1.

**package** Lambda;

@FunctionalInterface

**interface** Addition

{

**int** add(**int** a,**int** b);

}

**interface** Subtract

{

**int** sub(**int** a,**int** b);

}

**interface** Multiply

{

**int** mul(**int** a,**int** b);

}

**interface** Divide

{

**int** div(**int** a,**int** b);

}

**public** **class** ArithmeticOperations

{

**public** **static** **void** main(String[] args)

{

System.***out***.println("Addition:");

Addition Add=(a,b)->(a+b);

System.***out***.println(Add.add(100,50));

System.***out***.println("-----------------");

System.***out***.println("Subtraction:");

Subtract Sub=(a,b)->(a-b);

System.***out***.println(Sub.sub(100,50));

System.***out***.println("-----------------");

System.***out***.println("Multiplication:");

Multiply Mul=(a,b)->(a\*b);

System.***out***.println(Mul.mul(100, 50));

System.***out***.println("-----------------");

System.***out***.println("Division:");

Divide Div=(a,b)->(a/b);

System.***out***.println(Div.div(100,50));

}

}

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}

3.

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System.***out***.println(Mul.mul(100, 50));

System.***out***.println("-----------------");

System.***out***.println("Division:");

Divide Div=(a,b)->(a/b);

System.***out***.println(Div.div(100,50));

}

}

4.

**package** Lambda;

**import** java.util.ArrayList;

**import** java.util.List;

**public** **class** RemoveOddLength

{

**public** **static** **void** main(String[] args)

{

List<String> li=**new** ArrayList<>();

li.add("Ankita");

li.add("Pritee");

li.add("Pranali");

li.add("Ashlesha");

System.***out***.println("-------------------------------");

System.***out***.println("Elements in the list are:");

**for** (String string : li) {

System.***out***.println(string);

}

System.***out***.println("-------------------------------");

System.***out***.println(" ");

li.removeIf(a->(a.length()%2 !=0));

System.***out***.println("------------------------------------------");

System.***out***.println("Elements in the list with odd lengths are:");

**for** (String string : li) {

System.***out***.println(string);

}

System.***out***.println("------------------------------------------");

}

}

5. **package** Lambda;

**import** java.util.ArrayList;

**import** java.util.Iterator;

**import** java.util.List;

**import** java.util.function.Consumer;

**public** **class** StringProgram

{

**public** **static** **void** main(String[] args)

{

StringBuilder sb=**new** StringBuilder();

Consumer<String> letter=(s)->

{

sb.append(s.charAt(0));

};

List<String> li=**new** ArrayList<>();

li.add("Ankita");

li.add("Pritee");

li.add("Parnali");

li.add("Ashlesha");

**for** (Iterator iterator = li.iterator(); iterator.hasNext();)

{

String string = (String) iterator.next();

letter.accept(string);

}

System.***out***.println("-----");

System.***out***.println(sb);

System.***out***.println("-----");

}

}

6.

package Lambda;

import java.util.ArrayList;

import java.util.List;

import java.util.function.UnaryOperator;

class MyOperator implements UnaryOperator<String>

{

@Override

public String apply(String t)

{

return t.toUpperCase();

}

}

public class UpperCaseEquivalent

{

public static void main(String[] args)

{

List<String> li=new ArrayList<>();

li.add("Ankita");

li.add("Pritee");

li.add("Pranali");

li.add("Ashelsha");

System.out.println("----------------------------------------------------------------");

System.out.println("Elements in list are:");

System.out.println(li);

System.out.println("----------------------------------------------------------------");

System.out.println(" ");

li.replaceAll(new MyOperator());

System.out.println("----------------------------------------------------------------");

System.out.println("Elements in list after replacing with upper case letters are:");

System.out.println(li);

System.out.println("----------------------------------------------------------------");

}

}

7.

package Lambda;

import java.util.HashMap;

import java.util.Map.Entry;

public class KeyValueIntoString

{

public static void main(String[] args)

{

HashMap<Integer,String> hs=new HashMap<>();

StringBuilder sb=new StringBuilder();

hs.put(1, "ProjectManager");

hs.put(2, "TeamLead");

hs.put(3, "SeniorDeveloper");

hs.put(4, "JuniorDeveloper");

System.out.println("-----------------------------------------------------------------");

System.out.println("The elements in the hashmap are:");

System.out.println(hs);

System.out.println("-----------------------------------------------------------------");

System.out.println(" ");

System.out.println("-----------------------------------------------------------------");

System.out.println("After converting entire hashmap into a string, the result is:");

for (Entry<Integer, String> m:hs.entrySet())

{

sb.append(m);

}

System.out.println(sb);

System.out.println("-----------------------------------------------------------------");

}

}

8.

package Lambda;

import java.util.ArrayList;

import java.util.Iterator;

import java.util.List;

import java.util.function.Consumer;

public class ThreadProgram

{

public static void main(String[] args)

{

Consumer<Integer> display = (i)->System.out.println(i);

List<Integer> li = new ArrayList<>();

li.add(1);

li.add(2);

li.add(3);

li.add(4);

li.add(5);

for (Iterator iterator = li.iterator(); iterator.hasNext();) {

Integer integer = (Integer) iterator.next();

display.accept(integer);

}

Thread lambdaThread=new Thread();

lambdaThread.run();

}

}