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1. Gauss-Jordan method:

For each time we need make some elements become 0, to achieve an upper triangular, so in the first time, we will need times multiplication and times subtraction, in second time we will need times multiplication and times subtraction and so on.

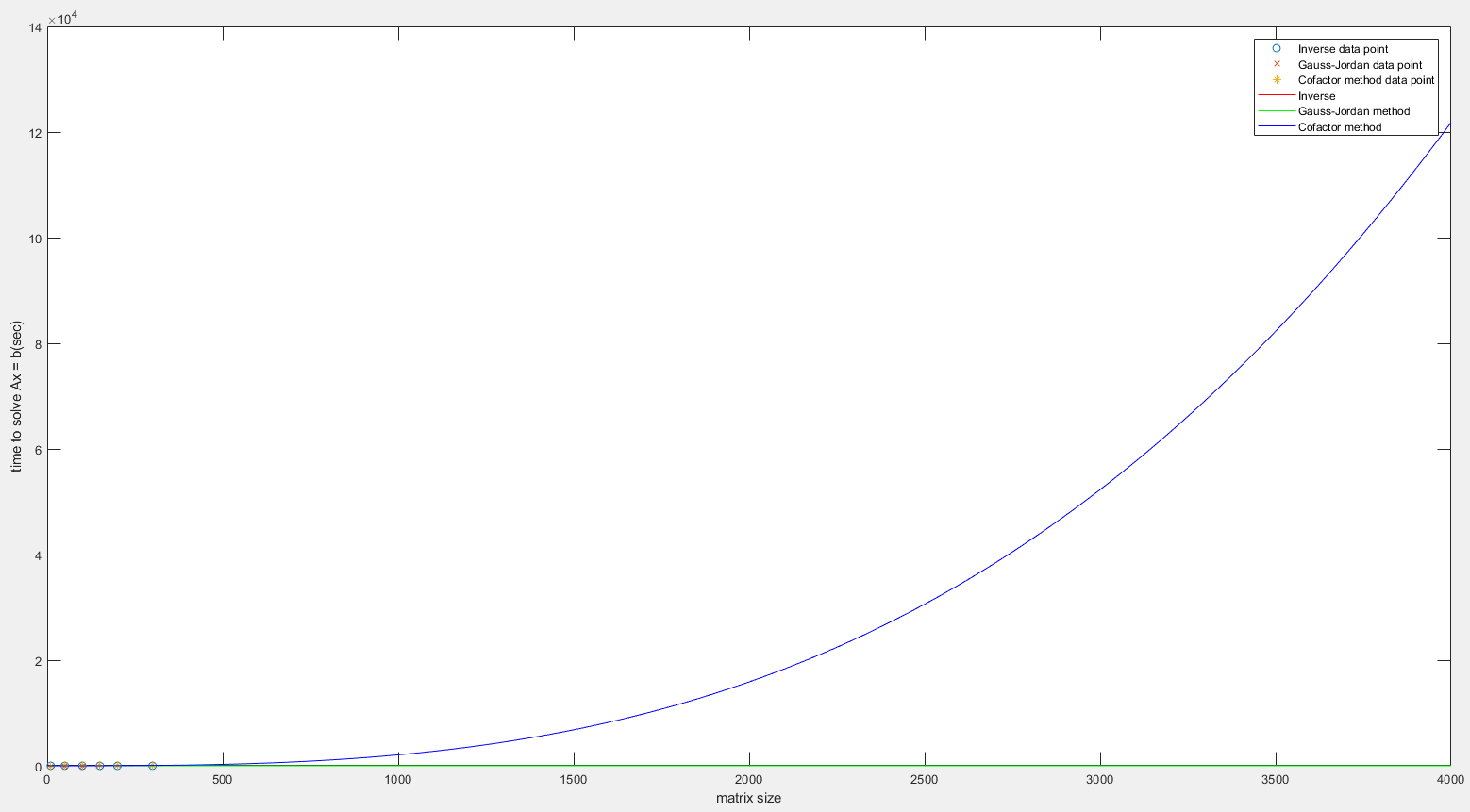
Totally we will need:

1. Cofactor method:

We use det built-in function in Matlab and it compute triangular factors obtained by Gaussian elimination with the LU function. To compute determinant, the time complexity is . For elements, we will compute each determinant, so totally we need O().

1. Inverse:

We use built-in function to calculate inverse of matrix A



The red line is inverse method, and it almost overlaps with green line (Gauss-Jordan method)