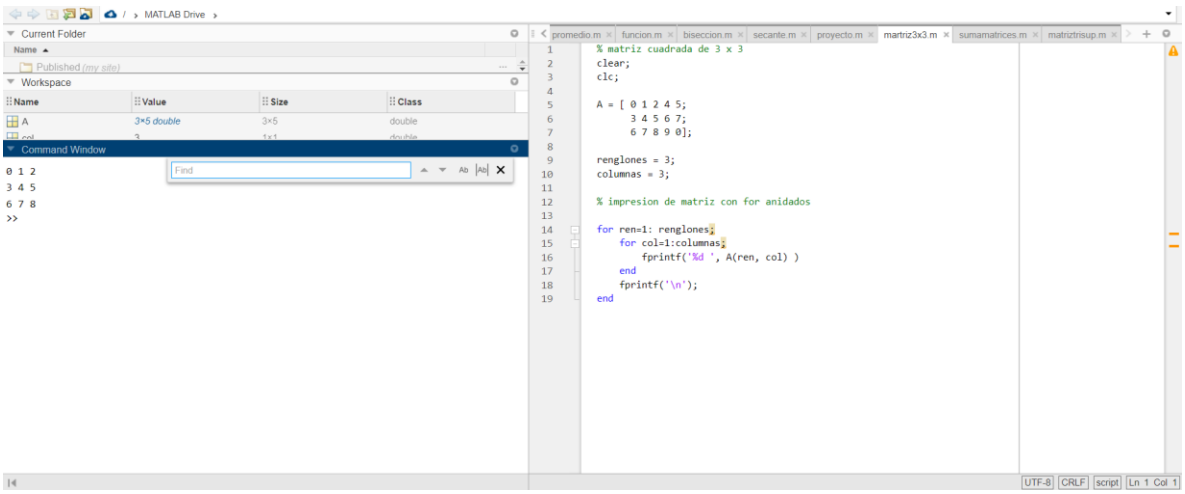
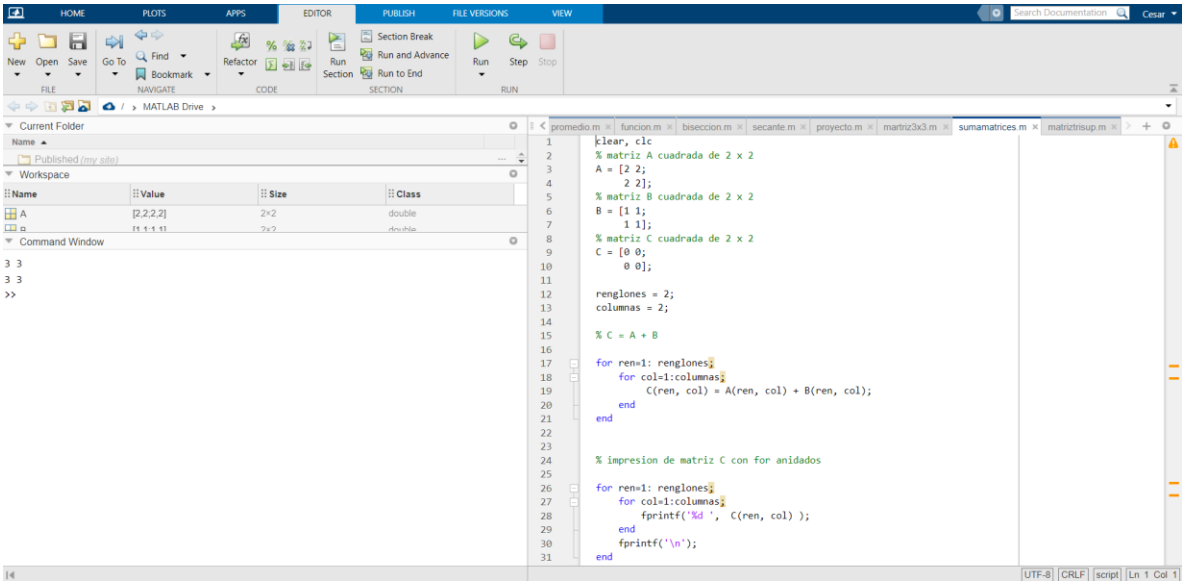
Definir matriz 3x3



```
% matriz cuadrada de 3 x 3
clear;
clc;

A = [ 0 1 2 4 5;
      3 4 5 6 7;
      6 7 8 9 0];

renglones = 3;
columnas = 3;

% impresion de matriz con for anidados

for ren=1: renglones;
    for col=1:columnas;
        fprintf('%d ', A(ren, col) )
    end
    fprintf('\n');
end
```

```
0 1 2
3 4 5
6 7 8
>>
```

