CS21: INTRODUCTION TO COMPUTER SCIENCE

Prof. Mathieson
Fall 2017
Swarthmore College
Outline Sept 20:

- Continue conditionals (if/elif/else)
- Logical operators (and, or, not)
- Nesting (+ indexing practice)
- Friday after quiz: improve your python

Notes

- Lab 2 due Saturday night
- Quiz 1: this Friday! (9/22), first 25-30 min (review study guide)
- Practice problems in the practice directory
- Office hours Friday 3-5pm (I’ll also be around today 3-5pm)
- Ninja session tonight! 7-9pm (room 256)
Study strategies

• 10 – (2.5 class + 1.5 lab) = 6 hrs/week outside of class

• Go over class notes
• Finish in class problems and then go over solutions
• Complete practice problems
• Quiz study guide problems
• Start the lab before your lab section
• Work on lab problems after lab
• Ninja sessions, office hours, meet with instructors
Studying Science at Swarthmore

- 7 PM: 30 min plus Q & A
- **Sunday, September 24**
- Kohlberg Scheuer Room
- Presented by Amy Cheng Vollmer, Dept. of Biology
- Advice and recommendations compiled from her interviews of many faculty in the Division of Natural Sciences and Engineering
- Recommended by SAMs & geared toward students of all class years
- Sponsored by the Dean of Students Division and Department of Biology
Continue conditionals
First programs with conditionals. Write a program that asks the user for their favorite integer. Then print out whether the integer is positive, negative, or zero. For example:

```python
python3 number_conditionals.py
Enter your favorite integer: -4
Your number is negative!
```

Author: Sara Mathieson
Date: 9/17/17

```python
def main():
    number = int(input("Enter your favorite integer: "))

    if number > 0:
        print("Your number is positive!")
    elif number < 0:
        print("Your number is negative!")
    else:
        print("Your number is zero!")

main()
```
Second program with conditionals. Write a program that asks the user for their favorite integer. Then print out whether the integer is even or odd. Example:

```python
python3 conditionals2.py
Enter your favorite integer: -4
Your number is even!
```

Author: Sara Mathieson
Date: 9/17/17

```python
def main():
    number = int(input("Enter your favorite integer: "))

    if number % 2 == 0:
        print("Your number is even!")
    else:
        print("Your number is odd!")

main()
```
Which of these are valid?

1) 
   if
   elif
   elif
   else

2) 
   else
   if

3) 
   elif
   else

4) 
   if
   if
   if
   if

5) 
   if
   else
   if
Which of these are valid?

1) `if
elif
elif
else`

2) `else
if`

3) `elif
else`

4) `if
if
if
if`

5) `if
else
if`
Logical operators
Logical operators: and, not, or

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Nesting (+ indexing practice)
New practice problems (suggested order)

- **voting.py**  conditionals
- **quadratic.py**  conditionals
- **coin_toss.py**  for loops, accumulator pattern, nesting, conditionals, random library
- **vowels.py**  for loops, accumulator pattern, nesting, conditionals, indexing