

CS210

Discussion

Week 11

Attendance



Today

- Exercise hints
- Finish through exercise 2
 - Show us passing Gradescope tests to leave early
- Programming exam next week
 - Bring a book
 - You can work on CS210 classwork after you finish also
 - No social media, email, communication, etc.
 - Phones, headphones, earbuds, etc. must be put away
 - Open book, open note, open course website

Graphs

- How do we represent a graph in Java?

Graphs

- How do we represent a graph in Java?
 - Adjacency list
 - Etc.
- Each vertex is a number
- Undirected graphs have two entries for each edge
- Directed graphs only one
 - From \rightarrow To

0	1
1	3 0
2	
3	1

Exercise 1 – Graph Properties

All together now

Exercise 2 Hints

- Do all your work in the constructor
 - Methods can simply return pre-computed values
- Three important things already imported, look at what methods they have available (either using IntelliJ or their documentation).

- DiGraph
- DiCycle
- LinkedBag

```
G.  
m adj(int v) Iterable<Integer>  
m addEdge(int v, int w) void  
m E() int  
m V() int  
m inDegree(int v) int  
m outDegree(int v) int
```

```
DiCycle cycle = new DiCycle(G);  
cycle.
```

```
m cycle() Iterable<Integer>  
m hasCycle() boolean
```