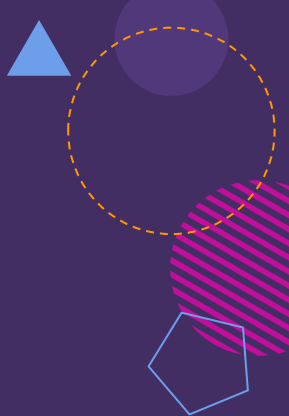
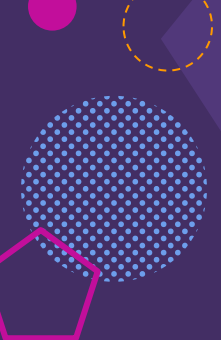


# optimal matching

Sofiat Olaosebikan



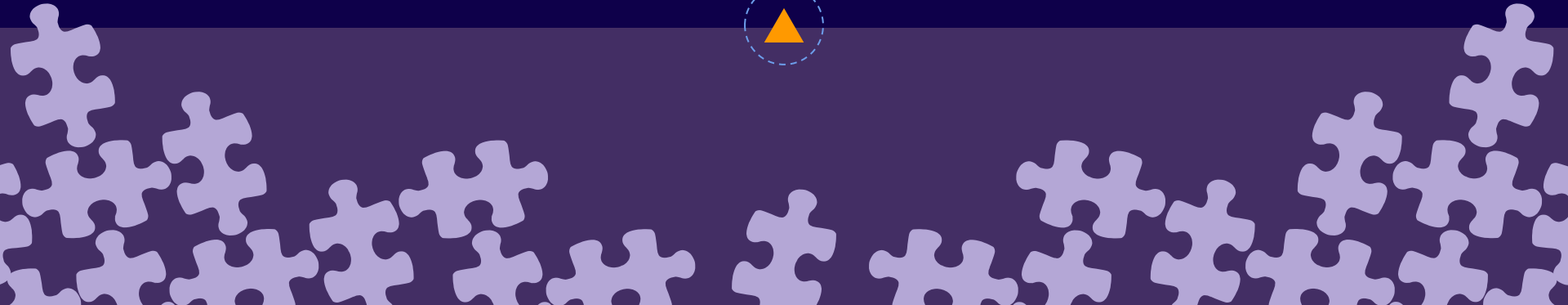








# Matching Problems

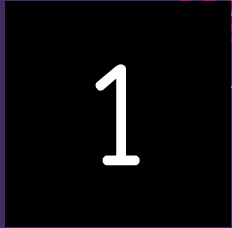


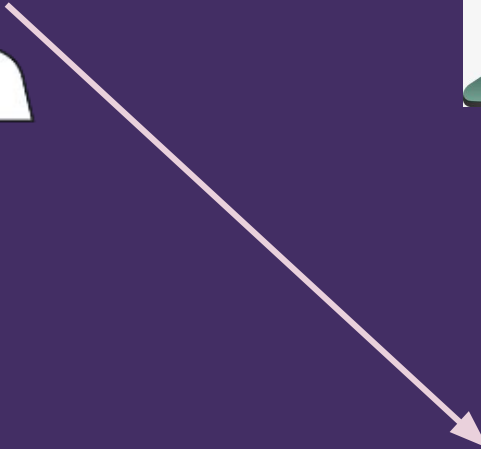
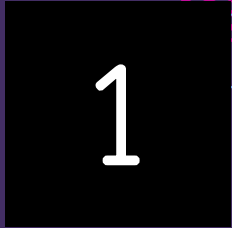


