CSE-327 (Software Engineering)
Faculty: AKM Iqtidar Newaz (IqN)
Lecture - 1

What is a Software?

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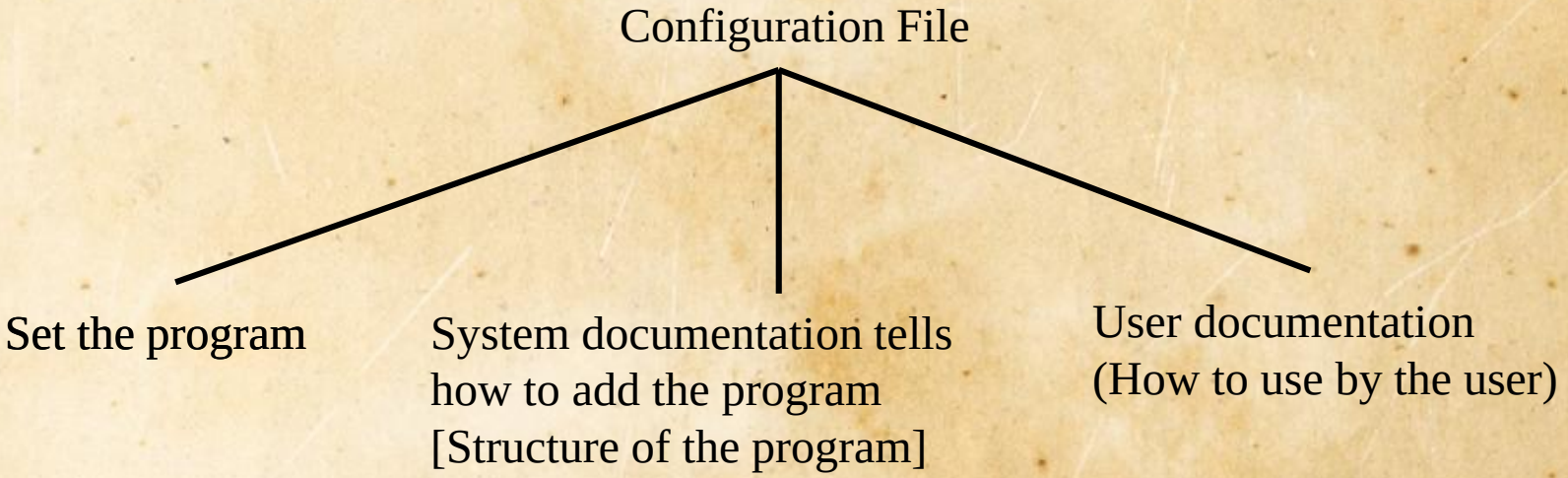
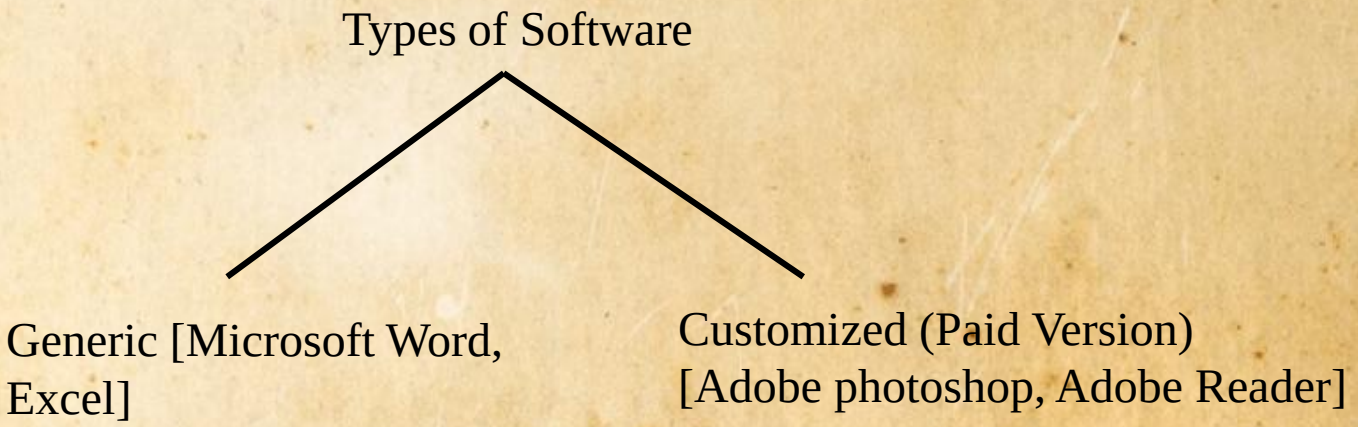
A set of programs. Initially, total works are divided into different parts and before releasing merged every parts all together to deliver the software.

What can be there in Software?





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Software engineering is the application of a systematic, disciplined, cost-effective techniques, which is an engineering approach for the development, operation and maintenance of a software.

Difference between Software Engineering and Computer Science?

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Computer science deals with the science behind interaction between hardware and software systems and computational applications.

Essential Attributes of Good Software

- Functionality - fulfilling the goal and requirement
- Usability - easy and flexible to use.
- Efficiency - no extra memory space
  - responsiveness
  - fast processing time.
- Maintainability - easy to change the design or add new feature.
- Security - no unauthorized access.
- Reliability - if software fails, there must be a backup system.

What is a Software Process?

- Software specification - users and developers meet, explain their expectations, budgets (SRS[Software Requirement Specification]).
- Software development - design and program.
- Software validation - check with the SRS.
- Software evaluation - if any changes need, we can change it.

What are the key challenges in Software Engineering?

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- Legacy challenge – Most softwares were created long time ago. It's been updated over times by developers. Updating this software is a big challenge and this is called legacy challenge.

- Heterogeneity challenge – Every day OS updates, network updates, all these updates can work smoothly.

- Delivery challenge – Small time limit but need to deliver high quality software.

What is SDLC?

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- SDLC stands for Software Development Life Cycle. Also referred to as the Application Development Life Cycle.
- Systemic process to develop a software.
- SDLC process aims to produce high-quality software that meets customer expectations.

What is SDLC?

- The system development should be complete within the pre-defined time frame and cost.
- SDLC consists of a detailed plan which explains how to plan, build, and maintain specific software.
- Every phase of the SDLC life cycle has its own process and deliverables that feed into the next phase.

Why SDLC?

- It provides basis for project planning, scheduling and estimating.
- Provides a framework for a standard set of activities and deliverables.
- It is a mechanism for project tracking and control.
- Increases visibility of project planning to all involved stakeholders of the development process.
- Increased and enhance development speed.
- Improved client relations.
- Helps to decrease project risk and project management plan overhead.