Assignment

Question 1: "software engineering is part of system engineering process". Do you agree with the above statement ? Justify your answer.

Answer

I agree, this is because system engineering concerns the overall management of engineering life cycle. While software engineering concerns the design and development of specified software of highest quality which is all done in the system engineering.

Question 2: what is "software crisis"?

Answer

Software Crisis is a term used in computer science for the difficulty of writing useful and efficient computer programs in the required time .software crisis was due to using same workforce, same methods, same tools even though rapidly increasing in software demand, complexity of software and software challenges. With increase in the complexity of software, many software problems arise because existing methods were insufficient.

Question 3: what are the professional responsibilities of a software engineer ?

Answer

A software engineer's duties and responsibilities fall into four main categories.

- **Research and analysis.** While programmatically proficient, plenty of software engineers must generate solutions without a roadmap. For back-end engineers, this may mean integrating an API into their tech stack. For front-end developers, this may mean building interfaces that can work across multiple browsers. Regardless of the problem, software engineers spend a good amount of time researching both programmatic solutions and technical documentation for help.
- **System design.** A back-end software engineer has to architect the technical underpinning that brings a designer's solutions to life, while a front-end engineer focuses on the user-facing aspect of the program. When researching a software engineer's roles and responsibilities, listed duties may include tasks like building back-end architecture or creating algorithms. A software engineer is always demonstrating creativity when they design technical solutions; after all, this is what makes so many power technologies proprietary, to begin with.

- **Implementation.** A software engineer's primary goal is to implement efficient code into the overall product infrastructure. Most software developers work in teams and therefore only focus on building specific front-end or back-end components of a certain product. Therefore, it is crucial to demonstrate an understanding of the implementation protocol as a key part of a software engineer's job responsibilities.
- **Support.** Products that have gone to market are never completed; they always need continued iteration, support, and patching. Software engineers are continuously supporting the products they build. This means that when problems arise—such as bugs or user experience errors—a software engineer must design a fix, implement the fix, and test the fix. This process is generally coined as support and a software engineer works in tandem with their QA team to continuously support their product throughout the software development lifecycle.

Question 4: component-based software Engineering allows faster delivery ". State whether this statement is true or false. Justify your answer.

<u>Answer</u>

true, since software is developed for specific component, it is easier to use version created for previous models of components. Also using previously tested components they produce more reliable system of a faster rate.