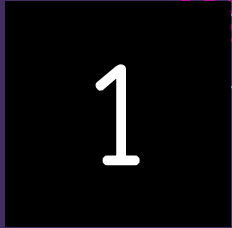












# Matching Game





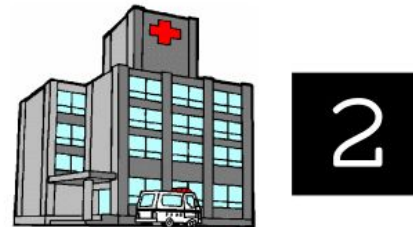
# Matching Game



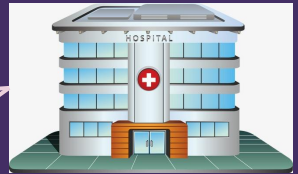
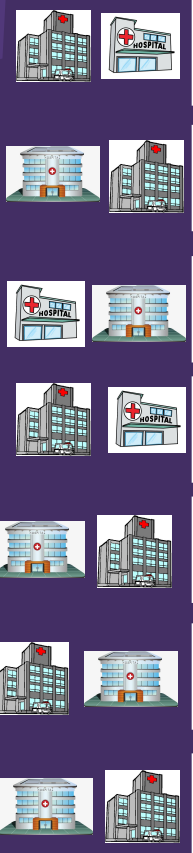
# Matching Game

## Rules

1. use a line to connect the doctors to only ONE of the hospitals that appear on their list
2. the total number of doctors you assign to each hospital must not exceed the number displayed beside it



How many doctors did you match?



2

3

2

5 doctors



2

3

2

6 doctors





2

3


2

7 doctors

# Press Release: 2017 NRMP Main Residency Match The Largest Match On Record


**MORE THAN 43,000 APPLICANTS REGISTERED AND MORE THAN 31,000 POSITIONS OFFERED.**

Washington, D.C., March 17, 2017 – Today the National Resident Matching Program® (NRMP®) announced the **results of the 2017 Main Residency Match®**, the largest in its history. A record-high 35,969 U.S. and international medical school students and graduates vied for 31,757 positions, the most ever offered in the Match. The number of available first-year (PGY-1) positions rose to 28,849, 989 more than last year.




**2017 Main Residency Match®  
Largest in NRMP History**

Registered Applicants	43,157	↑ 787
Active Applicants	35,969	↑ 493
Applicants Matched & PGY-1 Positions Filled	27,688	↑ 852
PGY-1 Positions	28,849	↑ 989
Total Positions	31,757	↑ 1,007



Talar Kavalyan, Erica Couzens, Carol Conceicao, Kate Phillips, and Kevin Yui Simalen  
Loma Linda University School of Medicine



Match Day, celebrated around the world, is when applicants learn the location and specialty of the



