MA 423 – Matrix Computations

Lab – 8

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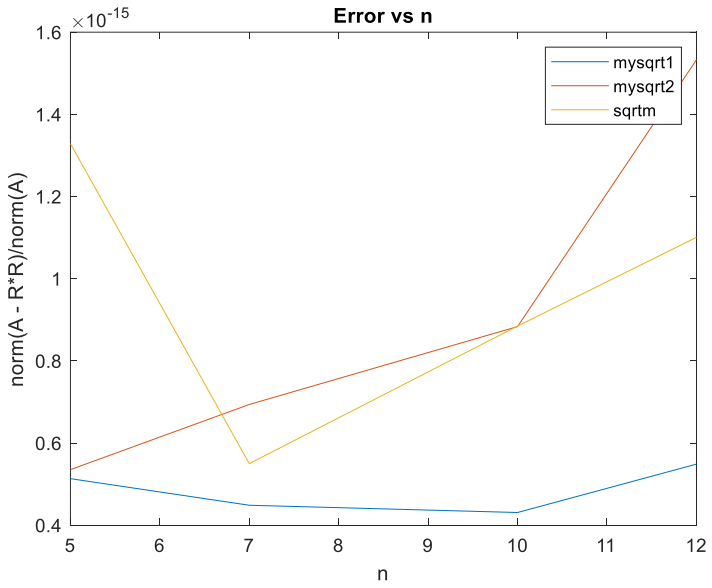
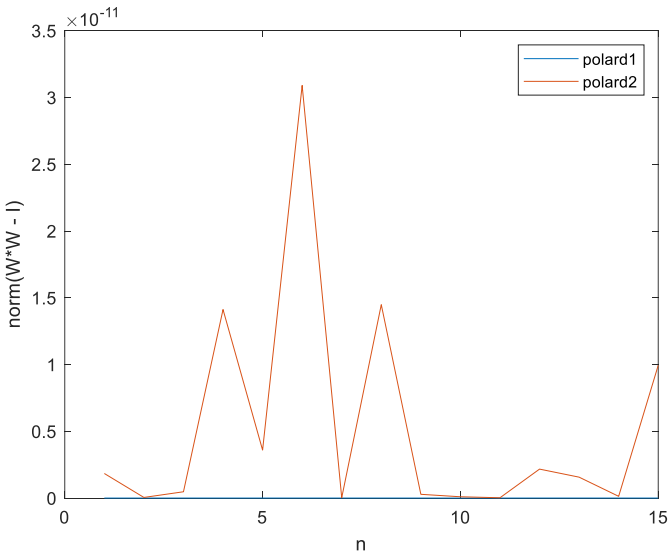
1 QUESTION - 2:



Observations:

- According to the plot, the relative error is always less for **mysqrt1** function. Hence it is reliable and better.
- For lower value of n, the relative error for **mysqrt2** is less than that of **sqrtm**, but the nature is reversed for higher values of n.

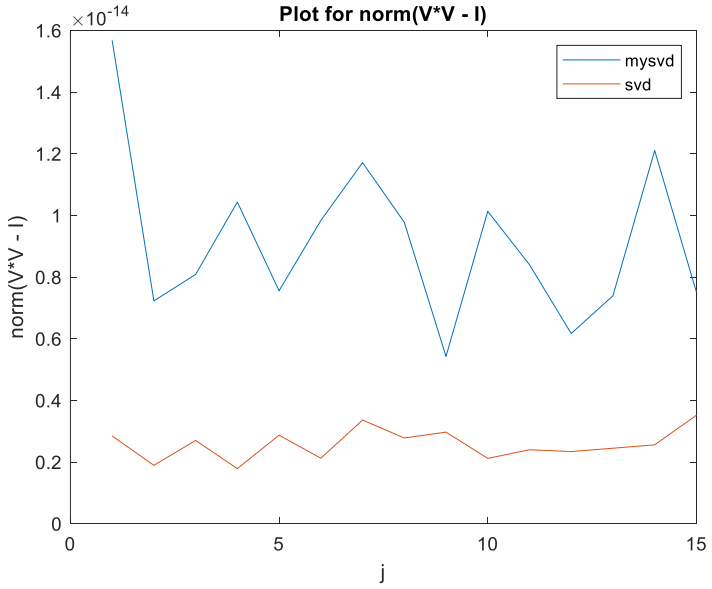
2 QUESTION - 3:

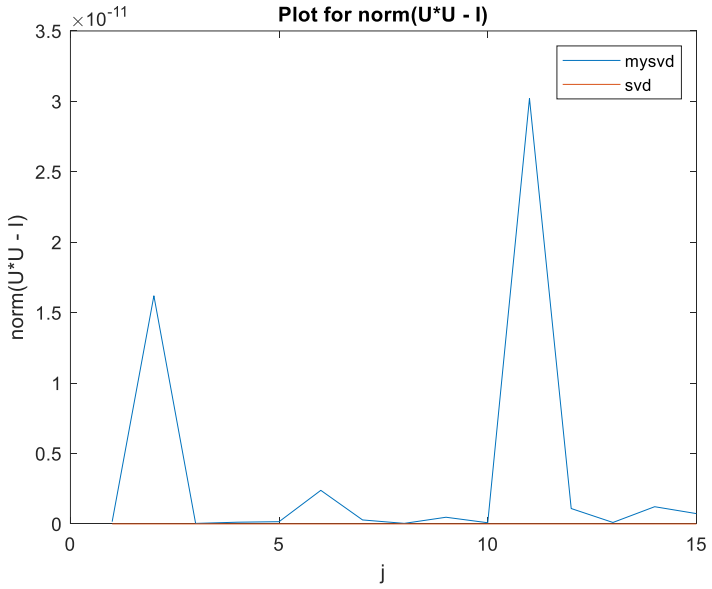


Observations:

- It is evident that the **polard1** is better and reliable than **polard2**. The relative difference in both the methods is very high when compared to the norm difference parameter.

3 QUESTION - 4:





Observations:

- It is clear from the plots that the **inbuilt svd function** is better than **mysvd**. The departure from orthogonality is more in matrices U and V when computed using mysvd.