

Example : 1

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Anaconda Prompt
(base) C:\Users\ankit>cd desktop
(base) C:\Users\ankit\Desktop>python Matrix_operation_tool.py

=== MATRIX OPERATIONS TOOL ===

Matrix A
Enter number of rows: 2
Enter number of columns : 2
Enter the matrix row by row(seperated by space:)
Row 1: 1 2
Row 2: 3 4

Matrix B
Enter number of rows: 2
Enter number of columns : 2
Enter the matrix row by row(seperated by space:)
Row 1: 5 6
Row 2: 7 8

Matrix A:
[[1. 2.]
 [3. 4.]]

Matrix B:
[[5. 6.]
 [7. 8.]]
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Enter your choice: 4

Transpose of A:
[[1. 3.]
 [2. 4.]]
Transpose of B:
[[5. 7.]
 [6. 8.]]
Enter your choice: 9
Invalid choice.
Enter your choice: 5

Determinant of A (if square):
-2.0000000000000004

Determinant of B (if square):
-2.0000000000000005
Enter your choice: 6
Rank of A = 2
Rank of B = 2
Enter your choice: 7
Exiting...

(base) C:\Users\ankit\Desktop>
```

Choose an operation:

1. Add ($A + B$)
2. Subtract ($A - B$)
3. Multiply ($A \times B$)
4. Transpose (A^T, B^T)
5. Determinant (A or B)
6. Rank (A, B)
7. Exit

Enter your choice: 1

Result:

[[6. 8.]

[10. 12.]]

Enter your choice: 2

Result:

[[-4. -4.]

[-4. -4.]]

Enter your choice: 3

Result:

[[19. 22.]

[43. 50.]]

Enter your choice: 4

Transpose of A:

[[1. 3.]

[2. 4.]]