

Lecture Notes

CSC111

Week 6 — Spring 2018

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Wednesday 3/7: Midterm

- **In class**
- **Bring laptop**
- **Timed: starts at 11:00 a.m., lasts 70 minutes**
- **Closed books, closed notes, closed Python, closed Web except *Moodle*.**

Outline

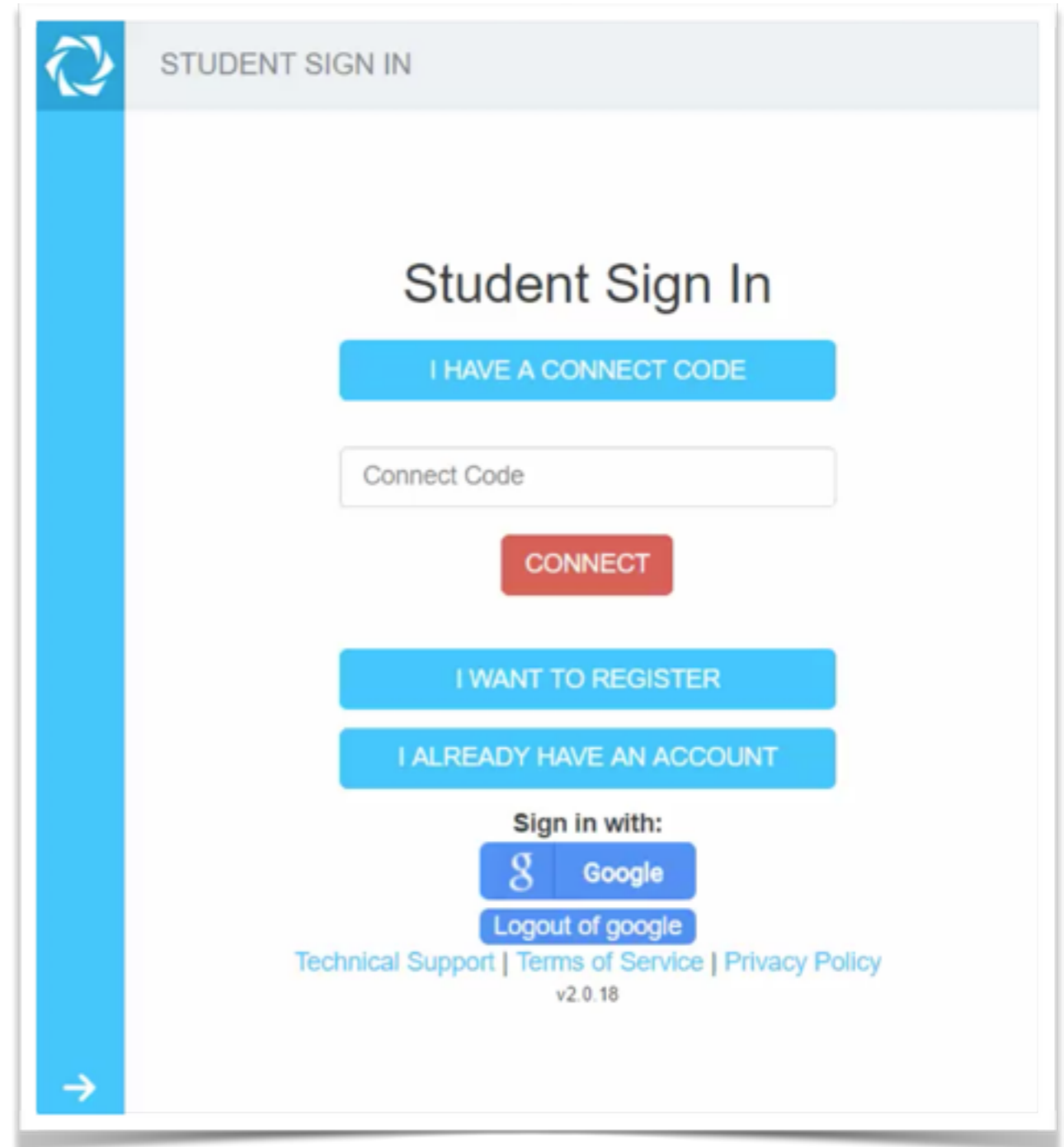
- **Decomposing a Problem into Sub-Problems**
- **Clicker Setup**
- **Mid-Semester Review**

Decomposing a Problem into Sub-Problems

- **Go to Item 13) on http://www.science.smith.edu/dftwiki/index.php/CSC111_Programs_Created_in_Class_2018**

Clicker Setup

- Go to <http://app.theanswerpad.com/student#auth>
- Pick "I HAVE A CONNECT CODE"
- Enter the Connect Code given in class



The screenshot shows the 'STUDENT SIGN IN' page of the AnswerPad app. The page has a blue header with a camera icon and the text 'STUDENT SIGN IN'. Below the header, the main heading is 'Student Sign In'. There are three blue buttons: 'I HAVE A CONNECT CODE', 'I WANT TO REGISTER', and 'I ALREADY HAVE AN ACCOUNT'. Below these buttons is a text input field labeled 'Connect Code' and a red 'CONNECT' button. At the bottom, there is a 'Sign in with:' section with a Google logo and a 'Google' button, and a 'Logout of google' button. At the very bottom, there are links for 'Technical Support', 'Terms of Service', and 'Privacy Policy', along with the version number 'v2.0.18'. A blue arrow icon is visible in the bottom left corner of the page.

