

Feb 10

## Gale-Shapley algorithm

$n$  men  
 $n$  women  
 $2n$  pref. lists

- ① Initially, all men & women are free
- ① In a loop:  
in boot, man propose  
A free woman proposes to a man
- ② You have  $n$  matched pairs.

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Initial state: All  $n$  men &  $n$  women are free

① Let  $w$  be a free woman

Q1: Which man should  $w$  propose to?

A1:

→  $w$  will propose to  $m$

Q2: What should  $m$  do?

A2: