

How to reduce the time required for completing the job?

There are many ways we can reduce the time required for completing the job by assigning the job to #1 person only

1. increase the energy levels of the resource, so that he would be more active in working on the job by which we can reduce the time required for completing the job

#100 (original) = 95 hours

#95 (reduced) = 92 hours

improving the energy efficiency levels of a resource will proportionately improves the performance and reduces the time required for completing the job?

No, the change in performance because of improving energy levels will not be proportionate, initially we might observe considerable amount of difference, but after increasing to a threshold level, they may not be any impact in performance

2. employ optimized methodologies and best practices in working on the job

#1 lac loc = 70k loc = 89 hours

#70k loc = 55k loc = 87 hours

I can employ optimization technics and best practices in re-designing the system, but i cannot build the system with 1 line of code, so we can able to achieve improvement or reduce time only to certain extent only

3. employ better tools and technologies in working on the job

we should use right tool for every job, for eg.. we cannot use a knife to cut a tree, this job will be never ending, instead we should use a saw for cutting a tree

similary, the program that has been developed could be on legacy language and running on heavy operating system platform instead let us employ latest tools and technologies

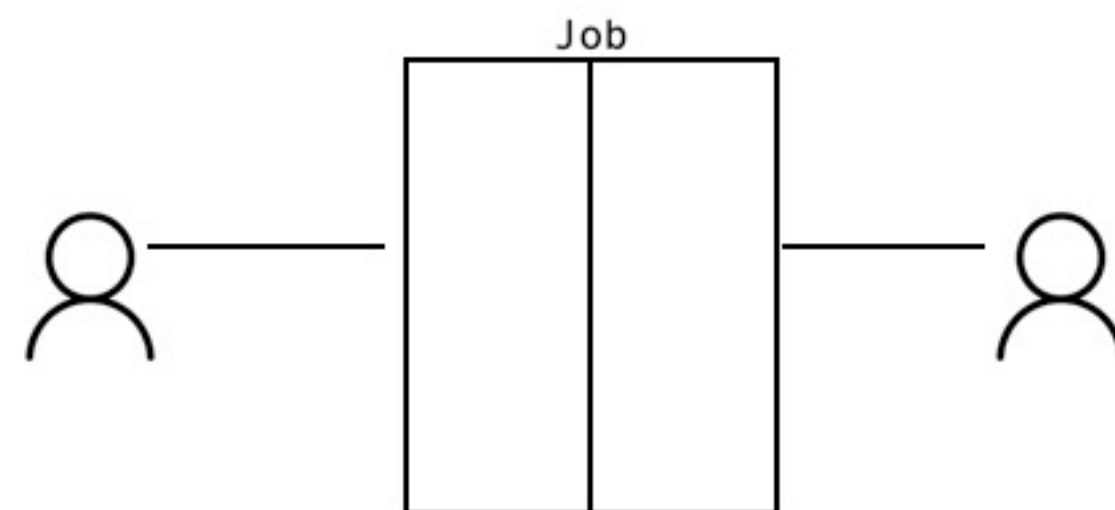
like java platform: for building application, so that we have multi-threading and memory management built-into the language itself

run the application on linux platform: so that it consumes minimum system resources in running the program

so that we can reduce time required for running the job: 80 hours

From the above we can understand, whatever the technics we employ, by assigning a job to one single person we will not be able achieve a huge/drastric change in computing the solution. So if we are looking for a drastic change in terms of time for completing the job for eg.. instead of 100 hours if we want the job to be completed in 50 hours, the only way is to distribute the job to multiple-people.

That is where distributed technology comes into picture. Assign the job to multiple people, so that mutal participating resources will work in parallel to complete the job quickly



break the job into #2 equal indepenent parts, in such a way that both the people can work on the job parallely

Instead of assigning the job to one person, break the job into #2 equal indepenent parts and assign the job to #2 people so that both the people can work on the job parallely.

1. So each of them will be able to complete their part within #50 hours itself

2. at the end of #50 hours each of them will be able to compute their individual parts of output, but we want combine output of total job, that may require an additional #5 hours in computing the final output

3. since both the people are working on same job, they need co-ordination in computing the job which may require an additional #5 hours

So total time in computing the output of the job is: 60 hours, which is an drastic change in computing the job, this can be only achieved by distributing the job across multiple people.