**Q/A Sheet #1- Introduction to SE**

date:2020/09/02 number:2016310936 name: 우승민

Questions from Prof.

1. On slide 7, why is the cost distribution pattern of the iterative model and componentbased model different from the waterfall?

Waterfall model은 requirement가 명확한 상태에서 시작하고 iterative model은 명확하지 않은 상태에서 시작한다. Component-based model은 software를 개발하는 것이 아닌 조립하는 것으로 생각한다.

1. Explain the trade-off between the essential attributes on slide 12.

Maintainability(기존 상태에서 변경이나 수정이 필요할 때 유지보수가 얼마나 쉬운가)

Dependability and security(사용자의 system에 대한 신뢰도가 충족되어야 한다.)

Efficiency(낭비 없이 효율적으로 사용되어야 한다.)

Acceptability(사용자가 어려움 없이 사용할 수 있어야 한다.)

1. Compare the validation and verification activities.

Validation은 customer의 require과 일치하는지 확인하는 것이고 verification은 customer의 문서와 일치하는지 검증하는 것이다.

1. Explain four fundamental software engineering activities.

Specification, development, validation, evolution 4가지이다.

1. Discuss the types of applications on Slide 18-20 and find more than two examples for each type.
2. Stan-alone application ex) adobe photoshop, MS office
3. Interactive transaction-based applications ex) teamviewer, remote view
4. Embedded control systems ex) IOS, android
5. Batch processing systems ex) 국민은행, 신한은행
6. Entertainment systems ex) youtube, netfilx
7. Systems for modelling and simulation ex) matlab, simulink
8. Data collection systems ex) surveys, questinnaries
9. Systems of systems ex) smart-house, air-traffic management
10. Explain why you should choose different software engineering techniques, methods, and tools depending on the context of the software project.

Software의 종류가 많고 각각 요구하는 기술들이 다르기 때문이다.

1. Think about some fundamental principles that can apply to all types of software systems.

Dependability, performance, understanding, managing

1. Describe the distinctive changes in the software development process when using web or web services as a technical platform.

Software reuse이 중요해질 것이다. User interfaces가 억제될 것이다.

1. Investigate the fatal consequences caused by unethical behavior or decisions by software engineers.

Software engineers가 비윤리적으로 개발하면, 피해자들이 발생한다. 예를 들어, 불법 도박 어플리케이션을 개발한다고 했을 때 확률을 조작하는 경우가 있다.

1. Discuss with your colleagues what knowledge and efforts you need to be a competitive software engineer.

기존의 software techniques들을 잘 이해하고 사용할 줄 아는 것이 중요할 것이다.

Questions from Student

1. Explain the General Issues that affect Most Software.

- Heterogeneity, Business and social change, Security and trust

2. Explain what are the most important at Software Engineering.

- Engineer need to be able to produce reliable and trustworthy systems economically and quickly.