

Instruction

- 1) IDEF0 – maps process for 2 perspectives (TAS and Driver). Please study all supplemental files to create IDEF0 from each perspective.
- 2) IDEF1x – produces the information model in database.
- 3) Arena – runs simulation for 32 days replication length with 1-replications run.
- 4) Dashboard – design web-based dashboard for a manager and operators at TAS. You should include the following options on the dashboard:
 - a. Log-in screen on a main page (separate the accounts for a manager and operators.)
 - b. Once a manager log-in, there are 2 options to select between operation dashboard and *financial dashboard. If operators log-in, they can see only operation dashboard.
 - c. For operation dashboard, A manager can see whole information related to the operation of TAS whereas the operator can only view some information.

An operator's operation dashboard should consist of:

- i. Daily amount of gas already filled so far.
- ii. Daily number of trucks which are in/out of the DC.
- iii. Average/Current Number of queue at each station.
- iv. Average waiting time at each station so far.
- v. Current WIP.
- vi. Current number of resources busy.
- vii. Current number of resources fail.
- viii. Current average cycle time.

A manager's operation dashboard contains above information and add-on the following:

- i. Weekly/Monthly amount of gas already filled.
- ii. Weekly/Monthly number of trucks which are in/out of the DC.
- iii. Weekly/Monthly average number of queue at each station
- iv. Weekly/Monthly average waiting time at each station so far.
- v. Average WIP.
- vi. Scheduled utilization of each resource.
- vii. Average cycle time.

5) The web page must include a search engine to find the history of each truck ID which show:

- a. Tracking time of each process (Arrival time and Finish time)
 - b. Service time for each process.
- For financial aspect, you will get the description from Aj. Pond later.