Calculate Min-Time

Description

List of jobs with different time requirements, and number workers available as well as time taken by a worker to complete per unit job is given. With that, the workers are assigned with jobs to find the minimum time requirements. If the minimum time is greater than the deadline, workers are hired to complete the task.

Actors

* Workers to whom the jobs are assigned.
* Jobs which the workers are assigned.
* Assigner that assigns the job.
* Hire, are those who are hired newly.

Trigger

When all the necessary data is provided

Pre-condition

* Workers should be available.
* Time requirements of different jobs should be given.

Basic Flow

* Jobs are assigned by the assigner to each worker randomly such that the time taken to do the jobs minimized.
* A new worker is recruited if the minimum time calculated after assigning jobs exceeds the deadline.
* The jobs go into hiring and the hiring process is done.

Exception

No exceptions

Level

Kite Level: Summary of goals

Post-condition

* New workers are hired
* Job is allocated to each worker such that minimum time is consumed.

Stakeholders

* Workers to whom the jobs are assigned.
* New Hires who get hired to do the job.