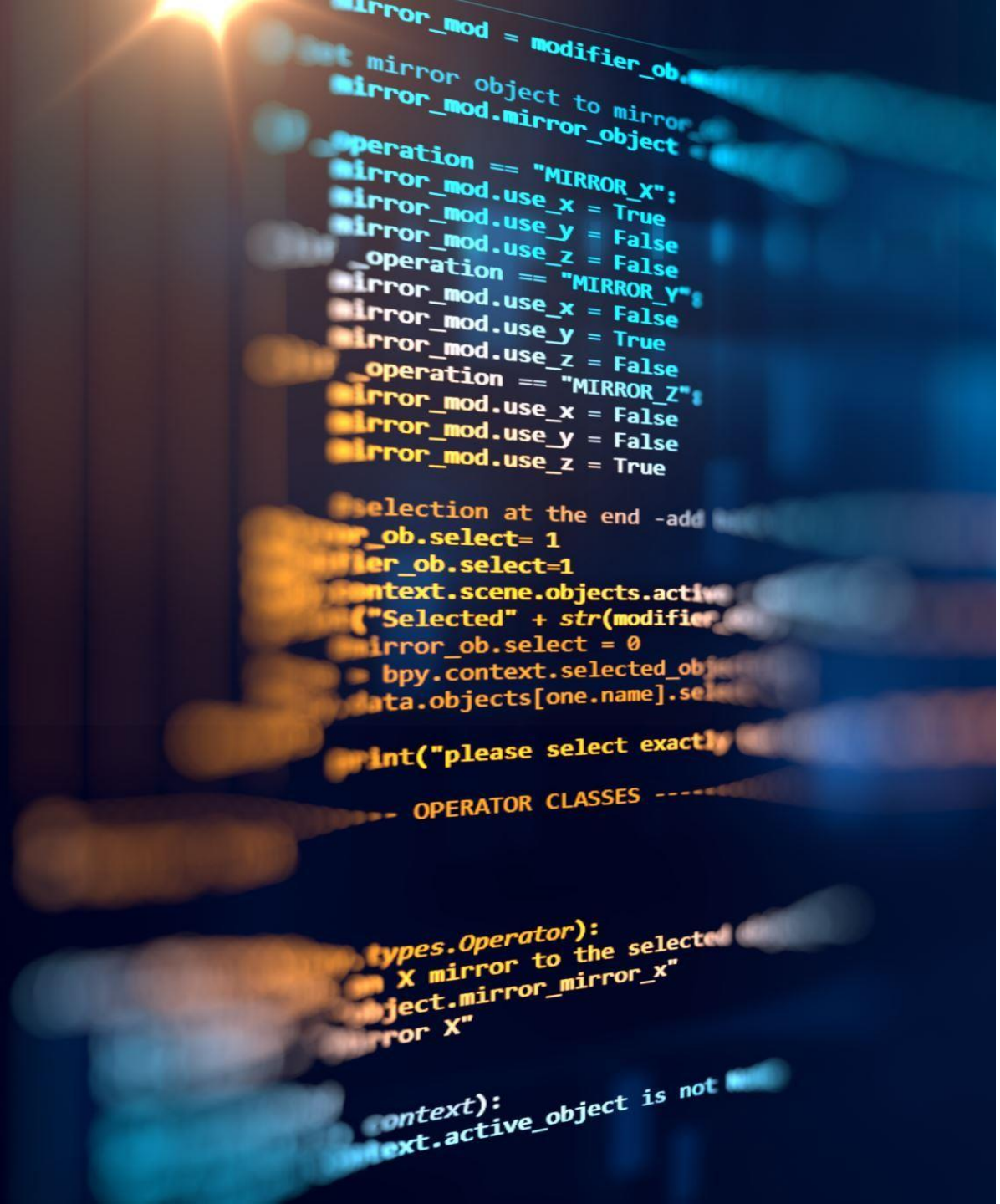

CSci363 User Interface Design

Friday, August 20, 2024

- **Today's session**:

