

Question set for sw development skills 5-9-2000

Product development lifecycle

- ❖ What's your typical software development lifecycle?
- ❖ In what areas do you think this can be improved?

Speeding up product cycle times

- ❖ What do you do to speed up the product cycle times when the schedule is tight?
- ❖ How can you speed up product cycle times without sacrificing quality?

Software quality assurance

- ❖ What do you do to assure the quality of your product?

Software architect design and development experience

- ❖ Do you have any experience architecting a software product?
- ❖ What is the process you used to architect or lead the project?
- ❖ UML, design pattern and OO design.

Working knowledge of Solaris, HP-UX and NT development platforms

- ❖ Compare NT vs UNIX from an application developer's point of view and from a user point of view.

Experience and skill working with OOA/OOD

- ❖ What are the basic benefits of OOA/OOD ?
- ❖ What is the difference between OO programming and procedural programming?

Experience and skill working with Java or XML (Extensible Markup Language)

- ❖ Teach me Java or XML in 5 minutes.
- ❖ Compare Java and C++;
- ❖ Describe a project that you've implemented in Java or XML.
- ❖ Which language that you would like to work with, C, C++ or Java?

## Software Engineering

1. If you are asked to take on a large piece of a project:

- How would you go about putting together a plan for it?
- How would you estimate time needed to complete your work?
- How do resources, schedule, and features interact in this context?

2. Pick 2 formal software lifecycle models that you have used and describe the steps required to produce a product using them.

3. How do you know when your product is complete and you can ship it?

4. Describe how you've tested software in the past.

5. What are your goals when doing software testing?

6. What are things to look for when designing tests? (corner cases, boundary conditions, coverage % etc.)

7. Where in the software lifecycle do you have to focus on the product's quality?

8. If you have several developers all working in the same area, what steps would you take to make sure they are as efficient as possible? (clear design with partitioning of responsibilities, develop libraries/reusable modules, etc.)

9. When designing and coding, what are some of the ways you can make a program more maintainable?

10. What kinds of tools have you found effective in producing high quality software quickly? (IDEs, debuggers, profiling tools, etc.)

11. How do you document your software's design and implementation details?

Describe these Development Paradigms: Waterfall Lifecycle, Iterative Prototyping, Extreme Programming

Design Methodologies: Use of data flow diagrams? Data Dictionaries? Object Inheritance diagrams? Sequence diagrams?

Testing: Purpose and use of unit tests, integration tests, system tests

Toolkits: what editors, debuggers, environments, source code control, defect tracking, etc, tools used for software development