Review

Week 6 March 5

Topics:	Lab/Hw	Reading [Collapse]
<ul style="list-style-type: none">• Monday<ul style="list-style-type: none">• Review<ul style="list-style-type: none">• indexing in a list• how range() works• functions returning values• "...{x:y}..."<code>.format()</code>• Wednesday: Midterm Exam, in class, timed, on Moodle, closed notes, closed books, closed Idle.• Friday	<ul style="list-style-type: none">•	<ul style="list-style-type: none">•



**We stopped here last
time...**

Friday Before Break

- **How does Moodle run the function for Lab 6?**
- **Different programming languages, different speeds of execution: A look at the N-Queens program**
- **Something completely different...**

Libraries

```
myLibrary.py - /Users/thiebaut/Desktop/Dropbox/111/myLibrary.py (3.5.4)
# myLibrary.py
# D. Thiebaut

def getFirstWordOf( line ):
    '''receives a line assumed not to be empty
    and returns its first words. Uses whitespace
    to split the line into words.
    '''
    words = line.strip().split()
    return words[0]
```

```
*libraryDemo.py - /Users/thiebaut/Desktop/Dropbox/111/libraryDemo.py (3.5.4)*
# libraryDemo.py
# D. Thiebaut

from myLibrary import *

def main():
    lines = [ "Soon there'll be lunch", "Spring into action",
             "Break bad habits!" ]

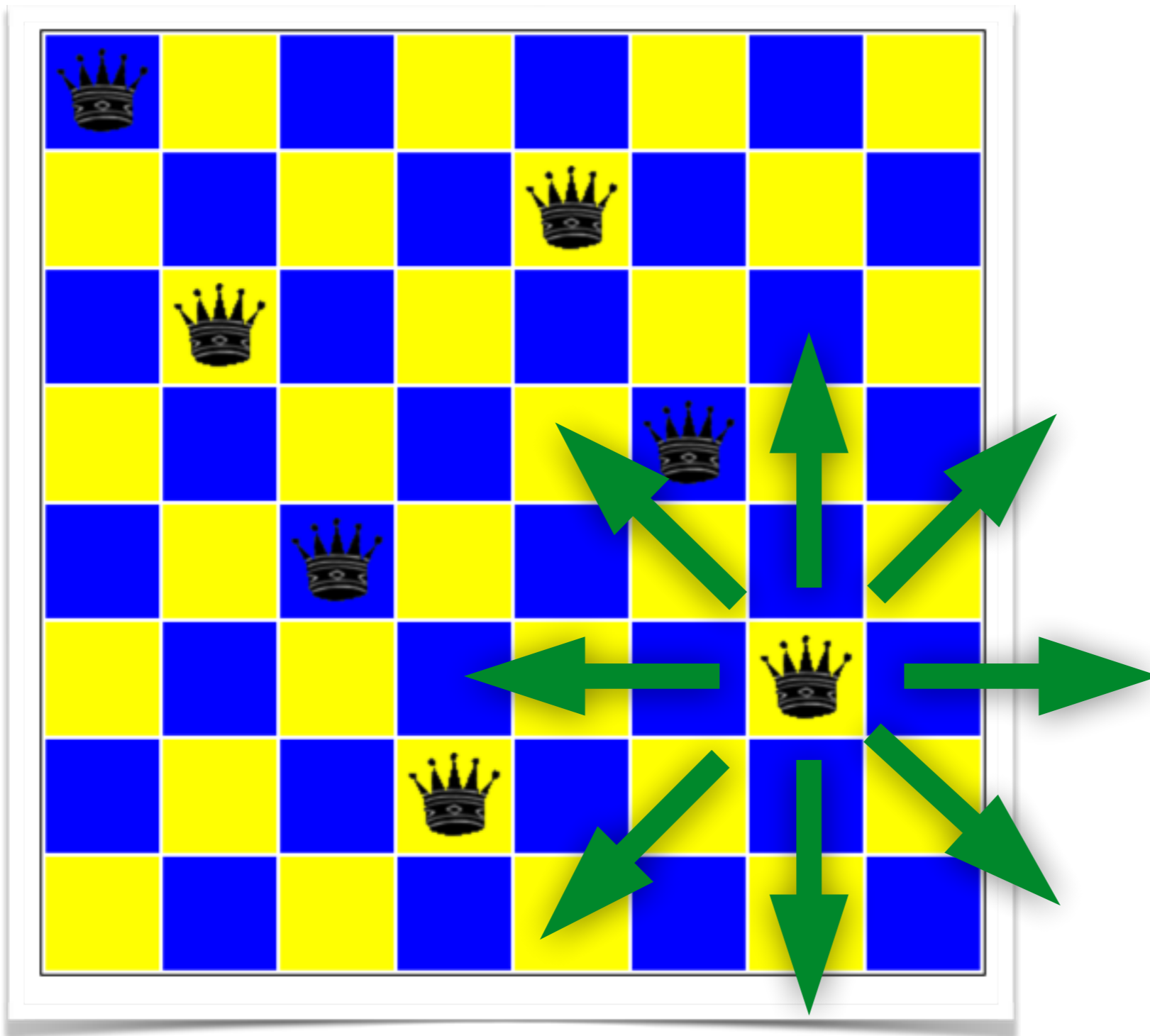
    for line in lines:
        print( getFirstWordOf( line ), end=" " )

    print()

main()
```

