

SimpleMultithreader - Using Multithreading with Ease

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Individual Contribution

- Aditya: making the for_parallel functions and their approach and time handler .
- Abhishek: changes in the functions and error handling .

Implementation

the steps for the implementation of the Scheduler are as follows:

1. we only had to make the for_parallel functions in this assignment according to the signature given in the pdf .
2. we stored the low1 , high1, low2 , high2 and the lamnda functions in a struct of args . Now we made two array one of pthread_t type and another of args type and just like array sum broke the operation of matrix multiplication and sum of two arrays into nthread number of operations .
3. thus in the function of the pthread_create we are using for loop to do the operation but in chunks using threading .
4. thus using arguments for nthreads in the commands we can see the difference in time taken which is implemented using timespec in c.
5. This is the main idead of our implementation .

Github Repository

Steps to run:

1. First write make command to run the makefile provided .
2. for default usage use ./vector or ./matrix
3. for specific usage use ./vector number_of_threads array_size(number of enteries)