Write a program to create an array with the first element as the number and second element as the square of the number

CODE:

import java.util.ArrayList;

import java.util.Scanner;

public class NumberSquareArray {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the lower range: ");

int lowerRange = scanner.nextInt();

System.out.print("Enter the upper range: ");

int upperRange = scanner.nextInt();

scanner.close();

ArrayList<Pair<Integer, Integer>> result = generateNumberSquareArray(lowerRange, upperRange);

System.out.println("Sample Output:");

System.out.println(result);

}

public static ArrayList<Pair<Integer, Integer>> generateNumberSquareArray(int lowerRange, int upperRange) {

ArrayList<Pair<Integer, Integer>> array = new ArrayList<>();

for (int i = lowerRange; i <= upperRange; i++) {

array.add(new Pair<>(i, i \* i));

}

return array;

}

static class Pair<T, U> {

private final T first;

private final U second;

public Pair(T first, U second) {

this.first = first;

this.second = second;

}

public T getFirst() {

return first;

}

public U getSecond() {

return second;

}

@Override

public String toString() {

return "(" + first + ", " + second + ")";

}

}

}

OUTPUT:

C:\javap>javac NumberSquareArray.java

C:\javap>java NumberSquareArray

Enter the lower range: 45

Enter the upper range: 49

Sample Output:

[(45, 2025), (46, 2116), (47, 2209), (48, 2304), (49, 2401)]

