

```
1 package com.ffcg;
2
3 public class Divisor {
4     private final int divisor;
5
6     public Divisor(int divisor) {
7         this.divisor = divisor;
8     }
9
10    public boolean isDivisorOf(int number) {
11        if (number >= this.divisor && this.divisor
12            != 0)
13            return number % this.divisor == 0 ? true
14            : false;
15        else
16            return false;
17    }
18
19    public int getDivisor() {
20        return this.divisor;
21    }
22
23    public boolean equals(Object object) {
24        //boolean result = false;
25        if (object instanceof Divisor) {
26            Divisor Compare_Divisor = (Divisor)
27            object;
28            if (this.divisor == Compare_Divisor.
29            divisor)
30                return true;
31        }
32        return false;
33    }
34 }
```

```
1 package com.ffcg;
2
3 import java.util.ArrayList;
4 import java.util.List;
5
6 public class SetDivisors {
7     private int number;
8     private List<Divisor> listDivisors;
9
10    public SetDivisors(int number) {
11        this.number = number;
12        this.listDivisors = new ArrayList<Divisor>();
13        this.calculateListDivisors();
14    }
15
16    private void calculateListDivisors() {
17        for (int i = 1; i < this.number; i++) {
18            Divisor divisor = new Divisor(i);
19            if (divisor.isDivisorOf(this.number))
20                listDivisors.add(divisor);
21        }
22        listDivisors.add(new Divisor(number));
23    }
24
25    public boolean isEqualTo(List<Divisor>
listDivisors) {
26        return this.listDivisors.equals(listDivisors
);
27    }
28
29    public int getSumOfSquaredDivisors() {
30        int sumOfSquaredDivisors = 0;
31        for (Divisor divisor : this.listDivisors) {
32            sumOfSquaredDivisors += Math.pow(divisor.
getDivisor(), 2);
33        }
34        return sumOfSquaredDivisors;
35    }
36 }
37
```

```
1 package com.ffcg;
2
3 public class PerfectSquared {
4     public static boolean isPerfectSquared(int number
5     ) {
6         if(Math.sqrt(number)%1 == 0){
7             return true;
8         }
9         return false;
10    }
11 }
```

```
1 package com.ffcg;
2
3
4 import java.util.ArrayList;
5 import java.util.List;
6
7 public class SquaredDivisor {
8
9     private static boolean isPerfectSquaredDivisor(
10         int number) {
11         SetDivisors setDivisors = new SetDivisors(
12             number);
13         return PerfectSquared.isPerfectSquared(
14             setDivisors.getSumOfSquaredDivisors());
15     }
16
17     public static int[] searchSquaredDivisor(int
18         initialNumber, int finalNumber) {
19         List<Integer> listSquaredDivisors = new
20             ArrayList<Integer>();
21         for (int currentNumber = initialNumber;
22             currentNumber <= finalNumber; currentNumber++) {
23             if (isPerfectSquaredDivisor(currentNumber
24             )) {
25                 listSquaredDivisors.add(currentNumber
26             );
27             }
28         }
29
30         int [] arraySquaredDivisorsToReturn = new int
31             [listSquaredDivisors.size()];
32         int squaredDivisorIndex = 0;
33         for (Integer squaredDivisor :
34             listSquaredDivisors) {
35             arraySquaredDivisorsToReturn[
36                 squaredDivisorIndex++] = squaredDivisor;
37         }
38         return arraySquaredDivisorsToReturn;
39     }
40 }
```