SOFTWARE and
SOFTWARE ENGINEERING

- **Engineered Software**
- **Controlled Configuration Item**
- **History of Software Development**
- **Software as a Business Opportunity**
- **Problems in Software Development**

- **Myths about Software Development**
- **Approaches to Software Development**
- **Engineered Software Development Models**
- **Software Engineering Technology**

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Objectives of Module 1

- Present and discuss the idea that software is much more than just code -- *engineered* software is composed of *controlled configuration items* which include documents, data, and code

- Present and discuss the history of software development, including its evolution into a business

- Present and discuss many of the problems with doing software development, particularly when there is more than one person involved

- Present and discuss many myths about software development and explain why some of these myths are fallacies

- Present and discuss several different software engineering paradigms, showing different methods for developing engineered software:

   - Classic "waterfall" method

   - Rapid prototyping

   - Spiral method

   - Fourth generation method

   - Combinations of the above

- Present and discuss some of the technologies used in the support of software engineering:

   - *Computer-Aided Software Engineering* (CASE)

   - Ada programming language