

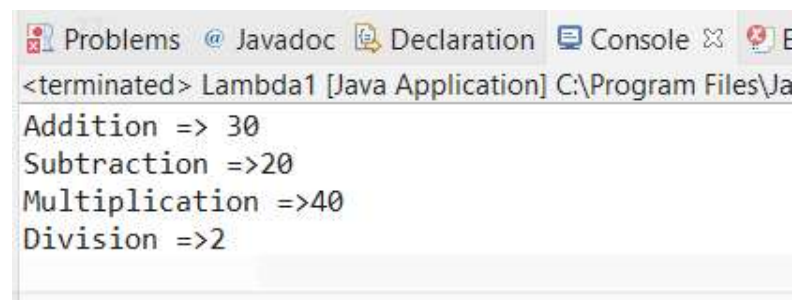
## LAMBDA 8 ASSIGNMENT

Name: Shruti Bhosale

### 1) Arithmetic Operation:

```
1 package javalambda8;
2
3 @FunctionalInterface
4 interface Arithmetic{
5     int operation(int a, int b);
6 }
7 public class Lambda1 {
8
9     public static void main(String[] args) {
10
11         Arithmetic addition = ( a, b) -> (a+b);
12         System.out.println("Addition => " + addition.operation(10,20));
13
14         Arithmetic subtraction = (a, b) -> (a-b);
15         System.out.println("Subtraction =>" + subtraction.operation(30,10));
16
17         Arithmetic multiplication = (a, b) -> (a*b);
18         System.out.println("Multiplication =>" + multiplication.operation(8,5));
19
20         Arithmetic division = (a, b) -> (a/b);
21         System.out.println("Division =>" + division.operation(10,5));
22
23
24     }
25
26 }
27
```

### Output:



The screenshot shows an IDE window with tabs for Problems, Javadoc, Declaration, Console, and Error. The Console tab is active, displaying the output of the program. The output consists of four lines: "Addition => 30", "Subtraction =>20", "Multiplication =>40", and "Division =>2".

```
<terminated> Lambda1 [Java Application] C:\Program Files\Ja
Addition => 30
Subtraction =>20
Multiplication =>40
Division =>2
```

## 2)Order:

```
1 package javalambda8;
2
3 class lambdaorder {
4     int id;
5     String status;
6     int price;
7     public lambdaorder(int id, String status, int price) {
8         super();
9         this.id = id;
10        this.status = status;
11        this.price = price;
12    }
13
14    }
15    public int getId() {
16        return id;
17    }
18    public void setId(int id) {
19        this.id = id;
20    }
21    public String getStatus() {
22        return status;
23    }
24    public void setStatus(String status) {
25        this.status = status;
26    }
27    public int getPrice() {
28        return price;
29    }
30    public void setPrice(int price) {
31        this.price = price;
32    }
33 }
34 }
```

```
1 package javalambda8;
2
3 import java.util.ArrayList;
4
5
6
7 class order {
8
9     public static void main(String[] args) {
10        List<lambdaorder> list=new ArrayList<>();
11        list.add(new lambdaorder(1,"Accepted",20000));
12        list.add(new lambdaorder(2,"Completed",30000));
13        list.add(new lambdaorder(3,"Accepted",15000));
14        list.add(new lambdaorder(4,"Completed",9000));
15        list.add(new lambdaorder(5,"Completed",40000));
16        list.add(new lambdaorder(6,"Accepted",8000));
17
18        System.out.println("\nOrders having price greater than 10000");
19        Stream<lambdaorder> data = list.stream().filter(p -> p.price > 10000);
20        data.forEach(lambdaorder -> System.out.println(lambdaorder.price + ":" + lambdaorder.status));
21
22        System.out.println("\nOrders Having Status Accepted");
23        Stream<lambdaorder> data1 = list.stream().filter(p -> p.getStatus().matches("Accepted"));
24        data1.forEach(order->System.out.println(order.id+" "+order.price+" "+order.status));
25
26        System.out.println("\nOrders Having Status Completed");
27        Stream<lambdaorder> data11 = list.stream().filter(p -> p.getStatus().matches("Completed"));
28        data11.forEach(order->System.out.println(order.id+" "+order.price+" "+order.status));
29
30    }
31 }
32
33 }
34 }
```

## Output:

```
Orders having price greater than 10000
20000:Accepted
30000:Completed
15000:Accepted
40000:Completed

Orders Having Status Accepted
1 20000 Accepted
3 15000 Accepted
6 8000 Accepted

Orders Having Status Completed
2 30000 Completed
4 9000 Completed
5 40000 Completed
```

## 3)Predicate,Supplier and Consumer:

```
1 package javalambda8;
2
3 import java.util.Arrays;
4
5
6
7 public class predicate{
8
9 public static void main(String[] args) {
10
11     List<Integer> list1=Arrays.asList(1,2,3,4,5);
12     list1.stream().filter(t -> t%2 == 0).forEach(t -> System.out.println("print Even:" +t));
13 }
14
15 }
16
```

Problems Javadoc Declarative

<terminated> predicate [Java Applicati

```
print Even:2
print Even:4
```

javasrcjavasupplier

```
1 package javalambda8;
2
3 import java.util.function.Supplier;
4
5 public class supplier {
6     public static void main(String[] args) {
7         Supplier<String> supplier = () -> "Hello World";
8         System.out.println(supplier.get());
9     }
10 }
11
12 }
13
```

