

Fundamentals of Software Engineering

Teacher: Jones Albuquerque

Student: Jéssica Alves de Souza

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Answers based on PRESSMAN's Software engineering book

Questions - Answers

2.5. Umbrella activities occur throughout the software process. Do you think they are applied evenly across the process, or are some concentrated in one or more framework activities?

R - Framework activities of the software engineering process are complemented by a number of umbrella activities, so they make a type of a skeleton for software engineering work. Together, they can control the progress, quality, change and risk of the software.

6.6. Which of the four organizational paradigms for teams (Section 6.4) do you think would be most effective (a) for the IT department at a major insurance company; (b) for a software engineering group at a major defense contractor; (c) for a software group that builds computer games; (d) for a major software company? Explain why you made the choices you did.

R- (a) - A closed paradigm, because your software may not need updates all the time.

(b) -

(c) - A random paradigm, because the games development necessity so much innovation.

(d) - An open paradigm, because works well for developing a solution to complex problems.

7.9. Describe what granularity means in the context of a project schedule.

R - Granularity is a type of level of detail that is introduced in an project plan development. It could be a high-granularity or a low-granularity. Depends of the necessity of details and time.

7.13. What is a successful test?

R - People think that a successful test is one in which no errors are found, but a successful test is one that you can see the undiscovered classes of errors and solve them in the least amount of time and effort possible.

8.3. Discuss some of the problems that occur when requirements must be elicited from three or four different customers.

R - There may be conflicts of interest between customers, where different requests may exist. It can be complicated to the software development, having to agree on the importance of each requirement.

8.17. What five tasks make up a comprehensive requirements monitoring program?

R -

- 1° By debugging the code, we can find errors and determine their cause.
- 2° Run-time verification determines when the software matches its specification.
- 3° Run-time validation checks whether software is meeting its objectives required by users.
- 4° Evaluates whether it is being satisfactory for business objectives.
- 5° Evolution and codesign produce project information for people who are interested in it.

10.7. What is an analysis package and how might it be used?

R - Is an important part of analysis modeling, where on the requirement model we have various elements that are categorized in packages. We can see classes that represent diversified parts of our software. Class name in each package indicates that the classes have public visibility and are therefore accessible from other packages. For example: A program making using the Java language. We can make many classes, and it is a great form to specify the many parts that compose it.

11.2. How does a sequence diagram differ from a state diagram? How are they similar?

R - They are modeled using UML notation, but state diagram represents events that cause changes between these active states, and sequence diagram indicates how events (derived from a use case) cause transitions from object to object.