**HW10\src\Problem2.java**

```
 1  /*
 2  Name: Hunter Poole
 3  Date: 4/16/25
 4  HW #: 10
 5  Problem #: 2
 6  Source Code: Problem2.java
 7  Action: Asks for a base and an Exponent from the user. Then, calls IntegerPower function
 8          to calculate the result without using any of the math methods.
 9  */
10
11  import java.util.Scanner;
12
13  public class Problem2
14  {
15
16      public static void main(String[] args)
17      {
18          int Base, Exponent, Answer;
19
20          Scanner Input = new Scanner(System.in);
21          System.out.print("Please input the base --> ");
22          Base = Input.nextInt();
23
24          System.out.print("Please input the exponenet --> ");
25          Exponent = Input.nextInt();
26
27          Answer = IntegerPower(Base, Exponent);
28
29          System.out.print("Answer is = " + Answer);
30      }
31
32  /*
33  Action: Given two integers, a base and an exponent, finds the result of the exponential
    math.
34  Parameters: int Base, int Exponent
35  Returns: int Result
36  Precondition: int Exponent is non-zero and non-negative.
37  */
38
39      static int IntegerPower(int Base, int Exponent)
40      {
41          int Result = Base;
42
43          for (int i = 2; i <= Exponent; i++)
44          {
45              Result *= Base;
46          }
```

```java
47
48          return Result;
49      }
50
51  }
52
53  /*
54  Please input the base --> 2
55  Please input the exponenet --> 5
56  Answer is = 32
57
58  Please input the base --> 2
59  Please input the exponenet --> 10
60  Answer is = 1024
61
62  Please input the base --> 3
63  Please input the exponenet --> 3
64  Answer is = 27
65
66  Please input the base --> 8
67  Please input the exponenet --> 2
68  Answer is = 64
69  */
70
71  // Constraints tests //
72
73  /*
74  Please input the base --> 2
75  Please input the exponenet --> 0
76  Answer is = 2
77
78  Please input the base --> 2
79  Please input the exponenet --> -1
80  Answer is = 2
81
82  Please input the base --> 2
83  Please input the exponenet --> 999999999
84  Answer is = 0
85  */
```