



# Module 1

## Software and Software Engineering

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### ▼ What are some categories of software?

- system - programs that service other programs
- application
- engineering/scientific
- embedded
- product-line
- web/mobile
- AI

### ▼ What is software engineering?

- a systematic, disciplined, quantifiable approach to software development and maintenance
- it is the application of engineering to software development

### ▼ What is a software engineering process?

- a model chosen to manage the development of software
- e.g. iterative approach

### ▼ What are some examples of software development problems?

- Inaccurate understanding of end-user needs
- Inability to deal with changing requirements

- Modules that don't fit together
  - Software that's hard to maintain or extend
  - Late discovery of serious project flaws
  - Poor software quality
  - Unacceptable software performance
- ▼ What are some software development best practices?
- Develop software iteratively.
  - Manage requirements.
  - Use component-based architectures.
  - Visually model software.
  - Verify software quality.
  - Control changes to software.