# Algorithms





# Algorithms



## Discrete Mathematics



Algorithms



Discrete Mathematics

Graph Theory



# Algorithms



## Discrete Mathematics

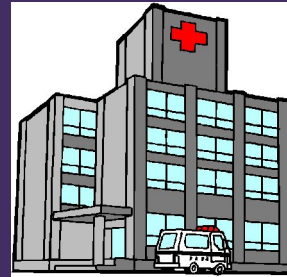
# Graph Theory



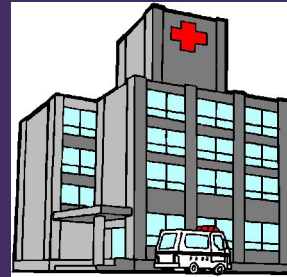
2



3



2

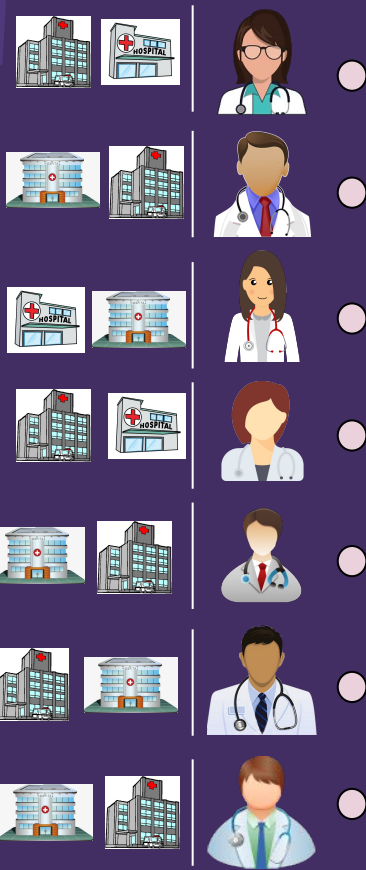


2

3

2





2

3

2

Vertices

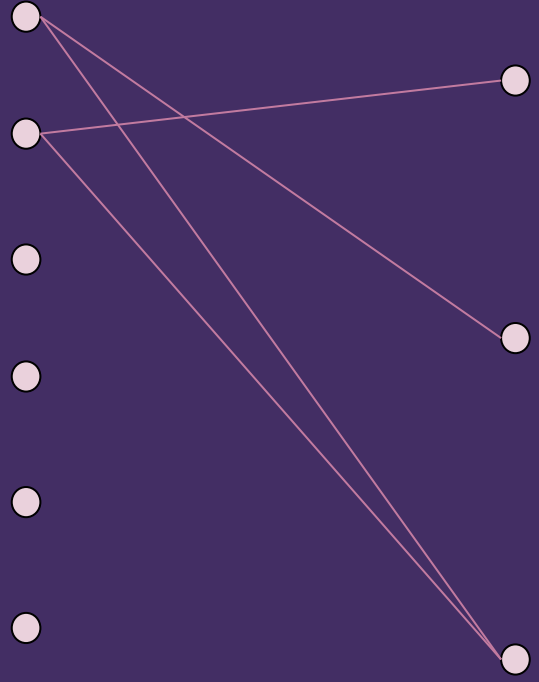


2

3

2

Vertices

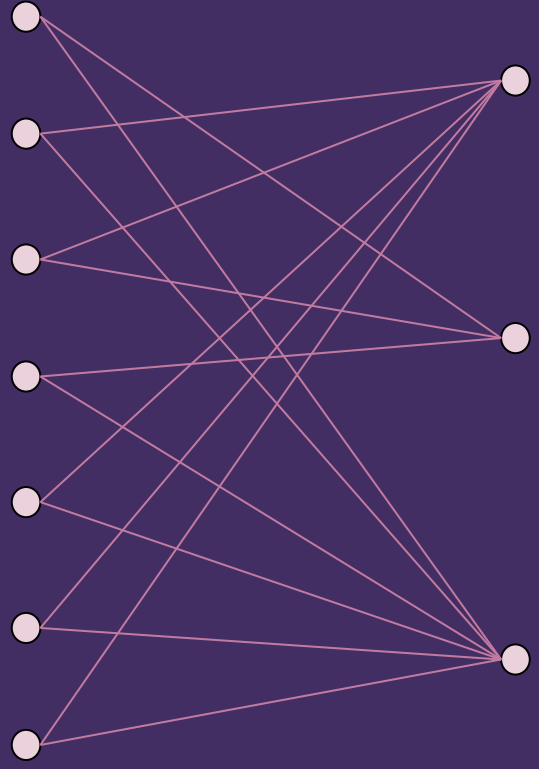


2

3

2

Vertices

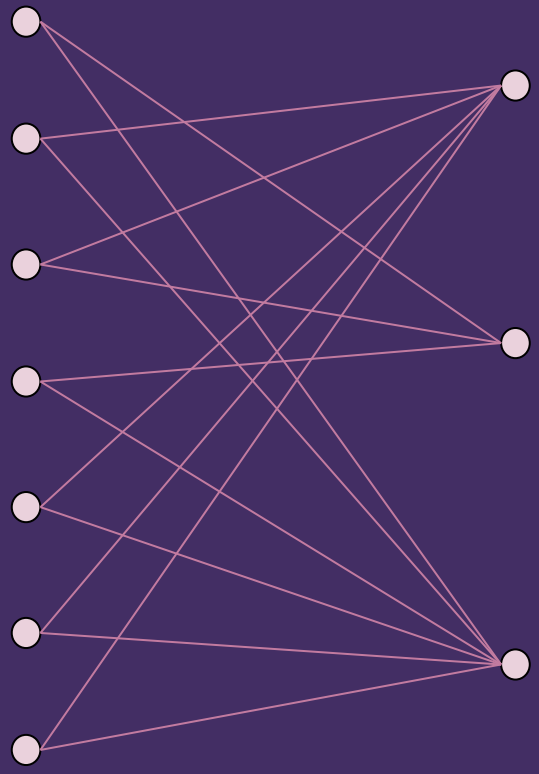
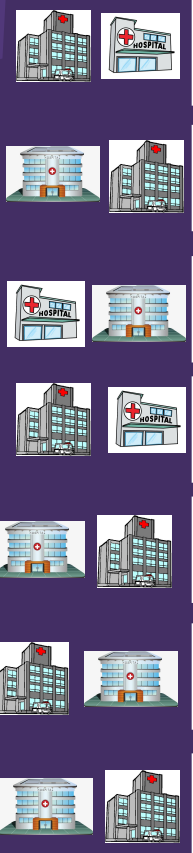


