CS3523-OPERATING SYSTEMS-2

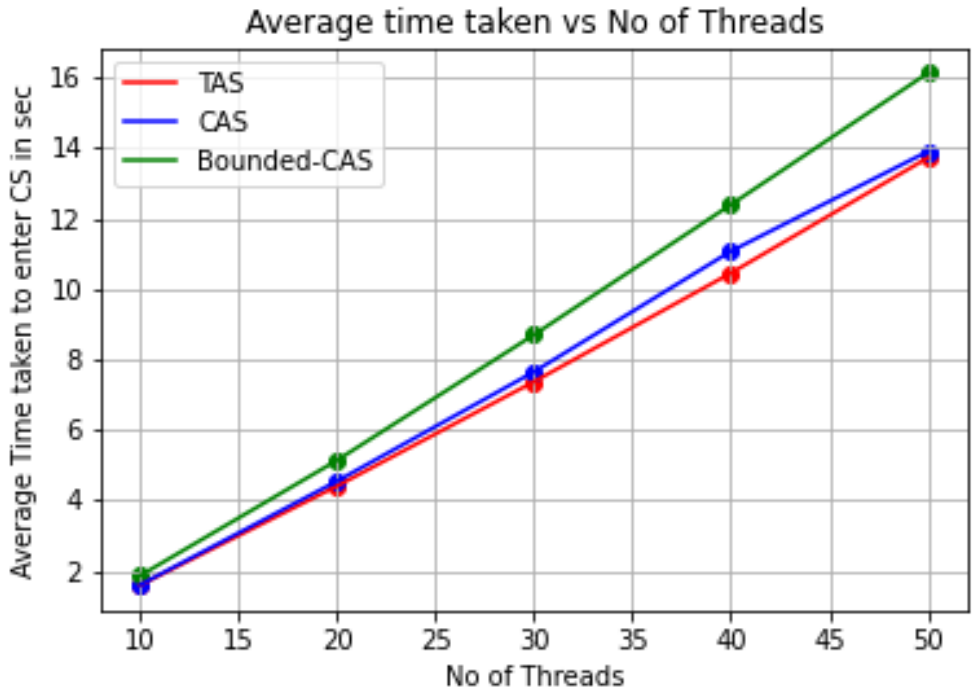
REPORT :

Assumption:

- In the input file given in pdf has λ1 , λ2 values as 5,20 .With these values it is taking hours to do the simulation for 5 times for each point .
- So I chose the values of λ1 , λ2 as 0.5 , 2 respectively .Which takes comparitevly less time .

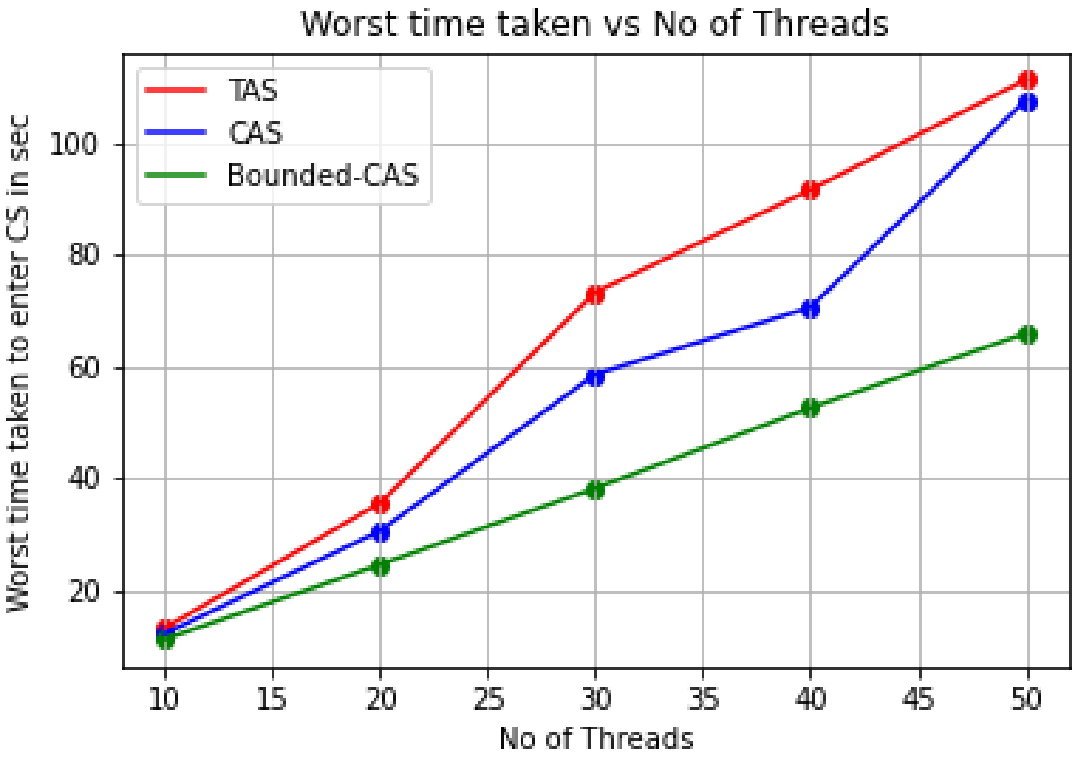
Comparision of performance between TAS , CAS , Bounded CAS ME ALGORITHMS :

- The below graph i.e Graph-1 shows the performance of tas , cas , bounded cas ME algorithms by caluclating average waiting time of a thread to enter CS with varying the no of threads (n) for the fixed values of λ1=0.5 and λ2 =2 respectively.



Graph-1

- The below graph gives the comparison between tas , cas , bounded cas ME algorithms by caluclating the worst time taken by a thread to enter the CS with varying no of threads (n) for the fixed values of λ1=0.5 and λ2=2 respectively .



Graph-2

Analysis :

- We can clearly say that the Worst time taken to enter the CS (Graph-2) is least in Bounded-CAS-ME algorithm than the tas , cas algorithm since it gives equal chance for all threads to enter the CS which prevents starvation & Due to this we get the average time taken to enter the CS (Graph-1) is high for Bounded-CAS-ME algorithm than the tas , cas algorithms . These results are expected as the theoritical results .So,Bounded-CAS-ME performs better than tas , cas algorithms in terms of worst time taken to enter CS .
- When we come to tas , cas algorithms we have got a slight variation between average time taken by a thread to enter CS(Graph-1) for tas , cas algortihms with the upperhand of cas algorithm .Because cas algorithm does more operations than that of tas algorithm.When we come to worst time taken by a thread to enter CS(Graph-2) we got

that TAS had upperhand than CAS algorithm and the variation is small.

- So,At last when measuring through average waiting time TAS/CAS performs better and Bounded-CAS performs worst.
- When measuring through worst waiting time Bounded-CAS performs better and TAS/CAS performs worst.

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