Theory Lecture

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SKILLS FOR LIFE
SKILLS BOOTCAMPS

Department for Education

Software Engineering Lecture Housekeeping

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly. **(FBV: Mutual Respect.)**

- No question is daft or silly - **ask them!**

- There are **Q&A sessions** midway and at the end of the session, should you wish to ask any follow-up questions. Moderators are going to be answering questions as the session progresses as well.

- If you have any questions outside of this lecture, or that are not answered during this lecture, please do submit these for upcoming Open Classes. You can submit these questions here: **Open Class Questions**

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Software Engineering Lecture 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**

Lecture Objectives

1. **Define Python as a high-level programming language.**

2. **Explain the concept of variables and their role in storing and managing data in Python.**

3. **Demonstrate basic string usage.**

Poll:

Assessment

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Which Apps Are Developed With
Python

Pinterest

Dropbox

Instagram

Uber

Spotify

Reddit

Disqus

Netflix

Why is Python considered an easy-to-learn programming language, and what are its popular use cases?

Variables

Strings

```python
double_quote = "The quick brown fox jumps over the lazy dog"
single_quote = 'A'

# Assigning a string to a variable
name = "Miles"
surname = "Morales"

# Assigning the result of two concatenated strings to a variable called 'full_name'
full_name = name + surname
print(full_name)

full_name = name + " " + surname
print(full_name)

# BONUS ALERT!!! --> Using formatted-strings :)
full_name = f"{name} {surname}"

# Printing whatever is stored in the full_name variable to the terminal
print(full_name)
```

What Are "Strings"?

Hello

0 1 2 3 4

-5 -4 -3 -2 -1

Strings are basically a list of characters. An example here would be the word "Hello", which consists of the characters H+e+l+l+o.

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String Methods

Python has a number of built-in string methods:

- ★ upper()
- ★ lower()
- ★ capitalize()
- ★ len()

- ★ strip()
- ★ join()
- ★ split()
- ★ replace()

Best Practices

Challenge:

Identify any naming convention violations and suggest corrections.

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Mini Break

- Grab Some Water
- Give your pet some love

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Practical Lecture

Poll:

Assessment

Wrapping Up

Python

Python is a high-level, interpreted programming language known for its simplicity and readability.

Strings

They can be created using single (' '), double (" ") quotes.

Variables

Variables are declared and assigned values using the assignment operator (=).

Progression Criteria

✅ **Criterion 1: Initial Requirements**

- Complete 15 hours of Guided Learning Hours and the first four tasks within two weeks.

✅ **Criterion 2: Mid-Course Progress**

- Software Engineering: Finish 14 tasks by week 8.
- Data Science: Finish 13 tasks by week 8.

✅ **Criterion 3: Post-Course Progress**

- Complete all mandatory tasks by 24th March 2024.
- Record an Invitation to Interview within 4 weeks of course completion, or by 30th March 2024.
- Achieve 112 GLH by 24th March 2024.

✅ **Criterion 4: Employability**

- Record a Final Job Outcome within 12 weeks of graduation, or by 23rd September 2024.

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Questions around String and Variables

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Thank you for joining

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