

# 2019-03-04 Stable Marriage

Monday, March 4, 2019 3:08 PM

- 2 disparate groups: proposers and acceptors
- While there exists an acceptor without a proposer
  - All Proposers simultaneously make offer to highest priority available Acceptor
  - All Acceptors simultaneously reject all but the most favorable Proposer

## Class Example #1

### Proposers

Sarah	Erik	Sean	Beau	Ethan	Justin
Carrie	Beau	Ethan	Justin	Sean	Erik
Jessica	Erik	Beau	Justin	Sean	Ethan
Rachel	Ethan	Justin	Sean	Beau	Erik
Vanessa	Erik	Justin	Sean	Beau	Ethan

### Acceptors

Justin	Sarah	Jessica	Carrie	Rachel	Vanessa
Ethan	Carrie	Jessica	Vanessa	Rachel	Sarah
Beau	Jessica	Sarah	Rachel	Vanessa	Carrie
Sean	Rachel	Sarah	Vanessa	Jessica	Carrie
Erik	Vanessa	Rachel	Sarah	Carrie	Jessica

### Iteration #1

#### Proposers

Sarah	<del>Erik</del>	Sean	Beau	Ethan	Justin
Carrie	<del>Beau</del>	Ethan	Justin	Sean	Erik
Jessica	<del>Erik</del>	Beau	Justin	Sean	Ethan
Rachel	<del>Ethan</del>	Justin	Sean	Beau	Erik
Vanessa	<del>Erik</del>	Justin	Sean	Beau	Ethan

#### Acceptors

Justin	Sarah	Jessica	Carrie	Rachel	Vanessa
Ethan	Carrie	Jessica	Vanessa	<del>Rachel</del>	Sarah
Beau	Jessica	Sarah	Rachel	Vanessa	<del>Carrie</del>
Sean	<del>Rachel</del>	Sarah	Vanessa	Jessica	Carrie
Erik	<del>Vanessa</del>	Rachel	<del>Sarah</del>	Carrie	<del>Jessica</del>

### Iteration #2

#### Proposers

## Iteration #2

### Proposers

Sarah	<del>Erik</del>	Sean	Beau	Ethan	Justin
Carrie	<del>Beau</del>	Ethan	Justin	Sean	Erik
Jessica	<del>Erik</del>	Beau	Justin	Sean	Ethan
Rachel	Ethan	Justin	Sean	Beau	Erik
Vanessa	Erik	Justin	Sean	Beau	Ethan

### Acceptors

Justin	Sarah	Jessica	Carrie	Rachel	Vanessa
Ethan	Carrie	Jessica	Vanessa	Rachel	Sarah
Beau	Jessica	Sarah	Rachel	Vanessa	<del>Carrie</del>
Sean	Rachel	Sarah	Vanessa	Jessica	Carrie
Erik	Vanessa	Rachel	<del>Sarah</del>	Carrie	<del>Jessica</del>

## Iteration #3

### Proposers

Sarah	<del>Erik</del>	Sean	Beau	Ethan	Justin
Carrie	<del>Beau</del>	Ethan	Justin	Sean	Erik
Jessica	<del>Erik</del>	Beau	Justin	Sean	Ethan
Rachel	<del>Ethan</del>	Justin	Sean	Beau	Erik
Vanessa	Erik	Justin	Sean	Beau	Ethan

### Acceptors

Justin	Sarah	Jessica	Carrie	Rachel	Vanessa
Ethan	Carrie	Jessica	Vanessa	<del>Rachel</del>	Sarah
Beau	Jessica	Sarah	Rachel	Vanessa	<del>Carrie</del>
Sean	Rachel	Sarah	Vanessa	Jessica	Carrie
Erik	Vanessa	Rachel	<del>Sarah</del>	Carrie	<del>Jessica</del>

## Iteration #4

### Proposers

Sarah	<del>Erik</del>	Sean	Beau	Ethan	Justin
Carrie	<del>Beau</del>	Ethan	Justin	Sean	Erik
Jessica	<del>Erik</del>	Beau	Justin	Sean	Ethan
Rachel	<del>Ethan</del>	Justin	Sean	Beau	Erik
Vanessa	Erik	Justin	Sean	Beau	Ethan

### Acceptors

Justin	Sarah	Jessica	Carrie	Rachel	Vanessa
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## Acceptors

Justin	Sarah	Jessica	Carrie	<del>Rachel</del>	Vanessa
Ethan	<del>Carrie</del>	Jessica	Vanessa	<del>Rachel</del>	Sarah
Beau	<del>Jessica</del>	Sarah	Rachel	Vanessa	<del>Carrie</del>
Sean	Rachel	<del>Sarah</del>	Vanessa	Jessica	Carrie
Erik	<del>Vanessa</del>	Rachel	<del>Sarah</del>	Carrie	<del>Jessica</del>