

**Teacher:** Jessica Novillo Argudo, Jing Xue, Rich Parker

**Unit Plan:** Introduction to Python

**Topic of the Lesson:** Conditionals (part 2)

**Grade and Content:** 10th - 12th / CSP

**Date:** Fall 2022

**Learning Objectives:**

- Students will learn to write chained conditionals in Python
- Students will learn to write nested conditionals in Python

**NYS standards:**

- **9-12.CT.5:** Modify a function or procedure in a program to perform its computation in a different way over the same inputs, while preserving the result of the overall program.

**Content-specific vocabulary:**

- Chained conditional
- Nested conditional

**Materials/Resources:**

- Computers
- Smartboard
- Slides
- Python
- Replit
- Google Classroom

**Assessments:**

- Programming log

**Warm-up (10 minutes):**

- The teacher will show to the students the following table (available on the slides) and indicate that the table contains names of basketball players, their teams and state.

Player	State	Team
Giannis Antetokounmpo	Wisconsin	Milwaukee Bucks
Kevin Durant	New York	Brooklyn Nets

Player	State	Team
Giannis Antetokounmpo	Wisconsin	Milwaukee Bucks
Stephen Curry	California	Golden State Warriors
Nikola Jokic	Colorado	Denver Nuggets
Joel Embiid	Philadelphia	Philadelphia 76ers

- The teacher will ask students to work in pairs and think on how they would write a condition(s) including the player name and the state to get the team. (5 minutes)
- The teacher will ask students for volunteers to explain their ideas on how they will do it, and ask other students to add on ideas or suggestions.
- The teacher guides the discussion to introduce the concepts of chained and nested conditionals.

#### **Activity / Sequence of Lesson (30 minutes):**

- The teacher will explain what is a chained conditional, and will model how to write it in Python (live coding).  

```
if x < y:
    print('x is less than y')
elif x > y:
    print('x is greater than y')
else:
    print('x and y are equal')
```
- The teacher will explain what is a nested conditional, and will model how to write it in Python (live coding).  

```
if x == y:
    print('x and y are equal')
else:
    if x < y:
        print('x is less than y')
    else:
        print('x is greater than y')
```
- The teacher will ask students to work with a partner (pair programming) on the “03\_LAB\_Conditionals\_2” that can be found on Google Classroom.
- The teacher will walk around the classroom to observe students’ performance and assist with questions or problems about the lab.

**Summary / Next Steps / Exit Slip ( 10 minutes):**

- The teacher will ask students to complete their lab as homework if they still need to finish it.
- The teacher will ask students to complete their “Daily Log Programming,” which can be found on Google Classroom.