- Introduction
- History of software development
- Software Development Ethics

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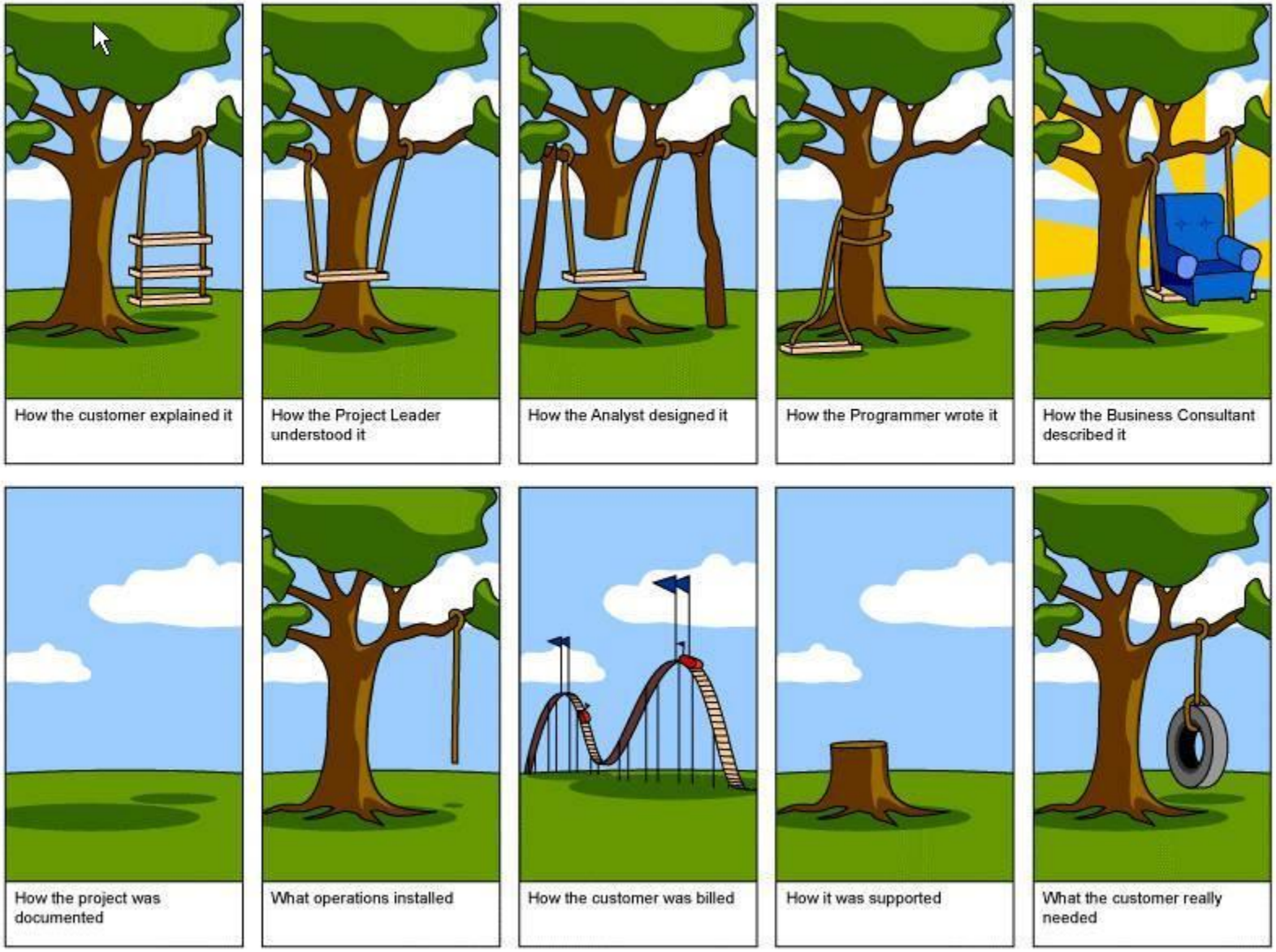

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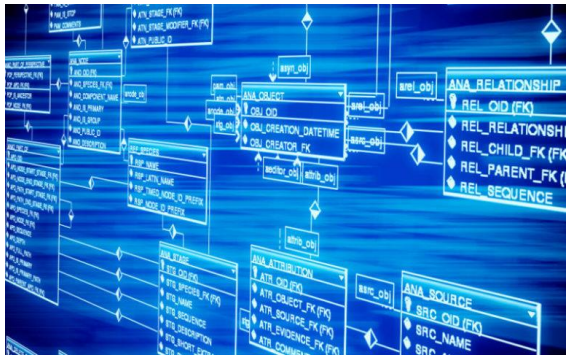


Software Development

The economies of ALL developed nations are
dependent on software.

More and more systems are software controlled

Software engineering is concerned with theories, methods and tools for professional software development.

Expenditure on software represents a significant fraction of GNP in all developed countries.

Software costs

Software costs often dominate computer system costs. The costs of software on a PC is greater than the hardware cost.

