EIT, 306387, Gabriel Ćwiek, MAPT 2, lab 7, https://github.com/Astaree/MAPT_2

Ad.: Im working on personal device so out./ might look a bit different than expected

1. Ex. 1:

```
>> whos
  Name        Size              Bytes  Class     Attributes

  a           1x1                   8  double
  aa          1x1                   8  double
  b           1x1                   8  double
  bb          1x1                   8  double
  c           1x1                   2  char
  cc          1x1                   8  double
  d           1x1                   8  double
  d1          1x1                   4  single
  d2          1x1                   1  int8
  d3          1x1                   1  uint8
  dc          1x1                   8  double
  dd          1x1                   8  double
  df          1x1                   8  double
  dr          1x1                   8  double
  ff          1x1                   8  double
  gg          1x1                   8  double
  ii          1x1                   8  double
>> pwd
ans =
    'C:\(RODO)\GitHub\MAPT_2\lab7'
>> ls
.        ..       Ex_1.m   Ex_2.m   Ex_3.m
```

2. Ex. 2:

Throws errors at lines 26, 39, 50, 72,

3. Ex. 3:
   a. Create 4x4 matrix containing 4 [2x5] matrices. Next we check which way it is larger, which is more rows than columns. After that we iterate over rows 1-10 and selected rows in matrix K = [4 1 3 5 4].
   b. Error occurs because we didn't assign it any value so compile doesn't know what it is. After fix, added function comparing results, there are no "1" so we know both arrays are "equal"

```
kM = []

disp(' While loop /Pętla while ')
[rows, columns] = size(A)
m=1
while m <= rows
  disp('iterator value:')
  m
  disp('m-th row of the matrix A:')
  A(m,:)
  kM = [kM; A(m,:)]
  m = m + 1;
end

%compare matrices
C =kA~=kM
```

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

4. Ex. 4:
   a. Generating random matrices A and B:

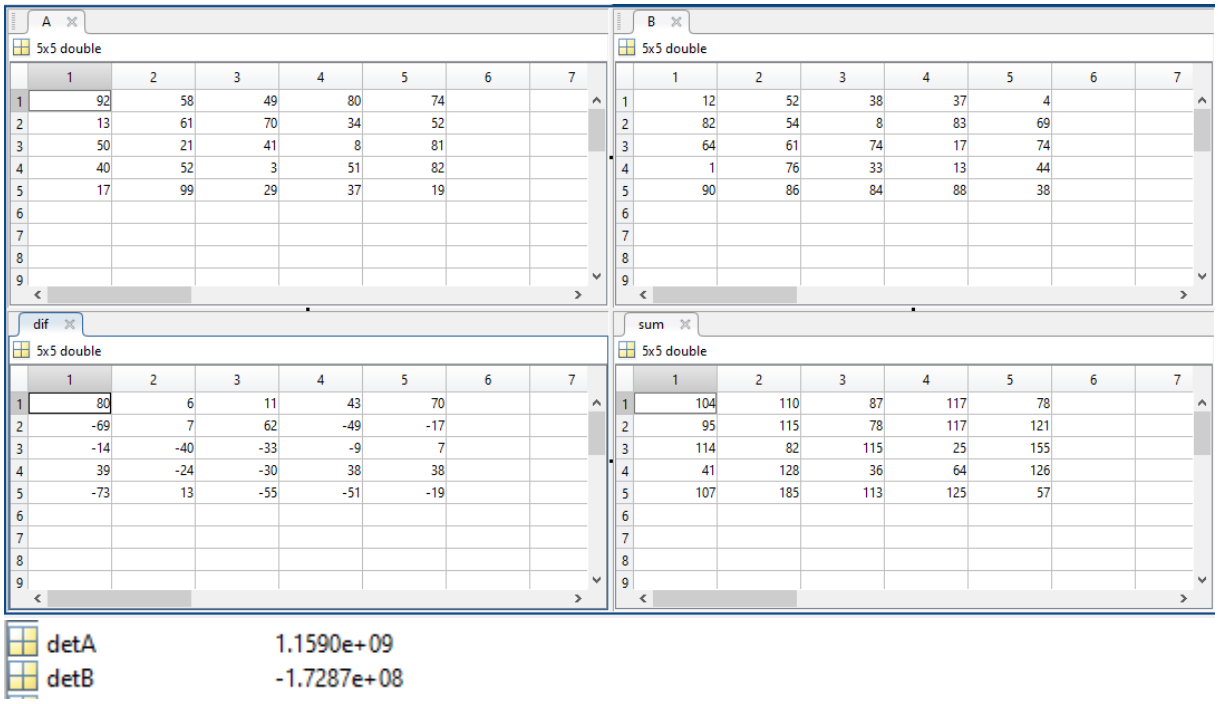
```
A = randi([0 100],5,5)
B = randi([0 100],5,5)

[sum,dif,detA,detB]=teapot(A,B)
```

   b. Creating function that adds, subtracts and calc det of matrix:

```
function [sum, dif,detA,detB] = teapot(A,B)
%TEAPOT Summary of this function goes here
%   Detailed explanation goes here
    sum = A + B;
    dif = A - B;
    detA = det(A);
    detB = det(B);
end
```

   c. Output:



A — 5x5 double

	1	2	3	4	5	6	7
1	92	58	49	80	74		
2	13	61	70	34	52		
3	50	21	41	8	81		
4	40	52	3	51	82		
5	17	99	29	37	19		
6							
7							
8							
9							

B — 5x5 double

	1	2	3	4	5	6	7
1	12	52	38	37	4		
2	82	54	8	83	69		
3	64	61	74	17	74		
4	1	76	33	13	44		
5	90	86	84	88	38		
6							
7							
8							
9							

dif — 5x5 double

	1	2	3	4	5	6	7
1	80	6	11	43	70		
2	-69	7	62	-49	-17		
3	-14	-40	-33	-9	7		
4	39	-24	-30	38	38		
5	-73	13	-55	-51	-19		
6							
7							
8							
9							

sum — 5x5 double

	1	2	3	4	5	6	7
1	104	110	87	117	78		
2	95	115	78	117	121		
3	114	82	115	25	155		
4	41	128	36	64	126		
5	107	185	113	125	57		
6							
7							
8							
9							

detA	1.1590e+09
detB	-1.7287e+08