CS 1173: MATLAB median function

The median function returns the median or middle value along an array dimension.

Example 1: Different ways to take median of array A

\[
A = \begin{bmatrix} 1, 2, 6; 4, -7, 0 \end{bmatrix};
B = \text{median}(A, 1);
C = \text{median}(A, 2);
\]

\[
B = \text{median}(A, 1) = \begin{bmatrix} 2.5 & 2.5 & 3 \end{bmatrix}
\]

\[
C = \text{median}(A, 2) = \begin{bmatrix} 2 \\ 0 \end{bmatrix}
\]
CS 1173: MATLAB median function (1 argument)

When you don’t include the dimension argument, median finds the middle value along the first non-singleton dimension. For a single row or column, the result is just one number.

B = median(A)

resulting median array to find median of

Example 1: A has both rows and columns

A = [1, 2, 6; 4, -7, 0];
B = median(A);
C = median(A(:));
The first non-singleton dimension is 1

B = median(A) =
[2.5  -2.5   3]

C = median(A(:)) = 1.5

Example 2: A has just one row

A = [1, 2, 6];
B = median(A);
The first non-singleton dimension is 2

B = median(A) = 2

Example 3: A has just one column

A = [1; 4];
B = median(A);
The first non-singleton dimension is 1

B = median(A) = 2.5