ADVANCED SYSTEMS PROGRAMMING – EEL5934

ASSIGNMENT-2

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PROBLEM STATEMENT:

In this Assignment, we have implemented a multi-threaded program using pthreads library to achieve the following functionalities mentioned below

Threads:

Mapper Pool Updater: Reads a text file and writes words into mapper pool for each entry where as each entry should consists of words of same alphabet.

Mapper: Reads the data from mapper pool and adds a count value as 1 for each word and this tuple say (word, 1) is written into reducer pool.

Reducer: Reads the data from reducer pool for each entry then counts the number of times the word is repeated. Each count is appended correspondingly with the word and tuples (word, count) are written into summarizer pool.

Summarizer: Reads the data from summarizer pool for each entry .this entry includes tuples of form (word, count) ,where all the words start with same letter then creates a tuple of form (letter,totalcount) and writes into Letter count table.

Wordcountwriter: Reads from a summarizer pool and writes to wordcount.txt

Lettercountwriter: Reads from letter count table and writes to lettercount.txt

How To Run:

1. Download the compressed file named Asp_19343642
2.Extract the file and go to that folder
3.Enter make command
4.Execute the program the following command

./Asp_19343642 make

Complilation done

./Asp_19343642 filename #mapperthreads #reducerthreads #summarizerthreads

Eg: ./Asp_19343642 file.txt 2 2 2

5.Output is stored in wordcount.txt and lettercount.txt