

The maximum size of matrix that we can multiply (in terms of  $r_1 * c_2$ ) is around 9500. This is because the maximum user process for our machine is 30426

```
aryan@lenovo-ubuntu:~$ ulimit -u  
30426  
aryan@lenovo-ubuntu:~$
```

Thus we can create around  $(9500/30426 * 100)$  31% child processes of the maximum number of processes. At any given instant at most 8 processes can run parallelly which decreases the total time of computation for matrix multiplication by a factor of 4.

Details :

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