Welcome to the CoGrammar

Inheritance

The session will start shortly...

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

CoGrammar

Cyber Security 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**

Cyber Security Session Housekeeping cont.

- For all **non-academic questions**, please submit a query: **www.hyperiondev.com/support**

- We would love your **feedback** on lectures: **Feedback on Lectures**

- Find all the lecture **content** in you **Lecture Backpack** on GitHub.

CoGrammar

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
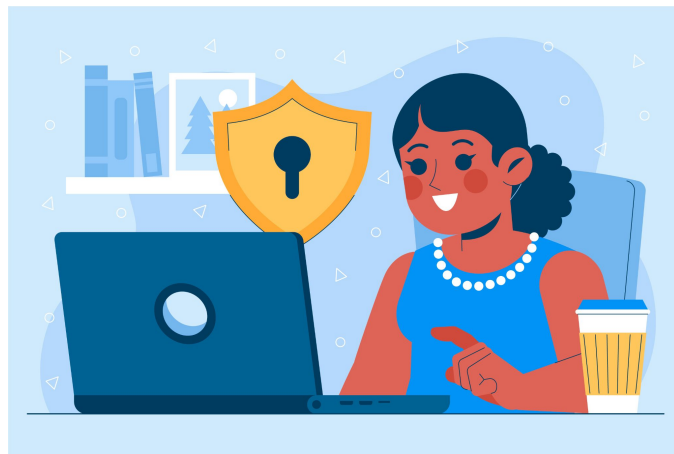
CoGrammar   HyperionDev

Stay Safe Series:

Mastering Online Safety One Week/step at a Time

While the digital world can be a wonderful place to make education and learning accessible to all, it is unfortunately also a space where harmful threats like online radicalisation, extremist propaganda, phishing scams, online blackmail and hackers can flourish.

As a component of this BootCamp the *Stay Safe Series* will/is designed to guide you through essential measures in order to protect yourself & your community from online dangers, whether they target your privacy, personal information or even attempt to manipulate your beliefs.

CoGrammar

Stay Safe Series

Privacy Matters: Guarding Your Personal Info Online

- Use Strong, Unique Passwords for Each Account
- Be Cautious with Social Media Sharing
- Keep Software Updated
- Beware of Phishing Scams
- Monitor Your Accounts Regularly

Learning Objectives & Outcomes

- Define the concept of inheritance

- Explain why it's useful in programming.

- Define a parent (base) class and create child (derived) classes.

- Demonstrate how to use the super() function to inherit methods and properties from a parent class.

- Recognise and implement method overriding.
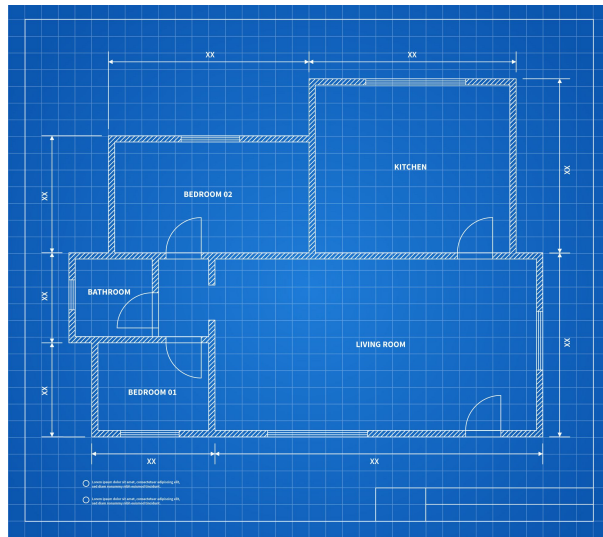
CoGrammar

Inheritance

October 2024

Inheritance

What is a class in Python?

CoGrammar

Inheritance

Have you heard of inheritance in programming? If so, what do you think it means?

Please have a look at the poll notification and select an option.

What is the syntax to create a class Dog that inherits from a class Animal?

A. class Dog inherits Animal:
B. class Dog: Animal
C. class Dog(Animal):
D. class Dog <- Animal

CoGrammar

Please have a look at the poll notification and select an option.

Which keyword is used in Python to define a subclass?

A. class
B. inherit
C. extend
D. super

CoGrammar

Inheritance

- Allows a class (child) to inherit attributes and methods from another class (parent).
- Why inheritance
  - Code Reusability
  - Improved Code Organization and Structure
  - Encourages Extensibility and Scalability
  - Facilitates Maintenance and Reduces Errors

CoGrammar

Basic Inheritance Syntax

- To inherit a from a class we first need a class to inherit from.

```python
class MyClass:
    pass
```

- Now we can inherit from this class with the following syntax

```python
class NewClass(MyClass):
    pass
```

CoGrammar

Method Overriding

- Child classes can override parent methods to customize behaviour.
- Use the same method name in child class as in parent.

CoGrammar

Activity

- Create a parent class called Animal with methods like speak().

- Create a child class (e.g., Dog) that inherits from Animal and overrides speak() to print "Woof!".

- Be creative! Use any animal type you would like.

Polls

Please have a look at the poll notification and select an option.

What is the main purpose of inheritance in Python?

A. To make code more complex
B. To allow one class to use methods and properties of another class.
C. To limit the functionality of a class
D. To add multiple methods to a class

CoGrammar

Please have a look at the poll notification and select an option.

What does the super() function do in the context of inheritance?

A. Accesses methods and properties of a parent class
B. Deletes the parent class
C. Creates an instance of the parent class
D. Checks if the subclass has the same methods as the parent

CoGrammar

Questions and Answers

CoGrammar

Thank you for attending