



Welcome to this CoGrammar Q&A: Conditionals and Iteration

The session will start shortly...

Questions? Drop them in the chat.
We'll have dedicated moderators
answering questions.



Software Engineering Session Housekeeping

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly.
(Fundamental British Values: Mutual Respect and Tolerance)
- No question is daft or silly - **ask them!**
- There are **Q&A sessions** throughout this session, should you wish to ask any follow-up questions.
- If you have any questions outside of this lecture, or that are not answered during this lecture, please do submit these for upcoming Academic Sessions. You can submit these questions here: [Questions](#)

Software Engineering Session Housekeeping cont.

- For all **non-academic questions**, please submit a query: www.hyperiondev.com/support
- Report a **safeguarding** incident: www.hyperiondev.com/safeguardreporting
- We would love your **feedback** on lectures: [Feedback on Lectures](#)

Enhancing Accessibility: Activate Browser Captions

Why Enable Browser Captions?

- Captions provide **real-time text for spoken content**, ensuring inclusivity.
- Ideal for individuals in noisy or quiet environments or for those with **hearing impairments**.

How to Activate Captions:

1. YouTube or Video Players:

- Look for the CC (Closed Captions) icon and click to enable.

2. Browser Settings:

- Google Chrome: Go to *Settings > Accessibility > Live Captions* and toggle ON.
- Edge: Enable captions in *Settings > Accessibility*.

Safeguarding & Welfare

We are committed to all our students and staff feeling safe and happy; we want to make sure there is always someone you can turn to if you are worried about anything.

If you are feeling upset or unsafe, are worried about a friend, student or family member, or you feel like something isn't right, speak to our safeguarding team:



Ian Wyles
Designated Safeguarding
Lead



Simone Botes



Nurhaan Snyman



Rafiq Manan



Ronald Munodawafa



Tevin Pitts

Scan to report a
safeguarding concern



or email the Designated
Safeguarding Lead:
Ian Wyles

safeguarding@hyperiondev.com

Skills Bootcamp Progression Overview

✓ Criterion 1 - Initial Requirements

Specific achievements **within the first two weeks** of the program.

To meet this criterion, students need to, by no later than **01 December 2024 (C11)** or **22 December 2024 (C12)**:

- **Guided Learning Hours (GLH):** Attend a **minimum of 7-8 GLH per week** (lectures, workshops, or mentor calls) for a total minimum of **15 GLH**.
- **Task Completion:** Successfully complete the **first 4 of the assigned tasks**.

✓ Criterion 2 - Mid-Course Progress

Progress through the successful completion of tasks **within the first half** of the program.

To meet this criterion, students should, by no later than **12 January 2025 (C11)** or **02 February 2025 (C12)**:

- **Guided Learning Hours (GLH):** Complete at least **60 GLH**.
- **Task Completion :** Successfully complete the **first 13 of the assigned tasks**.

**SKILLS
FOR LIFE**

SKILLS BOOTCAMPS



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Conditionals and Iteration

Learning Outcomes

- **Perform Basic Data Operations:** Conduct operations with strings, integers, floats, and booleans, applying conditional logic with if, elif, and else.
- **Implement Control Structures:** Use while and for loops, including nested loops, to solve repetitive tasks and iterate over sequences.
- **Generate and Control Sequences:** Use the range() function effectively, applying different parameters to control sequence generation.

Polls



Poll

1. Which data type is returned by the input() function in Python?

- A. Integer
- B. String
- C. Float
- D. Boolean

Poll

2. Consider multi-dimensional lists, what does the following code output?

```
matrix = [[1, 2], [3, 4], [5, 6]]  
print(matrix[1][0])
```

- A. 1
- B. 3
- C. 4
- D. IndexError

Poll

3. Consider multi-dimensional lists, what is the output of the following code?

```
matrix = [[1, 2], [3, 4], [5, 6]]  
result = []  
for row in matrix:  
    if sum(row) > 6:  
        result.append(row)  
print(result)
```

- A. `[[1, 2], [3, 4], [5, 6]]`
- B. `[[3, 4], [5, 6]]`
- C. `[[5, 6]]`
- D. `[]`

Poll

4. Consider the range function, what is the output of this code snippet?

```
for num in range(1, 10, 2):  
    print(f"{num}", end = " ")
```

- A. 1 2 3 4 5 6 7 8 9
- B. 1 3 5 7 9
- C. 1 3 5 7
- D. Error

Python Basics



Key Concepts

- **Variable:** symbolic name that refers to a memory location where a value of a specific data type is stored.
 - (=) Assigns right-hand value to left-hand variable
 - In Python, variables do not require explicit declaration before use.
 - Variables are created when a value is assigned to them.
- **Data Types:** A category of values held by the variable
 - Primitive: `str("Hello")`, `int(6)`, `float(3.14)`, `bool(True)`
 - Non-Primitive: `list[1]`, `set{1}`, `tuple(1,2)`, `dict{"a":1}`

Key Concepts

- **Conditional Statement:** an expression that is either True or False
 - Keywords: `if`, `elif`, `else`
 - Operators: `<`, `<=`, `>`, `>=`, `==`, `!=`, `and(&)`, `or(|)` `not(!)`
- **Loop:** A control flow statement that repeatedly executes a block of code as long as a specified condition is true.
 - Keywords: `for`, `while`, `break`, `continue`

**Let's take a short
break**

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Let's get coding!



Lesson Conclusion and Recap

- Wrote Python Code: Wrote a Python script incorporating fundamental programming concepts, including data types, if-elif-else conditions, for loops, and while loops.

Questions and Answers



Thank you for attending



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