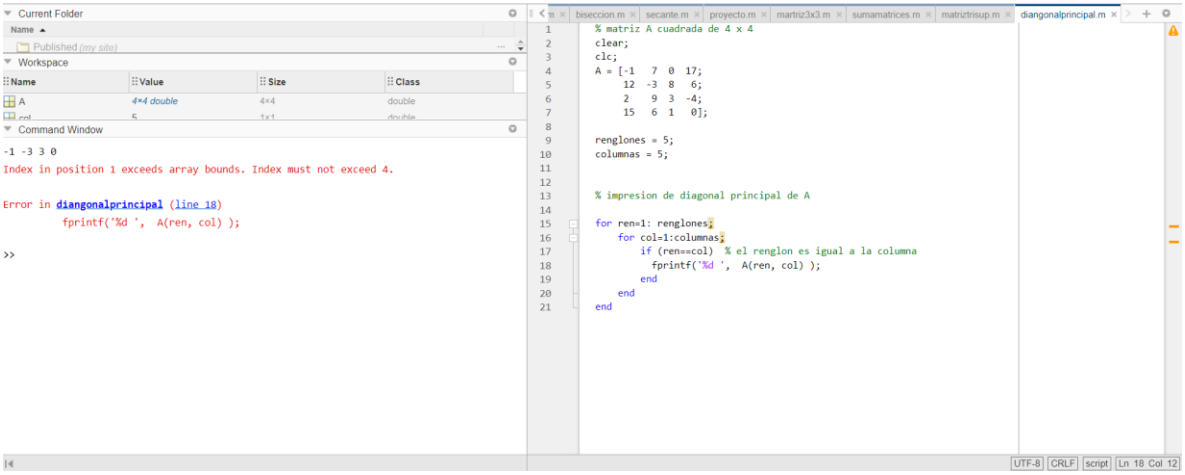
Suma Matrices



```
clear, clc
% matriz A cuadrada de 2 x 2
A = [2 2;
     2 2];
% matriz B cuadrada de 2 x 2
B = [1 1;
     1 1];
% matriz C cuadrada de 2 x 2
C = [0 0;
     0 0];

renglones = 2;
columnas = 2;

% C = A + B

for ren=1: renglones;
    for col=1:columnas;
        C(ren, col) = A(ren, col) + B(ren, col);
    end
end


% impresion de matriz C con for anidados

for ren=1: renglones;
    for col=1:columnas;
        fprintf('%d ', C(ren, col) );
    end
    fprintf('\n');
end
```

```
3 3
3 3
>>
```

