***Software Engineering*** – The application of scientific principles to the design and creation of software  
- Uses a systematic approach to collect business requirements and design, build, and test software

**Computer-Aided Software Engineering (CASE):**

- Tools that came to prevalence in the 196- 1980’s to alleviate the “software crisis” and help align discordant software engineering frameworks  
- Can be divided into six categories:

1. Business Analysis & Modeling  
2. Debugging Environments  
3. Verification and Validation tools  
4. Configuration Management  
5. Metrics and Measurement  
6. Project Management

**Software Engineer vs Software Developer:**

**A screenshot of a computer

Description automatically generated  
A blue and white text on a white background

Description automatically generated  
A blue background with white text

Description automatically generated**

- Engineering encompasses system design and architecture   
- Goes beyond just ‘writing code’

**Software Development Life Cycle (SDLC)**

- A scientific approach to software development  
- Identifies steps needed to develop high quality software and guides the software development process to meet a client’s requirements  
- Defines phases with their own processes and deliverables (initially used waterfall method for development but now uses Agile and DevOps – more iterative methods)