2

3

2

Vertices



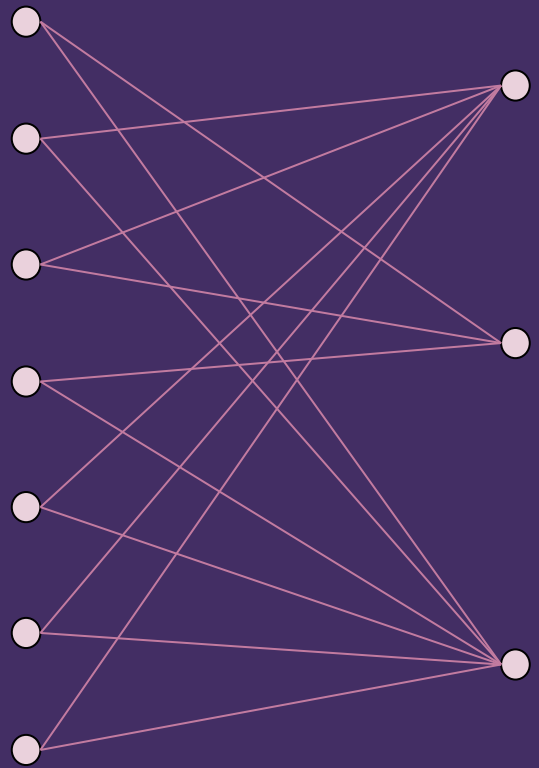
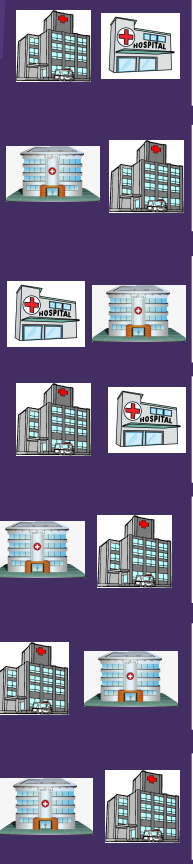
2

3

2

Vertices

Edges



2

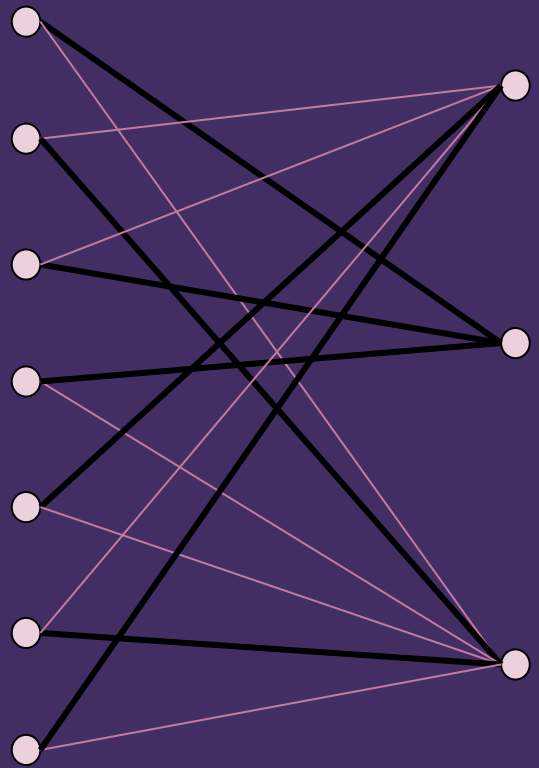
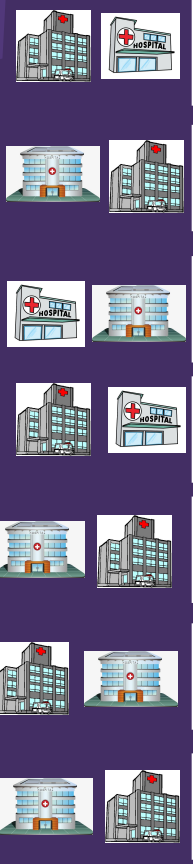
3