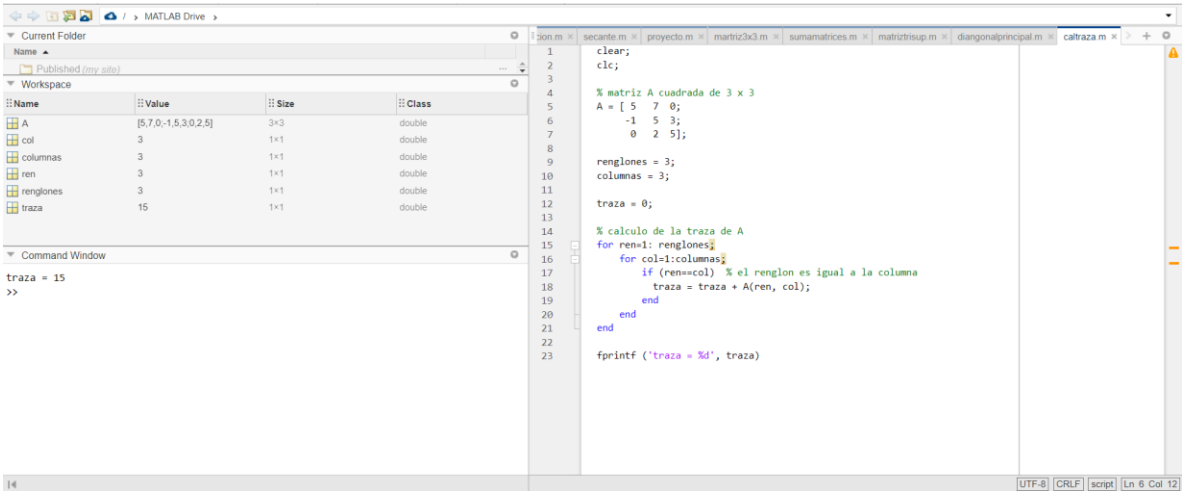
Diagonal principal



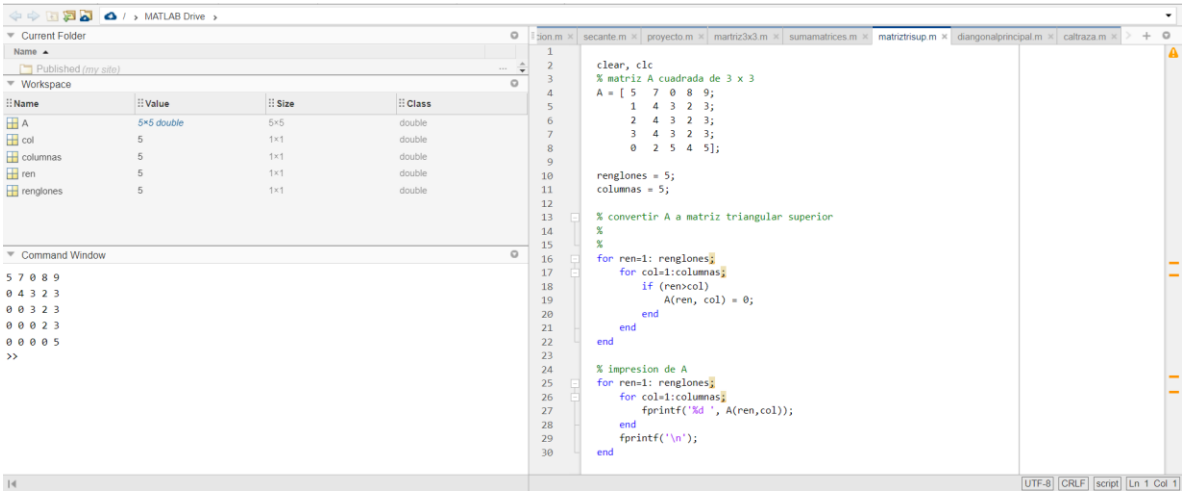
```
% matriz A cuadrada de 4 x 4
clear;
clc;
A = [-1  7  0  17;
     12 -3  8   6;
      2  9  3  -4;
     15  6  1   0];

renglones = 5;
columnas = 5;


% impresion de diagonal principal de A

for ren=1: renglones;
    for col=1:columnas;
        if (ren==col)  % el renglon es igual a la columna
          fprintf('%d ', A(ren, col) );
        end
    end
end
```

```
-1 -3 3 0
Index in position 1 exceeds array bounds. Index must not exceed 4.

Error in diangonalprincipal (line 18)
        fprintf('%d ', A(ren, col) );

>>
```

