Write a program to create a list of all numbers in a range which are perfect squares and the sum of the digits of the number is less than 10.

CODE:

import java.util.ArrayList;

import java.util.Scanner;

public class PerfectSquareWithSumOfDigits {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int start = scanner.nextInt();

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

int end = scanner.nextInt();

ArrayList<Integer> perfectSquaresWithSum = findPerfectSquaresWithSum(start, end);

System.out.println("Perfect squares with sum of digits less than 10 in the range " + start + " to " + end + " are:");

for (int num : perfectSquaresWithSum) {

System.out.println(num);

}

scanner.close();

}

public static ArrayList<Integer> findPerfectSquaresWithSum(int start, int end) {

ArrayList<Integer> result = new ArrayList<>();

for (int i = start; i <= end; i++) {

if (isPerfectSquare(i) && sumOfDigits(i) < 10) {

result.add(i);

}

}

return result;

}

public static boolean isPerfectSquare(int num) {

int sqrt = (int)Math.sqrt(num);

return sqrt \* sqrt == num;

}

public static int sumOfDigits(int num) {

int sum = 0;

while (num > 0) {

sum += num % 10;

num /= 10;

}

return sum;

}

}

OUTPUT:

C:\javap>javac PerfectSquareWithSumOfDigits.java

C:\javap>java PerfectSquareWithSumOfDigits

Enter the start of the range: 1

Enter the end of the range: 40

Perfect squares with sum of digits less than 10 in the range 1 to 40 are:

1

4

9

16

25

36

