

Homework 5

1. greedy algorithm can find the shortest time spent in the system.

Here is how greedy algorithm works

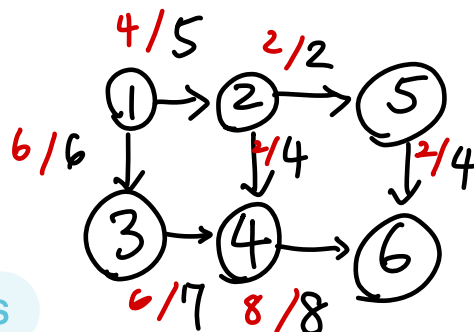
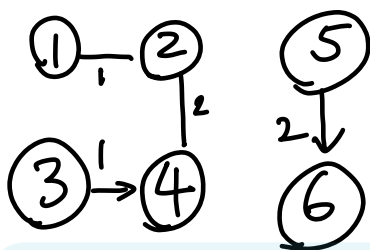
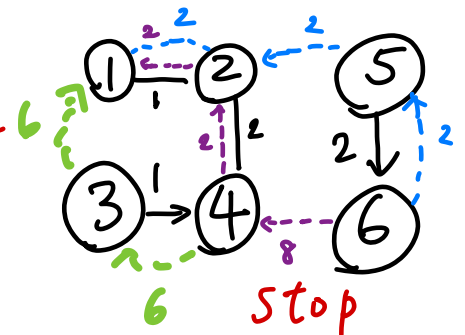
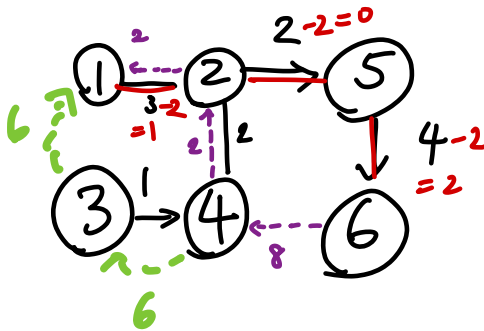
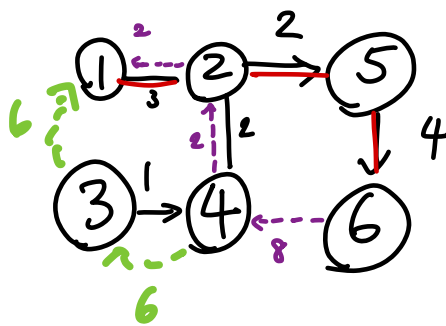
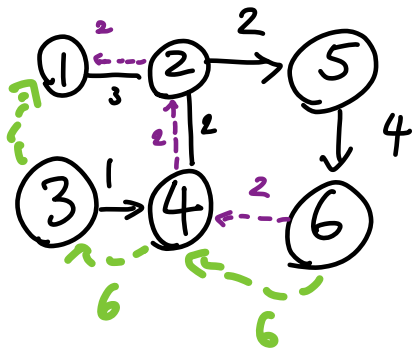
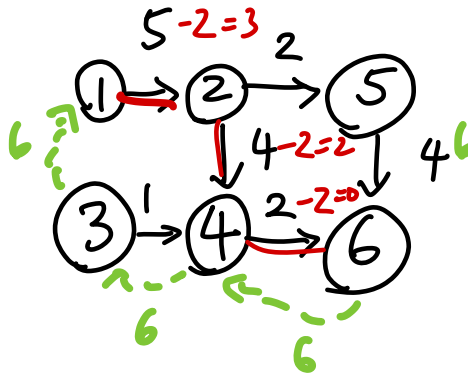
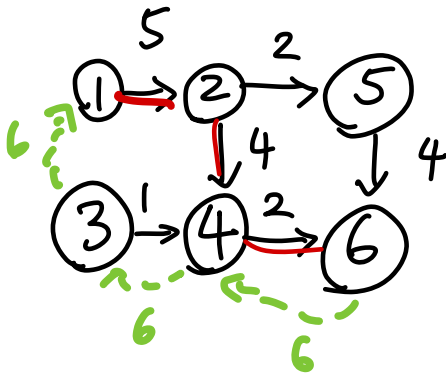
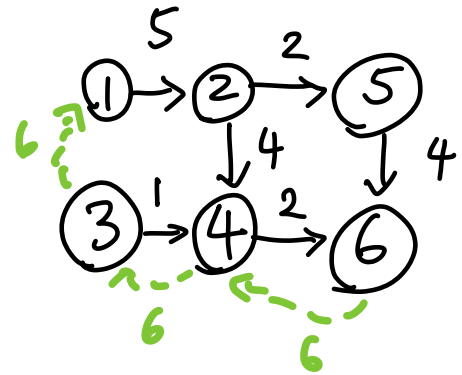
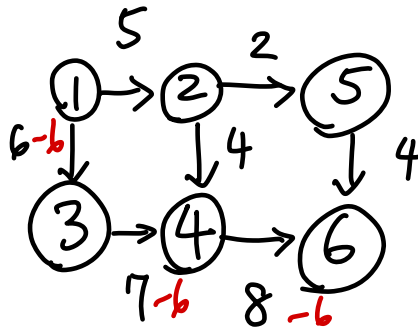
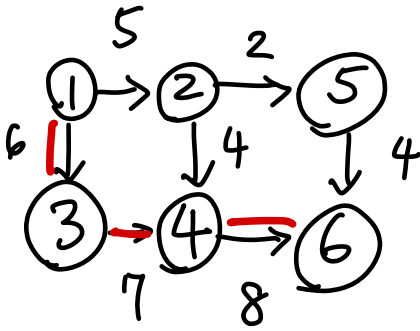
- ① Sort the jobs in ascending order of duration time
- ② execute the jobs in sorted order

greedy algorithm doesn't always have optimal solution for every problem.

