CoGrammar

Week 14 – Tutorial Class

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**

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**

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.

Unlock Prestigious Co-Certification Opportunities

New Partnerships Unveiled!

- **University of Manchester & Imperial College London** join our circle along with The University of Nottingham Online.

Exclusive Opportunity:

- Co-certification spots awarded on a first-come basis.
- Meet the criteria early to gain eligibility for the co-certification.

Key Deadlines:

- **11 March 2024**: 112 Guided Learning Hours & 'Build Your Brand' tasks completion.
- **18 March 2024**: Record interview invitation or self-employment.
- **15 July 2024**: Submit verified job offer or new contract.

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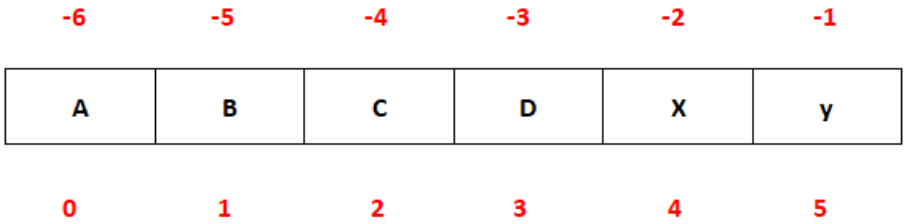
Lecture Objectives

1. **Recall the fundamental characteristics of Lists.**
2. **Explain the concept of indexing in a list.**
3. **Apply knowledge of lists to manipulate elements.**

Lists

- ★ A list is a data type that allows us to store multiple values of any type together and a list can contain duplications.
- ★ We can access individual values using indexing and multiple values using slicing.
- ★ We can iterate over lists using a for loop.



Lists

- ★ Lists are mutable.
- ★ This means the values inside a list can be changed and unlike a string won’t return a new list when changes have been made.
- ★ We can apply methods to our lists without having to restore them inside our variables.

Lists

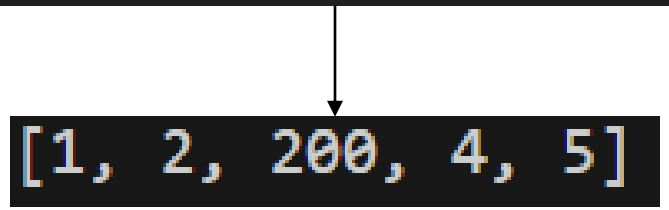
- ★ To create a list we can surround comma separated values with square brackets. []
- ★ E.g. my_list = [value1, value2, value3]
- ★ Adding Elements: append(), insert()
- ★ Removing Elements: remove(), pop() and ‘del’
- ★ Manipulating elements: sorting, reversing and slicing

List Example

```
num_list = [1,2,3,4,5]
word_list = ["Word1", "Word2", "Word3"]
```

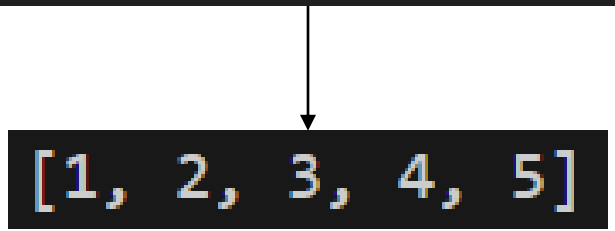
List Example

```
num_list = [1,2,3,4,5]
new_num_list = num_list

new_num_list[2] = 200
print(num_list)
```



List Example

```
num_list = [1,2,3,4,5]
new_num_list = num_list.copy()

new_num_list[2] = 200
print(num_list)
```



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Thank you for joining