Welcome to this CoGrammar Tutorial:

Task Walkthrough

The session will start shortly...

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

SKILLS FOR LIFE
SKILLS BOOTCAMPS

Department for Education

CoGrammar

Task Walkthrough: Programming with User-defined Functions

September 2024

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** 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 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**

Skills Bootcamp Progression Overview

To be eligible for a certificate of completion, students must fulfil three specific criteria. These criteria ensure a high standard of achievement and alignment with the requirements for the successful completion of a Skills Bootcamp.

✅ Criterion 1 - Meeting Initial Requirements

Criterion 1 involves specific achievements within the first two weeks of the program. To meet this criterion, students need to:

- Attend a minimum of 7-8 hours per week of guided learning (lectures, workshops, or mentor calls) within the initial two-week period, for a total minimum of 15 guided learning hours (GLH), by no later than 15 September 2024.
- Successfully complete the Initial Assessment by the end of the first 14 days, by no later than 15 September 2024.

Skills Bootcamp Progression Overview

✅ Criterion 2 - Demonstrating Mid-Course Progress

Criterion 2 involves demonstrating meaningful progress through the successful completion of tasks within the first half of the bootcamp.
To meet this criterion, students should:

- Complete 42 guided learning hours and the first half of the assigned tasks by the end of week 7, no later than 20 October 2024.

Skills Bootcamp Progression Overview

✅ Criterion 3 - Demonstrating Post-Course Progress

Criterion 3 involves showcasing students' progress after completing the course.
To meet this criterion, students should:

- Complete all mandatory tasks before the bootcamp's end date. This includes any necessary resubmissions, no later than 22 December 2024.
- Achieve at least 84 guided learning hours by the end of the bootcamp, 22 December 2024.

CoGrammar

Advised Resources

- HyperionDev PDF notes
- Lecture: Functions (09 September 2024 & Repeat on 14 September 2024)
- Example code files
- Task walkthrough lecture
- Research (Optional)

Learning Outcomes

- Define a Python function with parameters and return values.
- Execute two functions: one that takes input and returns a result, and another that performs a specific task based on input values.
- Explain the reasoning behind each code block and apply the logic to similar tasks.

Functions

- **Functions** allow you to encapsulate a set of instructions to be executed together, improving code readability and reusability.
- **Function definition** is done using the `def` keyword, followed by the function name and parentheses `()`.
- **Arguments** can be passed into functions to make them more flexible and reusable for different inputs.
- **Return values** are used to send results back to the part of the program that called the function.
- **Built-in functions** are provided by Python (e.g., `print()`, `len()`), while **user-defined functions** are created by you to perform specific tasks.

Task Walkthrough

CoGrammar

Auto-graded task 1

1. Create a Python file called **holiday.py.**
2. Your task will be to calculate a user's total holiday cost, which includes the plane cost, hotel cost, and car rental cost.
3. First, get the following user inputs:
    - `city_flight`: The city they will be flying to (you can create some options for them. Remember, each city will have different flight costs).
    - `num_nights`: The number of nights they will be staying at a hotel.
    - `rental_days`: The number of days for which they will be hiring a car.
4. Next, create the following four functions:
    - `hotel_cost()`: This function will take `num_nights` as an argument and return a total cost for the hotel stay (you can choose the price per night charged at the hotel).

- `plane_cost()`: This function will take `city_flight` as an argument and return a cost for the flight. Hint: use **if/else** statements in the function to retrieve a price based on the chosen city.

- `car_rental()`: This function will take `rental_days` as an argument and return the total cost of the car rental (you can choose the daily rental cost).

- `holiday_cost()`: This function takes three arguments: `num_nights`, `city_flight`, and `rental_days`. Using these three arguments, call the `hotel_cost()`, `plane_cost()`, and `car_rental()` functions with their respective arguments, and finally return the total cost for the holiday.

5. Print out all the details about the holiday in a way that is easy to read.

Try running your program with different combinations of input to show its compatibility with different options.

Questions and Answers

CoGrammar

Thank you for attending

SKILLS FOR LIFE
SKILLS BOOTCAMPS

Department for Education

CoGrammar