Because it doesn't operate exhaustively on all the data. It can make certain choices too early, preventing them from finding the best overall solution later.

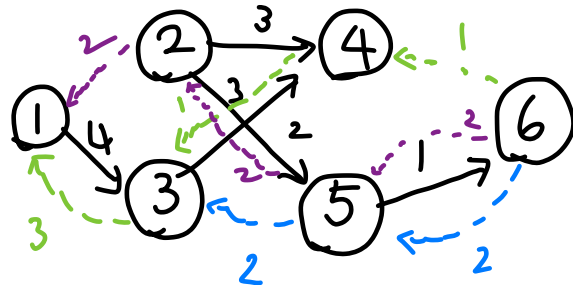
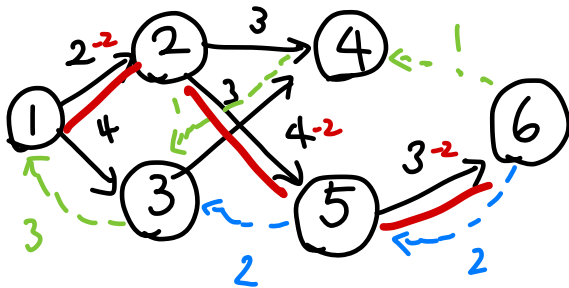
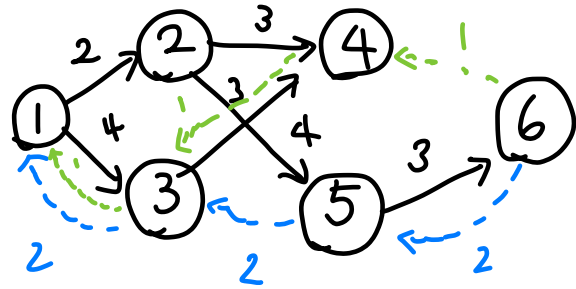
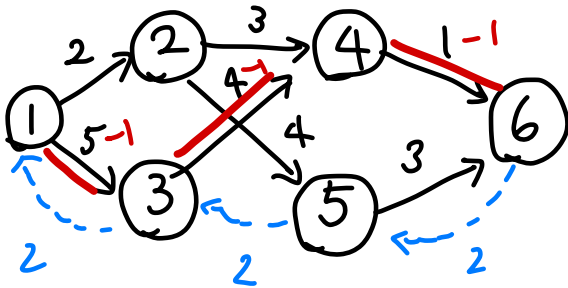
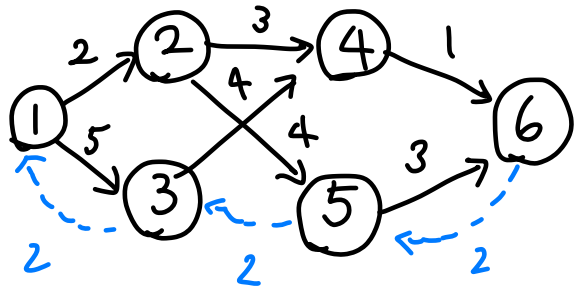
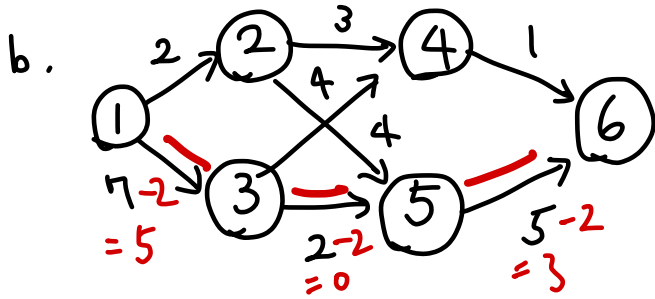
2. a. applying Ford - Fulkerson method

1 is source and 6 is sink

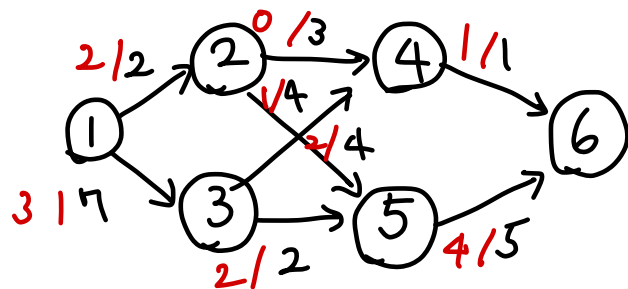
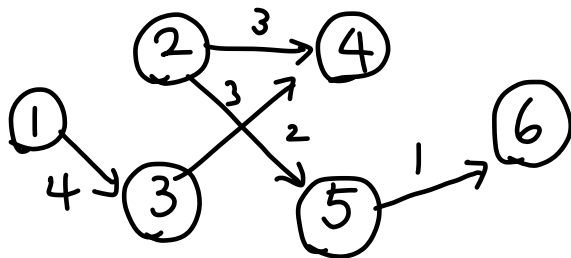


flow = capacity - residual

total flow = 10



Stop



flow = 5