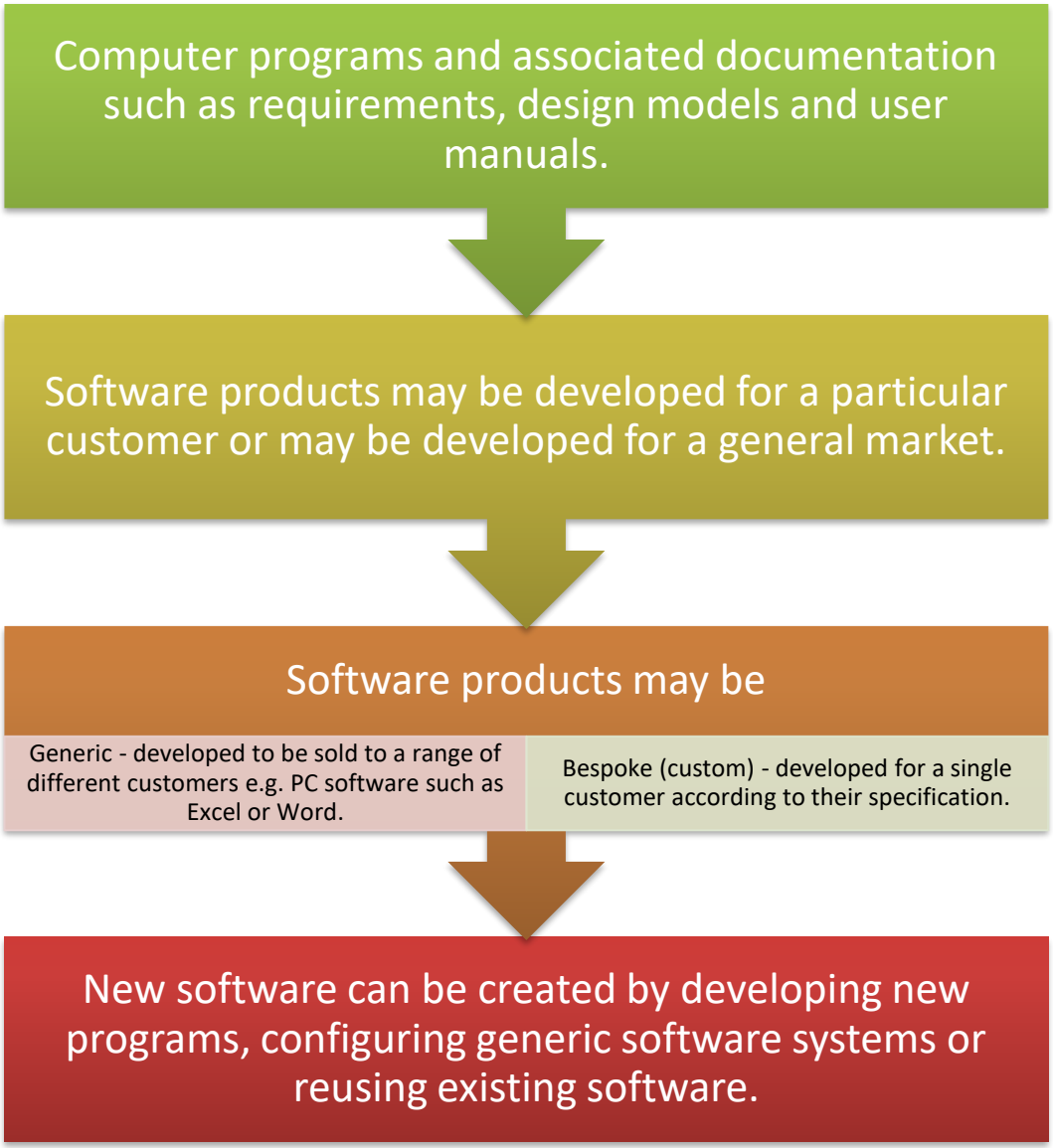
Software costs more to maintain than it does to develop. For systems with a long life, maintenance costs may be several times development costs.

Software engineering is concerned with cost-effective software development.

FAQs about software development

- What are the costs of software development?
- What are software development methods?
- What is CASE (Computer-Aided Software Engineering)
- What are the attributes of good software?
- What are the key challenges facing software development?

What is software?



What is software engineering?

Software engineering is an engineering discipline that is concerned with all aspects of software production.

Software engineers should adopt a systematic and organised approach to their work and use appropriate tools and techniques depending on the problem to be solved, the development constraints and the resources available.

What is the difference between software engineering and computer science?

Computer science is concerned with theory and fundamentals; software engineering is concerned with the practicalities of developing and delivering useful software.

Computer science theories are still insufficient to act as a complete underpinning for software engineering (unlike e.g. physics and electrical engineering).

What is the difference between software engineering and system engineering?

System engineering is concerned with all aspects of computer-based systems development including hardware, software and process engineering. Software engineering is part of this process concerned with developing the software infrastructure, control, applications and databases in the system.

System engineers are involved in system specification, architectural design, integration and deployment.