Problems Javadoc Declaration Console Error Log

<terminated> supplier [Java Application] C:\Program Files\Java\jdk-13.0.2\bin\javaw.exe (11. Hello World

```
javalamdba8 > src > javalamdba8 > consumer >
1 package javalamdba8;
2
3 import java.util.Arrays;
4
5
6
7 public class consumer{
8
9     public static void main(String[] args) {
10         Consumer<Integer> consumer=(t) -> {
11             System.out.println("Number :" + t);
12         };
13
14         consumer.accept(10);
15
16         List<Integer> list1 = Arrays.asList(20,30,40,50);
17         list1.stream().forEach(consumer);
18     }
19
20
21 }
22
```

Problems Javadoc Declaration Console Error Log

<terminated> consumer [Java Application] C:\Program Files\Java\jdk-13.0.2\bin\javaw.exe (11

Number :10  
Number :20  
Number :30  
Number :40  
Number :50

#### 4)Remove Odd length Words:

```
1 package javalamdba8;
2
3 import java.util.List;
4
5
6
7 public class lambda4 {
8
9
10     public static void main(String[] args) {
11         List<String> list=new ArrayList<>(Arrays.asList("shruti","Rohit","Swarda","Piu","Ashok","Shailaja"));
12         list.removeIf(i -> i.length() % 2 != 0);
13         System.out.println("Odd length Items Removed: " +list);
14     }
15 }
```

Problems Javadoc Declaration Console Error Log

<terminated> lambda4 [Java Application] C:\Program Files\Java\jdk-13.0.2\bin\javaw.exe (11-Aug-2021, 5:51:08 pm – 5:51:09 pm)

Odd length Items Removed: [shruti, Swarda, Shailaja]



## 5)Print First Letter:

```
1 package javalambda8;
2
3 import java.util.Arrays;
4
5
6
7 public class lambda5 {
8     public static void main(String[] args) {
9         List<String> list= Arrays.asList("Shruti", "Ashok","Bhosale");
10        StringBuilder str= new StringBuilder();
11        forEach(list, a-> str.append(a.charAt(0)));
12        System.out.println(str);
13    }
14    static<String> void forEach(List<String> list, Consumer<String> consumer)
15    {
16        for(String t : list) {
17            consumer.accept(t);
18        }
19    }
20 }
```

Problems Javadoc Declaration Console Error Log

<terminated> lambda5 [Java Application] C:\Program Files\Java\jdk-13.0.2\bin\javaw.exe (11-Aug-2021, 5:51:41 pm – 5:51:41 pm)

SAB

## 6)UpperCase:

```
1 package javalambda8;
2
3 import java.util.ArrayList;
4
5
6
7
8 public class lambda6 {
9     public static void main(String[] args)
10    {
11        ArrayList<String> list=new ArrayList<>(Arrays.asList("shruti","ashok","bhosal"));
12        System.out.println(list);
13        list.replaceAll(e -> e.toUpperCase());
14        System.out.println(list);
15    }
16 }
17 }
18 }
```

Problems Javadoc Declaration Console Error Log

<terminated> lambda6 [Java Application] C:\Program Files\Java\jdk-13.0.2\bin\javaw.exe (11-Aug-2021, 5:52:24 pm – 5:52:25 pm)

[shruti, ashok, bhosal]

[SHRUTI, ASHOK, BHOSALE]

## 7)HashMap:

```
1 package javalambda8;
2 import java.util.HashMap;
3 import java.util.Map;
4
5 public class lambda7 {
6     public static void main(String[] args) {
7         Map<Integer,String> map=new HashMap<Integer,String>();
8         map.put(10, "Shruti");
9         map.put(20, "Yogesh");
10        map.put(30, "Swarda");
11
12        StringBuilder sb=new StringBuilder("");
13        for(Map.Entry m:map.entrySet()) {
14
15            sb.append(" keys: " + m.getKey() + ",");
16            sb.append(" values:" + m.getValue() + ",");
17        }
18        System.out.println("\n" + sb + "\n");
19    }
20 }
21
22
```

Problems Javadoc Declaration Console Error Log

<terminated> lambda7 [Java Application] C:\Program Files\Java\jdk-13.0.2\bin\javaw.exe (11-Aug-2021, 5:54:20 pm)

keys: 20, values:Yogesh, keys: 10, values:Shruti, keys: 30, values:Swarda,

## 8)Thread:

```
1 package javalambda8;
2 import java.io.Console;
3 import java.util.ArrayList;
4 import java.util.List;
5 import java.util.function.Consumer;
6 class lambda8 extends Thread {
7     public void run() {
8         System.out.println("Running...");
9     }
10
11     public static void main(String[] args) {
12         lambda8 t=new lambda8();
13         t.start();
14         List<Integer> numbers=new ArrayList<>();
15         numbers.add(10);
16         numbers.add(20);
17         numbers.add(30);
18         numbers.add(40);
19
20         Consumer<List<Integer>> print=list -> list.stream().forEach(a -> System.out.print(a + " "));
21         print.accept(numbers);
22
23     }
24 }
25
26
```

Problems Javadoc Declaration Console Error Log

<terminated> lambda8 [Java Application] C:\Program Files\Java\jdk-13.0.2\bin\javaw.exe (11-Aug-2021, 5:55:37 pm – 5:55:40 pm)

Running...

10 20 30 40