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Course: SWE 1

Lab 1

1. Software engineering is part of System Engineering process because software engineering is a detailed study of engineering to the design, development and maintenance of software while system engineering process is the overall management of engineering projects during their life cycle(focusing more om the physical aspects)

2. Software crisis is a term used in the early days of computing science for the difficulty of writing useful and efficient computer programs in the required time. The software crisis was due to the rapid increases in computer power and the complexity of the problems that could now be tackled. Some causes of software crisis are;

- Projects running over-budget
- Projects running over-time
- Software was very inefficient
- Software was of low quality
- Software often did not meet requirements

3. The professional responsibilities of a software engineer include:
    - Perform systems modelling, simulation plus evaluation to provide suitable software solutions.
    - Design and prepare assemblers, utility programs, compilers and operating systems to accomplish customer business needs.
    - Provide all required input for documents of new and existing programs to assure information accessibility as needed.
    - Participate to design, develop, troubleshoot and analyse bn software programs operating with hardware systems.
    - Support customizing purchased applications plus assist to maintain program libraries along with manuals on basis of research as well as customer needs.
    - Provide feedback plus reports to management pertinent to status as well as availability of hardware and software to assure apt functioning.
    - Perform with customers to present hands-on first level assistance.
    - Support requirements gathering along with proposal development inclusive of effort estimation interacting directly with clients.

4. Component based Software Engineering allows faster delivery. Due to using previously tested components they produce more reliable system at a faster rate