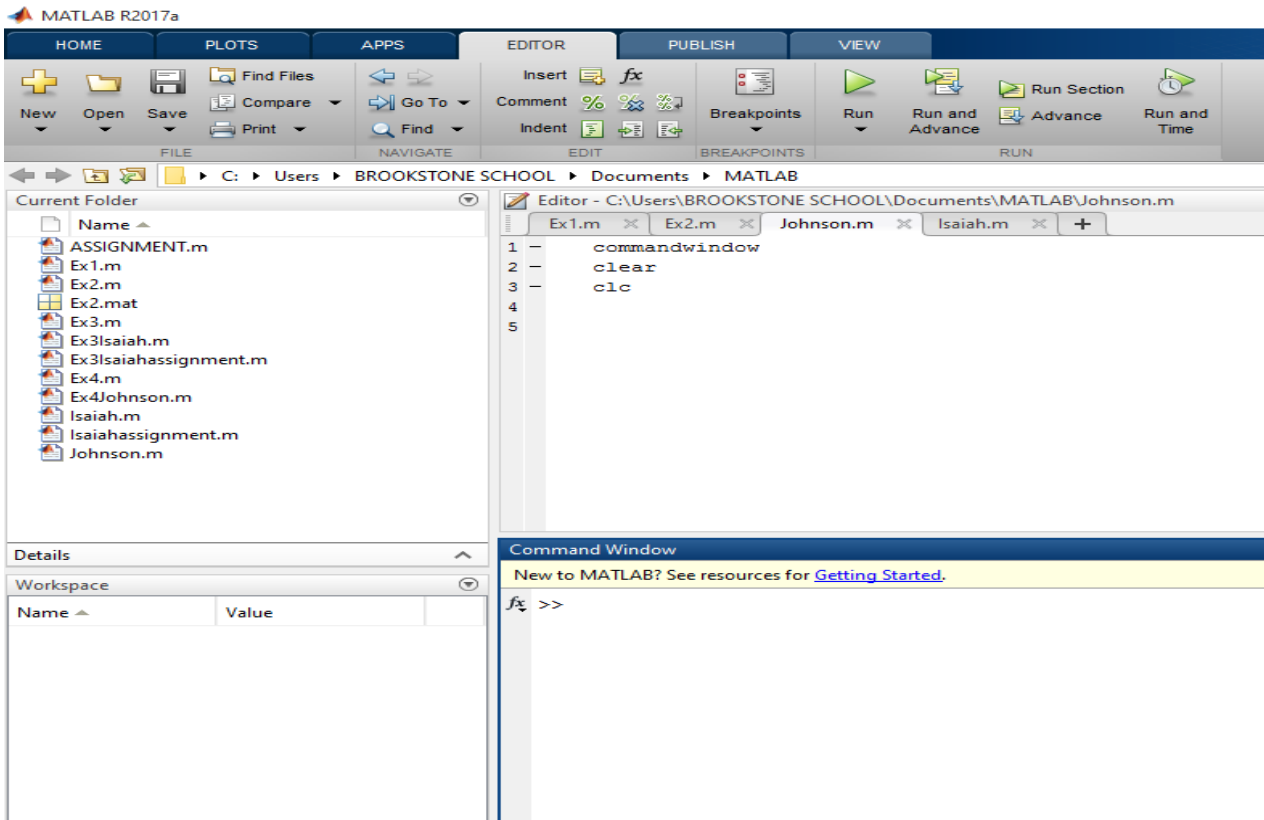


QUESTION 1

There are some variables in the workspace and the command window of MATLAB, and it is desired to clear all of them from the two places. Write the commands that can be used to execute this operation(s).

ANSWER



QUESTION 2

With the aid of MATLAB mfile, find:

- i. the determinant
- ii. the transpose
- iii. the inverse(expressed in both decimal and fractional forms) of the matrix given below:

A =

2	3	7	9	4
3	7	9	12	5
4	8	5	6	9
5	9	2	4	5
6	2	3	7	8

ANSWER

```

4 - A = [2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]
5 - D = det(A);
6 - T = A';
7 - In = inv(A);
8 - A=sym([2 3 7 9 4; 3 7 9 12 5; 4 8 5 6 9; 5 9 2 4 5; 6 2 3 7 8]);inv(A)
    
```

Command Window

New to MATLAB? See resources for [Getting Started.](#)

```

A =

     2     3     7     9     4
     3     7     9    12     5
     4     8     5     6     9
     5     9     2     4     5
     6     2     3     7     8

ans =

 [ 1447/765, -1073/765, -239/765, 40/51, -53/255]
 [ -67/153, 50/153, 8/153, -2/51, -1/51]
 [ 656/255, -469/255, -22/255, 13/17, -44/85]
 [-1444/765, 1121/765, 8/765, -31/51, 101/255]
 [ -28/45, 17/45, 11/45, -1/3, 2/15]
    
```

Command Window

New to MATLAB? See resources for [Getting Started.](#)

```

>> D
D =
-765.0000

>> T
T =

     2     3     4     5     6
     3     7     8     9     2
     7     9     5     2     3
     9    12     6     4     7
     4     5     9     5     8

>> In
In =

     1.8915    -1.4026    -0.3124     0.7843    -0.2078
    -0.4379     0.3268     0.0523    -0.0392    -0.0196
     2.5725    -1.8392    -0.0863     0.7647    -0.5176
    -1.8876     1.4654     0.0105    -0.6078     0.3961
    -0.6222     0.3778     0.2444    -0.3333     0.1333
    
```

QUESTION 3

Solve the set of algebraic equations given below using MATLAB mfile.

$$10x + 4y - 2z = -4$$

$$-3w - 17x + y + 2z = 2$$

$$W + x + y = 6$$

$$8w - 34x + 16y - 10z = 4$$

ANSWER

```

9 - JM = [0 10 4 -2; -3 -17 1 2; 1 1 1 0; 8 -34 16 -10]
10 - JB = [-4; 2; 6; 4]
11 - JIM = inv(JM);
12 - JS = JIM * JB;

```

Command Window

New to MATLAB? See resources for [Getting Started](#).

```

JM =
     0     10     4     -2
    -3    -17     1     2
     1     1     1     0
     8    -34    16    -10

JB =
    -4
     2
     6
     4

```

Command Window

New to MATLAB? See resources for [Getting Started](#).

```

>> JIM

JIM =

   -0.1786   -0.1020    0.5714    0.0153
    0.0357   -0.0153    0.0357   -0.0102
    0.1429    0.1173    0.3929   -0.0051
   -0.0357    0.1582    0.9643   -0.0612

>> JS

JS =

   4.0000
  -0.0000
   2.0000
   6.0000

```