

# JavaScript Objects and OOP

## Programming with JavaScript



# JavaScript Objects and OOP Programming with JavaScript

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## Course Outline

- Module 1: JavaScript Objects
- Module 2: Using Objects to Encapsulate Data and Operations
- Module 3: Prototype Extensions and Inheritance
- Module 4: JavaScript Class Syntax

# Module 1: JavaScript Objects



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## *Instructor DEMO*

- Object Types and Function Behaviors
- Using Python tutor
- Cloning Techniques in JavaScript
- Shallow Cloning in JavaScript
- Diagnosing and Resolving Shallow Copy Errors
- Deep Cloning
- Deep vs Shallow Cloning
- Structured clone
- Enumerating Object Properties
- Property Descriptors
- Using Strict Mode and Object Freezing
- Syntax Error and Workaround

# Module 2: Using Objects to Encapsulate Data and Operations



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## *Instructor DEMO*

- Introduction to Object Oriented & Functional Programming
- Single Instances and Classes
- Factory Method
- Constructor Functions
- Privacy Techniques
- Guessing game Exercise

# Module 3: Prototype Extensions and Inheritance



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*Instructor DEMO*

- Understanding Prototype extensions
- Inheritance
- Revisiting the Guessing game



# Module 4: JavaScript Class Syntax



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*Instructor DEMO*

- JavaScript Class Syntax
- Revisiting the guessing game with Class Syntax
- Inheritance with Class Syntax