Testing Results

Pylint Score

Pylint score is 10/10 as shown in the image below.

```
--------------------------------------------------------------------
Your code has been rated at 10.00/10 (previous run: 10.00/10, +0.00)
```

Input Errors

If an error occurs in input, the program asks the user to re-enter it as shown below.

```
Your selection: y
Enter your phone number (XXX-XXX-XXXX): 123-456-7890
Enter your zip code (XXXXX-XXXX): 12345-1234
Enter your first 3x3 matrix: 9 8 7 6 5 4 3 2 1
Your first 3x3 matrix does not contain 9 elements, please re-enter: 1 2 3 4 5 6 7 8 9
Enter your second 3x3 matrix: 1 2 3
Your second 3x3 matrix does not contain 9 elements, please re-enter: 5 6 4 1 2 3 6 5 8
```

Matrix Subtraction

Matrices can be subtracted successfully as shown in the picture below

```
Enter your zip code (XXXXX-XXXX): 12345-1236
Enter your first 3x3 matrix: 1 2 3 3 2 1 1 2 3
Your first 3x3 matrix does not contain 9 elements, please re-enter: 1 2 3 3 2 1 1 2 3
Enter your second 3x3 matrix: 1 2 3 4 5 6 7 8 9
Please select an operation to perform on matrices
a. Addition
b. Subtraction
c. Multiplication
d. Element multiplication
Your selection: b
The results are [ 0.  0.  0. -1. -3. -5. -6. -6. -6.]
The transpose is [ 0. -1. -6.  0. -3. -6.  0. -5. -6.]
Do you want to play the matrix game?
Y. Yes
N. No
Your selection:
```

Matrix Addition

Matrices can be added successfully as shown in the picture below

```
Enter your phone number (XXX-XXX-XXXX): 123-456-7890
Enter your zip code (XXXXX-XXXX): 12345-1234
Enter your first 3x3 matrix: 1 2 3 4 5 6 7 8 9
Enter your second 3x3 matrix: 1 2 3 4 5 6 7 8 9
Please select an operation to perform on matrices
a. Addition
b. Subtraction
c. Multiplication
d. Element multiplication
Your selection: a
The results are [ 2.  4.  6.  8. 10. 12. 14. 16. 18.]
The transpose is [ 2.  8. 14.  4. 10. 16.  6. 12. 18.]
```

Matrix Multiplication

Matrices can be multiplied successfully as shown in the picture below

```
Your second 3x3 matrix does not contain 9 elements, please re-enter: 5 6 4 1 2 3 6 5 8
Please select an operation to perform on matrices
a. Addition
b. Subtraction
c. Multiplication
d. Element multiplication
Your selection: c
The results are [ 25.  25.  34.  61.  64.  79.  97. 103. 124.]
The transpose is [ 25.  61.  97.  25.  64. 103.  34.  79. 124.]
```

Element-wise Multiplication

Matrices can be multiplied element-wise as shown in the picture below

```
Enter your phone number (XXX-XXX-XXXX): 123-456-1234
Enter your zip code (XXXXX-XXXX): 12345-1234
Enter your first 3x3 matrix: 1 2 3 4 5 6 7 8 9
Enter your second 3x3 matrix: 1 2 3 4 5 6 7 8 9
Please select an operation to perform on matrices
a. Addition
b. Subtraction
c. Multiplication
d. Element multiplication
Your selection: d
The results are [ 1.  4.  9. 16. 25. 36. 49. 64. 81.]
The transpose is [ 1. 16. 49.  4. 25. 64.  9. 36. 81.]
Do you want to play the matrix game?
Y. Yes
N. No
Your selection: n
```

Testing Table

Test	Input	Expected Output	Actual Output
Addition	A = [1 2 3 4 5 6 7 8 9] B = [1 2 3 4 5 6 7 8 9]	[2 4 6 8 10 12 14 16 18] and [2 8 14 4 10 16 6 12 18]	[2 4 6 8 10 12 14 16 18] and [2 8 14 4 10 16 6 12 18]
Subtraction	A = [1 2 3 3 2 1 1 2 3] B = [1 2 3 4 5 6 7 8 9]	[0 0 0 -1 -3 -5 -6 -6 -6] and [0 -1 -6 0 -3 -6 0 -5 -6]	[0 0 0 -1 -3 -5 -6 -6 -6] and [0 -1 -6 0 -3 -6 0 -5 -6]
Element-wise Multiplication	A = [1 2 3 4 5 6 7 8 9] B = [1 2 3 4 5 6 7 8 9]	[1. 4. 9. 16. 25. 36. 49. 64. 81.] and [1. 16. 49. 4. 25. 64. 9. 36. 81.]	[1. 4. 9. 16. 25. 36. 49. 64. 81.] and [1. 16. 49. 4. 25. 64. 9. 36. 81.]
Multiplication	A = [1 2 3 4 5 6 7 8 9] B = [1 2 3 4 5 6 7 8 9]	[30. 36. 42. 66. 81. 96. 102. 126. 150.] and [30. 66. 102. 36. 81. 126. 42. 96. 150.]	[30. 36. 42. 66. 81. 96. 102. 126. 150.] and [30. 66. 102. 36. 81. 126. 42. 96. 150.]