

# Software Development

## JavaScript Lesson 4

# Learning objectives

1. **Determine scope in JavaScript**
2. **Recognize the principles of Object Oriented Programming**

# Agenda

- 01. Recap
- 02. Scope
- 03. Objects
- 04. Object Oriented Programming

# Recap

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- What are variables used for?
- What are functions used for?
- What are loops used for?

# Scope

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- Global / module
- Function (local)
- Block

# Objects

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- Create an object in JavaScript
- Dot notation
- Bracket notation
- **this** keyword
- Constructors
- Everything is an object!

# Break

# Agenda

- 01. ~~Recap~~
- 02. ~~Scope~~
- 03. ~~Objects~~
- 04. Object Oriented Programming



# Object Oriented Programming

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- Classes
  - Instances
  - Constructors
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- 4 pillars
    - Encapsulation
    - Abstraction
    - Inheritance
    - Polymorphism

# Exercise (35 mins)

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## Class, Constructor and Instance exercise

- Create a book class that has constructor and method/function along with some properties like book title, pages, author name, published year, etc.
- Instantiate the book object
- Call properties of book class with the object

## Object Oriented Programming

- Do the exercise from LMS for all 4 principles

# For next class

1. Read about encapsulation, abstraction, inheritance and polymorphism in the LMS
2. Review the next lesson