Test case #1. Shows how an invalid phone # is handled, and a successful test case of option a (addition).

```
Welcome to the program!
Do you want to play the Matrix Game? (Yes/No)
yes
Enter your phone number (XXX-XXX-XXXX:)
1234-567-789
Your phone number is not in correct format. Please renter: 123-456-7890
Enter your zip code+4 (XXXXX-XXXX):
12345-6789
Enter your first 3x3 matrix:
1 2 4
4 2 1
3 8 9
Enter your second 3x3 matrix:
3 2 1
7 2 5
5 2 1
Your first matrix is:
1 2 4
4 2 1
3 8 9
Your second matrix is:
3 2 1
7 2 5
5 2 1

Select a Matrix Operation from the list below:
a. Addition
b. Subtraction
c. Matrix multiplication
d. Element by element multiplication
a
You selected addition. The results are:
4 4 5
11 4 6
8 10 10
The transpose is:
4 11 8
4 4 10
5 6 10

The row and column mean values of the results are:
Row: [4.33, 7, 9.33]
Column: [7.67, 6, 7]

Do you want to play the Matrix Game? (Yes/No)
no
Thank you for using the program, have a nice day!
```

Test case #2. Shows how an invalid zip code is handled and a successful test case of option b (subtraction).

```
Welcome to the program!
Do you want to play the Matrix Game? (Yes/No)
yes
Enter your phone number (XXX-XXX-XXXX:)
123-321-1234
Enter your zip code+4 (XXXXX-XXXX):
1234-56789
Your zip code is not in correct format. Please renter: 12345-6789
Enter your first 3x3 matrix:
1 2 3
4 7 1
7 6 0
Enter your second 3x3 matrix:
8 5 6
3 6 2
6 3 1
Your first matrix is:
1 2 3
4 7 1
7 6 0
Your second matrix is:
8 5 6
3 6 2
6 3 1

Select a Matrix Operation from the list below:
a. Addition
b. Subtraction
c. Matrix multiplication
d. Element by element multiplication
b
You selected subtraction. The results are:
-7 -3 -3
1 1 -1
1 3 -1
The transpose is:
-7 1 1
-3 1 3
-3 -1 -1

The row and column mean values of the results are:
Row: [-4.33, 0.33, 1]
Column: [-1.67, 0.33, -1.67]

Do you want to play the Matrix Game? (Yes/No)
no
Thank you for using the program, have a nice day!
```

Test case #3. Testing invalid input for play the game prompt and a successful test case of option c (matrix multiplication)

```
Welcome to the program!
Do you want to play the Matrix Game? (Yes/No)
Sure
Please select a valid option (Yes/No): yes
Enter your phone number (XXX-XXX-XXXX:)
333-444-5555
Enter your zip code+4 (XXXXX-XXXX):
11111-5555
Enter your first 3x3 matrix:
1 2 3
4 5 6
7 8 9
Enter your second 3x3 matrix:
3 5 7
1 2 4
7 6 3
Your first matrix is:
1 2 3
4 5 6
7 8 9
Your second matrix is:
3 5 7
1 2 4
7 6 3

Select a Matrix Operation from the list below:
a. Addition
b. Subtraction
c. Matrix multiplication
d. Element by element multiplication
c
You selected matrix multiplication. The results are:
26 27 24
59 66 66
92 105 108
The transpose is:
26 59 92
27 66 105
24 66 108

The row and column mean values of the results are:
Row: [25.67, 63.67, 101.67]
Column: [59, 66, 66]

Do you want to play the Matrix Game? (Yes/No)
no
Thank you for using the program, have a nice day!
```

Test case #4. Shows how invalid rows are handled when making the matrix and a successful test case of option d.

```
Welcome to the program!
Do you want to play the Matrix Game? (Yes/No)
yes
Enter your phone number (XXX-XXX-XXXX:)
111-222-3333
Enter your zip code+4 (XXXXX-XXXX):
55555-4444
Enter your first 3x3 matrix:
1 23
Invalid row #1
Input must be 3 integers separated by spaces (x y z). Please try again:
1 2 b
Invalid row #1
Input must be 3 integers separated by spaces (x y z). Please try again:
1 2 3
8 9 7
6 5 7
Enter your second 3x3 matrix:
3 2 1
3 8 9
2 6 4
Your first matrix is:
1 2 3
8 9 7
6 5 7
Your second matrix is:
3 2 1
3 8 9
2 6 4

Select a Matrix Operation from the list below:
a. Addition
b. Subtraction
c. Matrix multiplication
d. Element by element multiplication
d
You selected element by element multiplication. The results are:
3 4 3
24 72 63
12 30 28
The transpose is:
3 24 12
4 72 30
3 63 28

The row and column mean values of the results are:
Row: [3.33, 53, 23.33]
Column: [13, 35.33, 31.33]

Do you want to play the Matrix Game? (Yes/No)
no
Thank you for using the program, have a nice day!
```

Pylint results:

```
(venv) C:\Users\munki\PycharmProjects\lab4>pylint lab4.py

--------------------------------------------------------------------
Your code has been rated at 10.00/10 (previous run: 9.86/10, +0.14)
```