+ Nested Loops Review

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Midterm Review

Introduction to Computer Programming - Python

+ Agenda

- Review Exam Format

- Work on IPO Notation

- Complete Worksheet

Final Format

- IN-PERSON in this classroom

- On paper

- Number of questions: approx. 8

- Question types:
  - Trace the output,
  - Fill in the blank
  - Long form programming questions

- Time limit: 1 hour 10 minutes

The Day of the Exam (7/26)

- Get a good night's sleep

- Eat breakfast!

- 11:10 AM- Everyone comes to class and gets settled

- 11:20 AM – Exam Opens

- 12:30 PM – Exam Ends

- You did it!

+ What to Bring

- NYU ID

- Your Notes

- Pencils/pens

+ During the Exam

- Put your phone on silent.

- Place your phone, smart watches, and all other belongings in the front of the classroom.

- Look at your own exam!

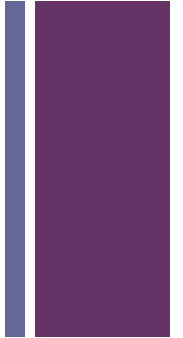# Function Review

Returning Boolean Values

- Functions can also return Boolean values

```
def isPositive(num):

    if num > 0:

        return True

    else:

        return False


x = isPositive(-1)
```

+ Returning multiple values

- Functions can also return multiple values using the following syntax:

```
def testfunction():
    x = 5
    y = 10
    return x, y


p, q = testfunction()
```

+ IPO Notation

- As you start writing more advanced functions you should think about documenting them based on their Input, Processing and Output (IPO)

- Example:

```
# function: add_ages
# input: age1 (integer), age2 (integer)
# processing:  combines the two integers
# output: returns the combined value
def add_ages(age1, age2):
    sum = age1+age2
    return sum
```

IPO Notation Practice

1.
```python
def discount(price, percent):
    return price * (percent/100)
```

2.
```python
def cube(num):
    return num * num * num
```

3.
```python
def dollar_format(value):
    return "$"+format(value, ',.2f')
```

4.
```python
def get_name():
    name = input('Enter your name: ')
    return name
```

Hands-on practice problems