the

CH #9

Short Questions

(i)

What is an Architecture/ Importance/ description/ decision?

Architecture: Software architecture is simply, the (organizing)* organization of System. The organization includes all components, how they interact with each other.

Importance: Representation of software architecture are an enabler for communication between all parties (stekeholders).

Description: It is a conceptualization of all architecture. Its usefulness is in expressing the functional and non-functional equality characteristics.

Decision: It is the art and science of designing websites for good decisions making by users. Decision making is complex proces.

(ii)

Define Architecture Genres?

Architecture Genie is used to define the architectural approach for the build of any structure. It includes:

(·) Devices (·) Artificial Intelligence
(·) Transportation (·) Communications
(·) Operating System (·) Tools

LONG QUESTION

(1) ALTERNATIVE ARCITECTURAL DESIGNS

Design results in a number of architectural alternatives that are each assesed to determine which is the most appropiate for the problem to be solved.

(i) ARCHITECTURE TRADE-OFF ANALYSIS METHOD

The software engineering institute (SEI) has developed an architecture trade-off analysis method that establishes an iterative evaluation process for software architectures

(i) COLLECT SCENARIOS A set of use cases is developed to represent the system from the user's point of view.

(ii) (Describe)* The architectural styles should be described using one of the following architectural views

i) MODEL VIEW for analysis of work assignements with components and the degree which informating ruling has been achieved.

(ii) PROCESS VIEW for analysis of system performances.

(iii) DATA FLOW VIEW for analysis of the degree to which the architecture meets functional requirements.

(iii) Elicit requirements, constraints and environment description. This information is determined as part of requirements engineering and is used to be certain that all stakeholders concerns have been addressed.

(i) ARCHITECTURAL COMPLEXITY

A useful technique for assessing the overall complexity of a proposed architecture is to consider dependencies between components within the architecture These dependencies are driven by information / control flow within the system.

Three types of dependencies.

(i) Sharing dependencies
(ii) Flow dependencies
(iii) Constrained dependencies

(i) SHARING DEPENDENCIES

represents dependences relationships among customers who use the same resource or producers who produce for the same customers.

(ii) FLOW DEPENDENCIES

represents dependence relationships between producer and consumer of resources.

(iii) CONSTRAINED DEPENDENCIES

represents (dependences) constraints on the relative flow of control among a set of activities.

(.) ARCHITECTURAL DESCRIPTION LANGUAGES

Architectural description language (ADL) provides a semantics and syntax of describing a software architecture.

ADL should provide the designer with the ability to decompose architectural components and represents interfaces (connection mechanism) between components.