2

Vertices

Edges

Graph



2

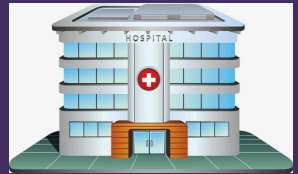
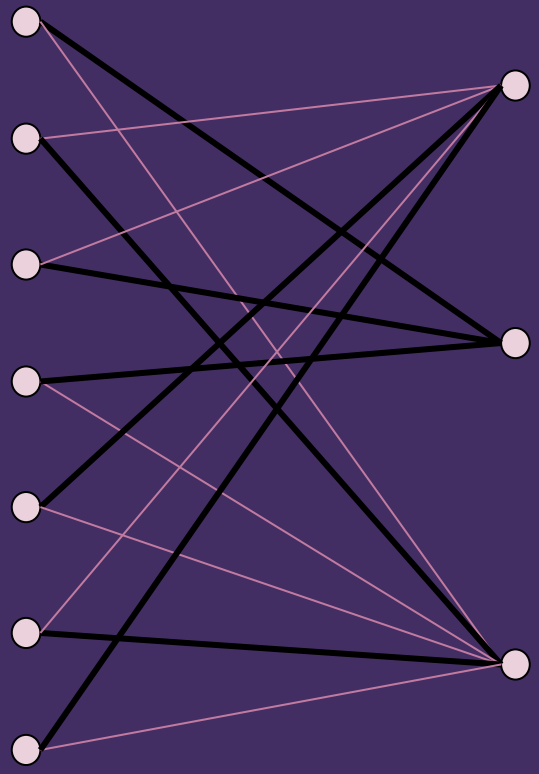
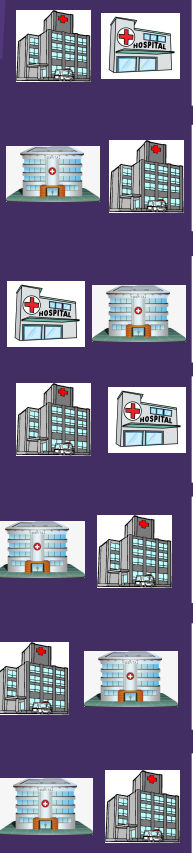
3

2

Vertices

Edges

Graph



2

3

2

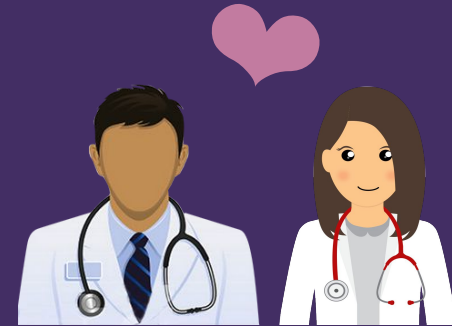
Vertices

Edges

Graph

Matching







***Blood and Transplant***



**NHS**

*Blood and Transplant*

**TeachFirst**



*Blood and Transplant*

**TeachFirst**



University of Glasgow | School of  
Computing Science



# Thanks!

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**Credit:**

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