steven Feuerstein]
Book [bkid=2, bktitle=SpringBoot - RESTAPI, Author name=william]
Book [bkid=3, bktitle=SpringMVC, Author name=Rod Johnson]
```

2) Write a Java program that calculates the sum of all even numbers present in an ArrayList of integers.

```
package com.wrapperclass.examples;
import java.util.ArrayList;
public class EvenSumCalculator {
    public static void main(String[] args) {
        // Create an ArrayList of integers
        ArrayList<Integer> numbers = new ArrayList<>();
        numbers.add(1);
        numbers.add(2);
        numbers.add(3);
        numbers.add(4);
        numbers.add(5);
        numbers.add(6);
        numbers.add(7);
        numbers.add(8);
        numbers.add(9);

        // Calculate and print the sum of even numbers
```

```
        int evenSum = calculateEvenSum(numbers);
        System.out.println("Sum of even numbers: " +
evenSum);
    }

    public static int
calculateEvenSum(ArrayList<Integer> numbers) {
        int evenSum = 0;

        // Iterate through the ArrayList and add even
numbers to the sum
        for (int num : numbers) {
            if (num % 2 == 0) {
                evenSum += num;
            }
        }

        return evenSum;}

}
```

Output:

```
 1 package com.wrapperclass.examples;
 2 import java.util.ArrayList;
 3 public class EvenSumCalculator {
 4     public static void main(String[] args) {
 5         // Create an ArrayList of integers
 6         ArrayList<Integer> numbers = new ArrayList<>();
 7         numbers.add(1);
 8         numbers.add(2);
 9         numbers.add(3);
10         numbers.add(4);
11         numbers.add(5);
12         numbers.add(6);
13         numbers.add(7);
14         numbers.add(8);
15         numbers.add(9);
16
17         // Calculate and print the sum of even numbers
18         int evenSum = calculateEvenSum(numbers);
```

Problems Javadoc Declaration Console × Coverage

<terminated> EvenSumCalculator [Java Application] C:\Users\USER\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_19.0.2.v20230129-1123\jre\bin\javaw.exe

```
Sum of even numbers: 20
```