1] create generate class:

class Generate {

private String name;

public Generate(String name) {

this.name = name;

}

public GeneratedObject generateObject() {

return new GeneratedObject(name);

}

}

class GeneratedObject {

private String name;

public GeneratedObject(String name) {

this.name = name;

}

public void printName() {

System.out.println("Generated Object Name: " + name);

}

}

public class Main {

public static void main(String[] args) {

Generate generate = new Generate("Example");

GeneratedObject generatedObject = generate.generateObject();

generatedObject.printName();

}

}

Output:

Generated Object Name: Example

=== Code Execution Successful ===

2] write a java program to create generate method that take list of numbers and return the sum of all the elements and odd number.

import java.util.ArrayList;

import java.util.List;

public class Main{

public static int[] generateSum(List<Integer> numbers){

int sumAll=0;

int sumOdd=0;

for (int number:numbers){

sumAll+=number;

if (number%2!=0){

sumOdd+=number;

} }

return new int[]{sumAll,sumOdd};

}

public static void main(String[] args){

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

numbers.add(1);

numbers.add(2);

numbers.add(3);

numbers.add(4);

numbers.add(5);

int[] result=generateSum(numbers);

System.out.println("Sum of all elements: " +result[0]);

System.out.println("Sum of odd numbers: " +result[1]);

}

}

Output:

Sum of all elements: 15

Sum of odd numbers: 9

=== Code Execution Successful ===

3] write a java program to create generate method that take a list of any type and a target element it return the index of 1st occurrence of the target element in the list return -1 if the target element cannot be found.

import java.util.ArrayList;

import java.util.List;

public class Main {

public static <T> int generateIndexOf(List<T> list,T target){

for(int i=0;i<list.size();i++){

if (list.get(i).equals(target)){

return i;

}

}

return -1;

}

public static void main(String[] args){

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

stringList.add("Apple");

stringList.add("Banana");

stringList.add("Cherry");

stringList.add("Date");

String targetString="Banana";

int resultString=generateIndexOf(stringList, targetString);

System.out.println("Index of "+targetString+": "+ resultString);

}

}

Output:

Index of Banana: 1

=== Code Execution Successful ===