
CSE 142

What is Computer Science?

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What is Computer Science?

- What do you think it is?

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What is Computer Science?

- Computation?
- Abstraction?
- Software Development?
- All boils down to modeling
 - Data
 - Objects
 - Relationships

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Overview of CSE 142

- We'll learn how to model...
 - Objects
 - Relationships
 - Data
 - Computation
- While learning how to create software systems using the Java programming language

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What is modeling? (1)

- What are some examples of models?
- Why do we use models of objects?

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What is modeling? (2)

- How do we model objects?

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World of Objects

- Learn to think about *properties* and *responsibilities* of objects
 - Properties: information relevant to the object
 - Responsibilities: tasks an object performs
- Learn to think about how objects relate to each other in a system

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Student Example

- You are a student
- Let's model a student object in the context of a course registration system
- Name examples of relevant properties:

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Student Example (cont.)

- What are some responsibilities (tasks) for the student in a course registration system?

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Retail Store Example

- Let's model a system to store inventory of a retail store that sells men's and women's shoes
- Give some examples of objects in the system

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Retail Store Example (cont.)

- Object Properties Responsibilities

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Summary

- Modeling the world with objects in software is called object-oriented programming.
 - We'll be discussing this in more detail
- Objects have properties and responsibilities
- Modeling includes developing abstractions for objects and creating relationships among objects

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