COP 4516 3/5/2024

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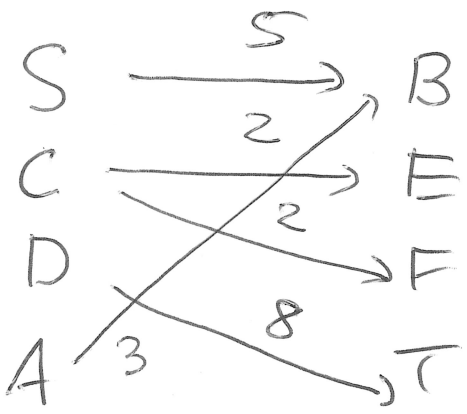
(1) Send me Team Names (1, 2, 3 in sorted order pref) email dmarino@ucf.edu
Inst / Prof Last Name + Nickname/mascot like
= Monty's Monsters"

(2) Announcement on WC mapping each team to a room. (10 teams in each room.)

(3) Team Set 6 problems (Team 1-6)
Gone Apr 13 - 20
Mar 15 (I'll be here 9am, leave early.)
Attendance @ 9:30am

Network Flow

Last Search S, C, D, A reachable from S



Left Right

min cut
= max flow

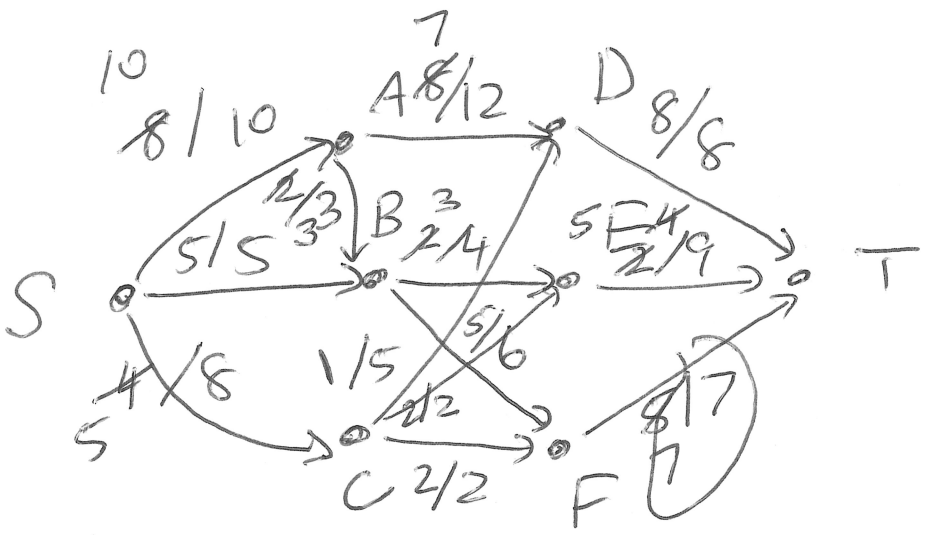
Cut

Partition Vertices into sets w/ S in one set T other set.
a cut is sum capacities of each edge btw sets in partition.
from S to T.

3 ALGS

1. Ford-Fulkerson – DFS
2. Edmunds-Karp – BFS
3. Dinitz's Alg – BFS (3 edges to T)
   Dinic DFS (capped)

Network Flow



Directed Edges
edge: capacity (+int)
2 special vertices
S: source
T: Sink
all edges from S are OUT edges
T has all in edges

basic rules:
flow leaves S = flow receive T
all other nodes flow in = flow out

AUGMENTING PATHS

while (~~first~~ there is an augmenting path)
add it!

SA → AD → DT 8
SA → AB → BE → ET 2
SB → BF → FT 5
SC → CE → ET 2
SC → CF → FT 2
SC → CD → DA → AB → BE → ET 1

How to Augment