

src/Problem2.java

```
1  /*
2  Name: Hunter Poole
3  Date: 3/17/25
4  HW #: 7
5  Problem #: 2
6  Source Code: Problem2.java
7  Action: Given an integer 1 - 100, determines if the integer
8           is odd or even via a method that returns to main.
9           Determines sum of integers of 1 - [Input] in the range
10          1 - 100, inclusive, via a method that returns to main.
11          Outputs result. Continues in a loop. Any input outside
12          of 1 - 100 will display an error and exit.
13  */
14
15  import java.util.Scanner;
16
17  public class Problem2
18  {
19
20      /*
21      Action: Determines if a number is odd or even
22      Parameters: int N
23      Returns: String " is even" || " is odd"
24      Precondition: Input must be an integer
25      */
26
27      static String OddOrEven (int N)
28      {
29          if (N % 2 == 0)
30          {
31              return " is even";
32          }
33          else
34          {
35              return " is odd";
36          }
37      }
38
39      /*
40      Action: Computes the sum of all integers up to and including
41             input integer, for starting integer 1
42      Parameters: int N
43      Returns: Sum of all integers from 1 to input integer, inclusive.
44      Precondition: Input must be an integer. Starting range must be 1, inclusive.
45      */
46
47      static int SumOfInts (int N)
```

```
48     {
49         int Sum = (N * (1 + N)) / 2;
50         return Sum;
51     }
52     /*******
53     public static void main(String[] args)
54     {
55         int Number;
56
57         Scanner Input = new Scanner(System.in);
58         System.out.print("Enter an integer 1 - 100 --> ");
59         Number = Input.nextInt();
60
61         if (Number >= 1 && Number <= 100)
62         {
63             while (Number >= 1 && Number <= 100)
64             {
65                 System.out.println(Number + OddOrEven(Number));
66                 System.out.printf("%s %d %s %d %n%n", "Sum of integers 1 - ",
Number, "is:", SumOfInts(Number));
67
68                 System.out.print("Enter an integer 1 - 100 --> ");
69                 Number = Input.nextInt();
70
71                 if (Number < 1 || Number > 100)
72                 {
73                     System.out.println("ERROR: Must enter an integer 1 - 100");
74                 }
75             }
76         }
77         else
78         {
79             System.out.println("ERROR: Must enter an integer 1 - 100");
80         }
81     }
82 }
83 }
84
85 /*
86 Enter an integer 1 - 100 --> 4
87 4 is even
88 Sum of integers 1 - 4 is: 10
89
90 Enter an integer 1 - 100 --> 12
91 12 is even
92 Sum of integers 1 - 12 is: 78
93
94 Enter an integer 1 - 100 --> 100
95 100 is even
```

```
96 Sum of integers 1 - 100 is: 5050
97
98 Enter an integer 1 - 100 --> 0           //In while-loop error
99 ERROR: Must enter an integer 1 - 100
100 */
101
102 /*
103 Enter an integer 1 - 100 --> 101         //Before while-loop error
104 ERROR: Must enter an integer 1 - 100
105 */
```