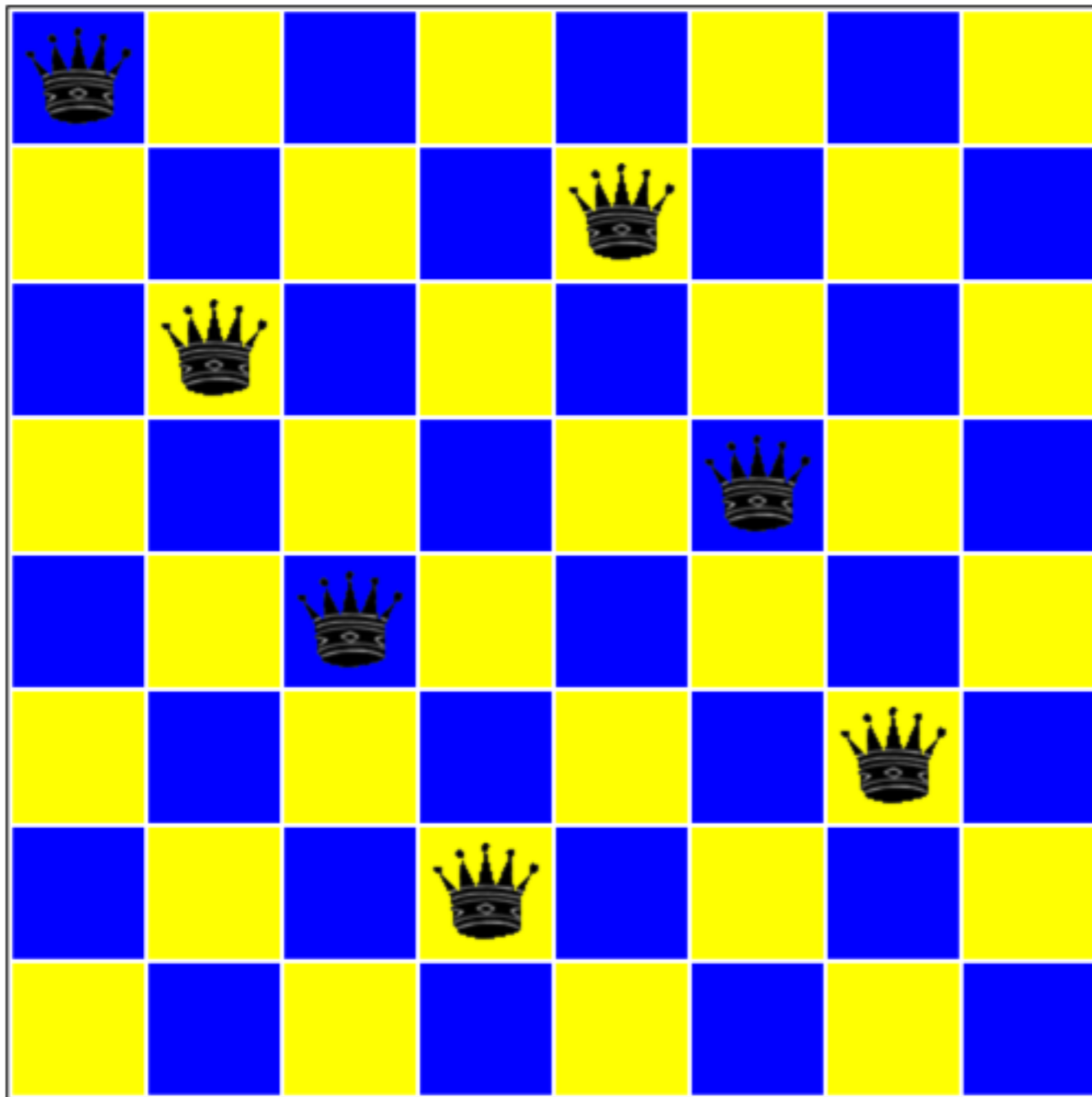
Ln: 7 Col: 20

The N-Queens Problem



<http://eightqueen.becher-sundstroem.de/>

The N-Queens Problem



*Watch the
animation...*

<http://eightqueen.becher-sundstroem.de/>

Python Version

<http://www.science.smith.edu/dftwiki/index.php/NQueens.py>

Java Version

http://www.science.smith.edu/dftwiki/index.php/N-Queens_Problem_in_Java

**And now,
for something completely
different...**