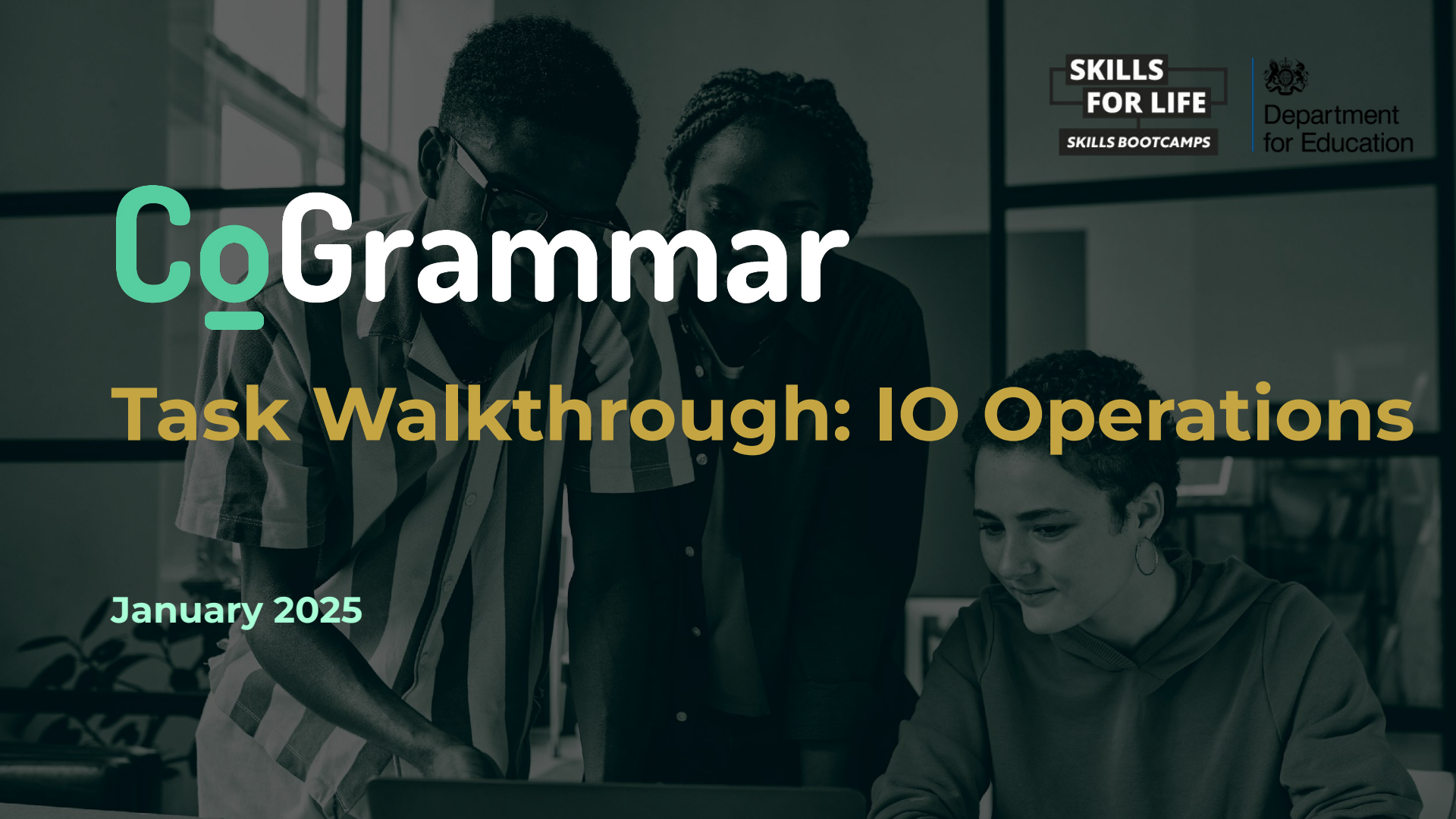
Welcome to this CoGrammar Tutorial:

Task Walkthrough

The session will start shortly...

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



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Department for Education

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Task Walkthrough: IO Operations

January 2025

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**

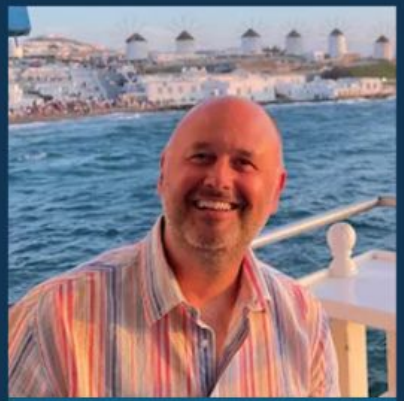
Software Engineering Session Housekeeping cont.

- 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**
- If you are hearing impaired, please kindly use your computer's function through Google chrome to enable captions.

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

Rafiq Manan

Charlotte Witcher

Nurhaan Snyman

Ronald Munodawafa

Tevin Pitts

Scan to report a safeguarding concern

or email the Designated Safeguarding Lead:
Ian Wyles
safeguarding@hyperiondev.com

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Learning Outcomes

- Explain the process of reading and writing files in Python.
- Apply for loops, list manipulation, and file operations in Python to solve problems that are similar to the walkthrough examples.
- Transfer your learnings to complete the tasks by the end of the session.

IO Operations

- File Operations:
  - **Reading files**: Opening files with open() in read mode ('r').
  - **Writing files**: Using open() in write mode ('w').
  - **Context Managers**: Explain the use of with to manage file streams.
- Common String Operations:
  - **Splitting** strings to separate data.
  - **Stripping** whitespace to clean input.
  - **Looping** through files line by line.
- Practical Use Cases: Storing data in lists and writing formatted output.