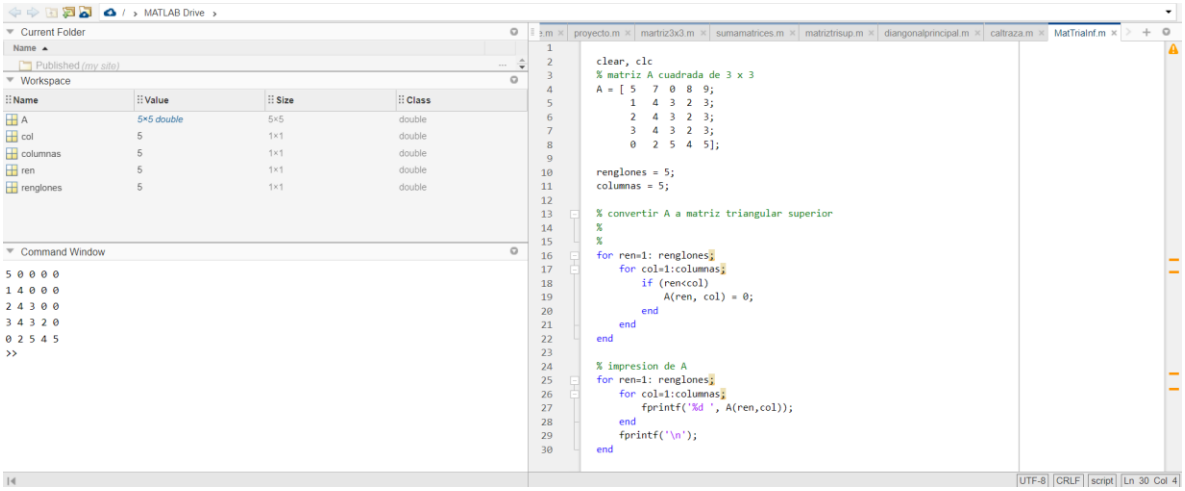
Traza



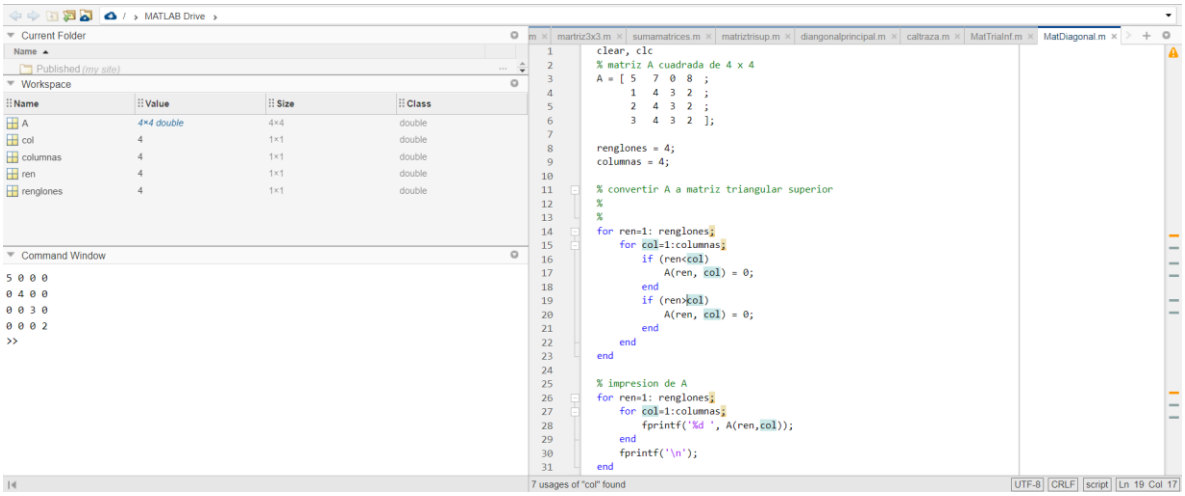
Matriz triangular Superior



Matriz triangular Inferior



Matriz Diagonal



Matriz Identidad