Lab 0

Indiana University | M303 Linear Algebra | Fall 2025

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```
format rat
format compact
```

1.) Store the matrix $\begin{bmatrix} 2 & 5 & 7 & 1 \\ 3 & 1 & 1 & 0 \\ -1 & -3 & 7 & 2 \end{bmatrix}$ in MATLAB and call it M. Do not suppress the output.

```
M = [2, 5, 7, 1; 3, 1, 1, 0; -1, -3, 7, 2]
```

```
M =
     2     5     7     1
     3     1     1     0
    -1    -3     7     2
```

2.) Store the matrix $\begin{bmatrix} 1 & 3 \\ -1 & 1 \\ 0 & 0 \\ 2 & 4 \end{bmatrix}$ and call it N. Suppress the output.

```
N = [1, 3; -1, 1; 0, 0; 2, 4];
```

3.) Store the matrix $\begin{bmatrix} 3 & \frac{1}{2} \\ -\frac{1}{2} & \frac{5}{3} \end{bmatrix}$ and call it F. Do not suppress the output.

```
F = [3, 1/2; -1/2, 5/3]
```

```
F =
     3     1/2
    -1/2   5/3
```

4.) Store the matrix $\begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 2 & 3 & 4 & 5 & 6 & 1 \\ 3 & 4 & 5 & 6 & 1 & 2 \\ 4 & 5 & 6 & 1 & 2 & 3 \\ 5 & 6 & 1 & 2 & 3 & 4 \\ 6 & 1 & 2 & 3 & 4 & 5 \end{bmatrix}$ using **the multiline method** and call it G. Do not suppress the output.

```
G = [1, 2, 3, 4, 5, 6;
     2, 3, 4, 5, 6, 1;
     3, 4, 5, 6, 1, 2;
     4, 5, 6, 1, 2, 3;
     5, 6, 1, 2, 3, 4;
```

```
      6, 1, 2, 3, 4, 5]
```

```
G =
     1     2     3     4     5     6
     2     3     4     5     6     1
     3     4     5     6     1     2
     4     5     6     1     2     3
     5     6     1     2     3     4
     6     1     2     3     4     5
```