Task Walkthrough: Auto-graded Task 1

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Auto-graded task 1

- Create a new Python file in the folder for this task, and call it **dob_task.py**.
- In your Python file, write a program that reads the data from the text file provided (**DOB.txt**) and prints it out in two different sections: one for names and another for birthdates, as shown in the format displayed below:

Name
Orville Wright
Rogelio Holloway
Marjorie Figueroa
... etc.

Birthdate
21 July 1988
13 September 1988
9 October 1988
... etc.

```
Orville Wright 21 July 1988
Rogelio Holloway 13 September 1988
Marjorie Figueroa 9 October 1988
Debra Garner 7 February 1988
Tiffany Peters 25 July 1988
Hugh Foster 2 June 1988
Darren Christensen 21 January 1988
Shelia Harrison 28 July 1988
Ignacio James 12 September 1988
Jerry Keller 30 February 1988
Frankie Cobb 1 July 1988
Clayton Thomas 10 December 1988
Laura Reyes 9 November 1988
Danny Jensen 19 September 1988
Sabrina Garcia 20 October 1988
Winifred Wood 27 July 1988
Juan Kennedy 4 March 1988
Nina Beck 7 May 1988
Tanya Marshall 22 May 1988
Kelly Gardner 16 August 1988
Cristina Ortega 13 January 1988
Guy Carr 21 June 1988
Geneva Martinez 5 September 1988
Ricardo Howell 23 December 1988
Bernadette Rios 19 July 1988
```

Task Walkthrough: Auto-graded Task 2

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Auto-graded task 2

Follow these steps:

- Create a file called **student_register.py**.
- Write a program that allows a user to register students for an exam venue.
- First, ask the user how many students are registering.
- Create a `for` loop that runs for that number of students.
- Each time the loop runs the program should ask the user to enter the next student ID number.
- Write each of the ID numbers to a text file called **reg_form.txt**.
- Include a dotted line after each student ID because this document will be used as an attendance register, which the students will sign when they arrive at the exam venue.

Questions and Answers

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Thank you for attending

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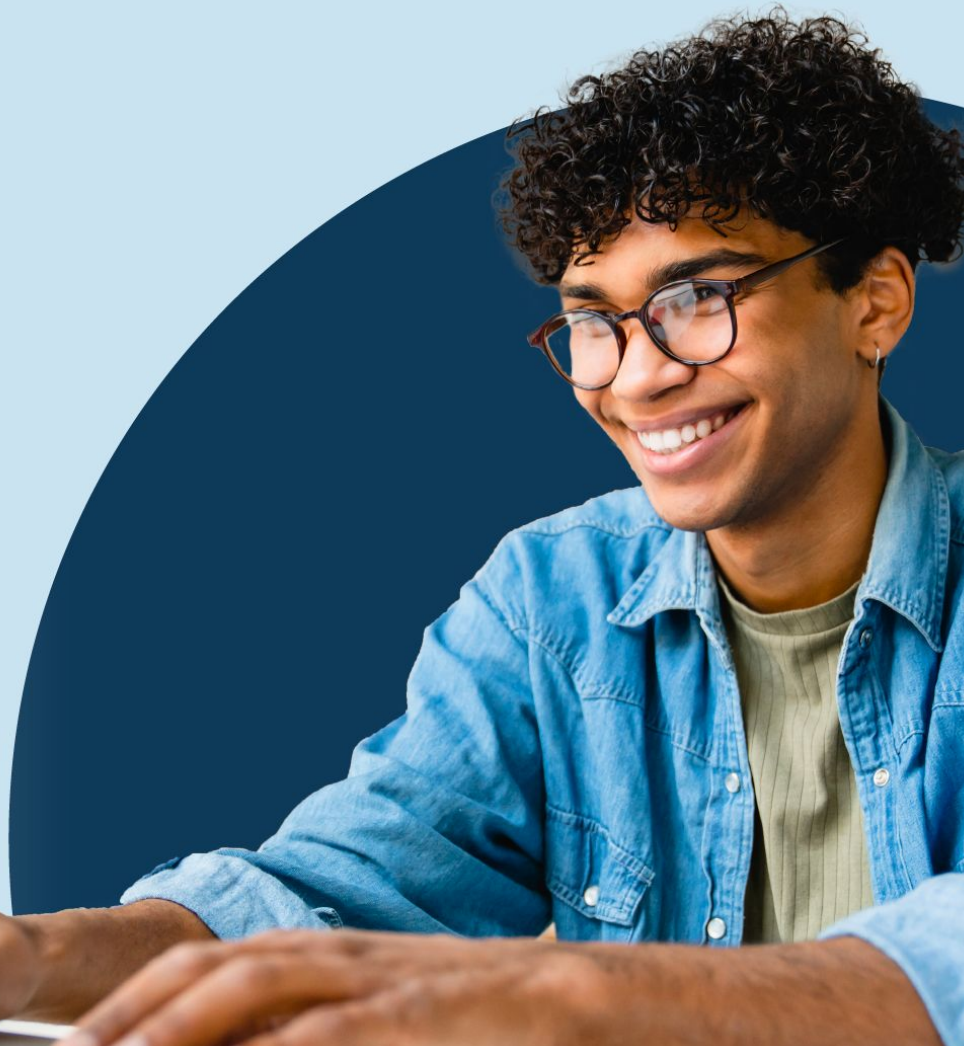

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