Henry Meyerson

109190761

Lab 1

Zagrodzki; CSCI 1320-112

Lab 1 – Calculator +

**Task 1)**

Sample Run 1:

Input A: 4

Input B: 6

4.0 + 6.0 = 10.0

4.0 - 6.0 = -2.0

4.0 \* 6.0 = 24.0

4.0 / 6.0 = 0.7

4.0 ^ 6.0 = 4096.0

Sample Run 2:

Input A: 3

Input B: 2

3.0 + 2.0 = 5.0

3.0 - 2.0 = 1.0

3.0 \* 2.0 = 6.0

3.0 / 2.0 = 1.5

3.0 ^ 2.0 = 9.0

**Task 2)**

|  |  |  |
| --- | --- | --- |
| **Description** | **Inputs** | **Expected Outputs** |
| **Normal cases** | | |
| two positive numbers | 15, 7 | 22, 8, 105, 2.14285714285714, 170859375 |
| two negative numbers | -8, -123 | -131, 115, 984, 0.0650406504065041, -8.3163278125159E-112 |
| one positive and one negative number | 5, -20 | -15, 25, -100, -0.25, 1.048576E-14 |
| two positive numbers both with fractions | 4.5, 9.2 | 13.7, -4.7, 41.4, 0.489130434782609, 1022245.31004515 |
| one positive and one negative number both with fractions | 3.2, -4.5 | -1.3, 7.7, -14.4, -0.711111111111111, 0.00533120149970005 |
| one whole number and one number with fraction | 4, 3.2 | 7.2, 0.8, 12.8, 1.25, 84.4485062894652 |
| **Error case for zero** | | |
| first number is zero, second is zero | 0, 0 | 0, 0, 0, NaN, 1 |
| first number is zero, second is not zero | 0, 5 | 5, -5, 0, 0, 0 |
| first number is not zero, second number is zero | 5, 0 | 5, 5, 0, Inf, 1 |
| **Special input case of one** | | |
| first number is one, second number is not one | 1, 5 | 6, -4, 5, 0.2, 1 |
| first number is not one, second number is one | 5, 1 | 6, 4, 5, 5, 5 |
| **Causing one of results to be zero without inputs being zero** | | |
| first number equals second number | 5, 5 | 10, 0, 25, 1, 3125 |

**Task 3)**

* 1. Input First Number, Store as variable “A”
  2. Input Second Number, Store as variable “B”
  3. Add A and B, Store as variable “addition”
  4. Subtract A and B, Store as variable “subtraction”
  5. Multiply A and B, Store as variable “multiplication”
  6. Divide A by B, Store as variable “division”
  7. Raise A to the power of B, Store as variable “power”
  8. Print results of functions, float 1