

Problem 1. Work with following lambda expression:

```
Random r = new Random();
```

```
() -> r.nextInt();
```

```
public class Problem1 {
```

```
    // name and type of lambda goes here
```

```
    // representing lambda as a method reference
```

```
    // Hint: To define the method reference, make use of a helper method.
```

```
    //representing lambda as a static nested class
```

```
    public void evaluator() {
```

```
}
```

```
    public static void main(String[] args) {
```

```
        Problem1 p = new Problem1();
```

```
        p.evaluator();
```

```
}
```

```
}
```

Problem 2. Use Lambdas and Streams to do the followings:

- 1) Use the `Collectors.joining` method to print out All Employee objects and separate each one with a delimiter of `“---\n---”`.
- 2) Print a list of both the capital and non-capital last names of employees using stream concat operation.
- 3) Calculate sum of Employee salaries using `DoubleStream`.
- 4) Calculate sum of Employee salaries with Stream's `reduce` method.
- 5) Count number of Employees in each department by using `groupingBy` operation.
- 6) Print out each department name with the average salary by using `groupingBy` operation.
- 7) Print out each department and its corresponding employees by using `groupingBy` operation.
- 8) From given employee list, create `Map<String, List<Double>>` map: keys will be department names, and values will be salaries of the department by using `groupingBy` operation and show the result using `forEach` method.