

Q - 2

- SDLC full form is Software Development Life Cycle.
- SDLC is a process that produces software with the highest quality and lowest cost in the shortest time possible.
- SDLC provides a well-structured flow of phases that help an organization to quickly produce high-quality software.
- SDLC is considered to be the foundation for all software development methodologies with various activities associated with each level.
- Activities such as budget, requirements gathering and documentation writing are included in the cycle.

- Phases of SDLC :-

- Plan Communication,
- Planning
- Modeling
- Construction
- Deploying.

- Communication: to gather the information of the project from the customer and focus on the main goal.
- Planning: The basic structure of project through chart, document, etc.
- Modeling: Build the model how to configure the method of the project.
- Construction: Coding, testing and developing of project.
- Deploying: The project is given to customer and take feedback.

Q - 7

CASE:-

- CASE means Computer Aided Software Engineering
- It is the implementation of computer facilitated tools and method in software development.
- It is used to ensure a high quality and defect free software. A check pointed and disciplined approach and helps designer, developer, managers, and other to develop project milestone during developing.

Benefit of CASE approach :-

- As special emphasis is placed on redesign as well as testing the screening cost of a product over its expended lifetime is considerably reduces.
- Changes to most real-world requirement are more likely and easier with a computer-aided software engineering approach.

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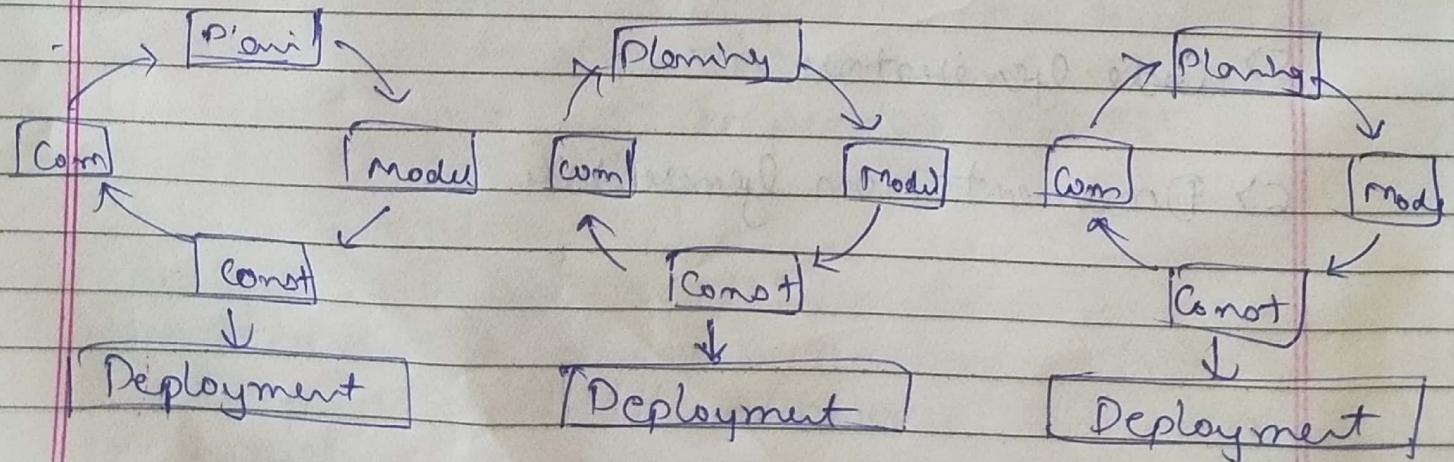
- The overall quality of the product is improved as an organised approach is undertaken during the process of development.
- Case indirectly provides an organization with a competitive advantage by helping ensure the development of high quality products.

CASE tools:-

- 1) Diagramming Tools
- 2) Computer display and report generation
- 3) Analysis tools
- 4) Central repository.
- 5) Code generator
- 6) Documentation generator

Q-5.

- Scrum has three roles: product owner, scrum master and development team member.
- Agile model:-
- Agile development model is also type of incremental model.
- Software is developed in incremental, rapid cycles. This results in small incremental releases with each release building on previous functionality.
- Each release is thoroughly tested to ensure software quality is maintained.



Scrum

Scrum which is specialized agile method, or we can say specialized incremental development process.

- Scrum is an iterative approach that has at its core the sprint

Sprint

Sprint is one development cycle in scrum

- Sprint is a set period of time during which specific work has to be completed.

Q - 6

- Software architecture refers to the fundamental structures of a software system and the discipline of creating such structures and systems.
- Each structure comprises software elements, relations among them and properties of both elements and relations.
- Software architecture represent a common abstraction of a system that most or if not all of the system is stakeholders can use as a basis for mutual function understanding.
- It is also the earliest point at which design decisions governing the system to be built can be analyzed. Therefore software architecture is important.

Different types of architecture styles?

• Data centered architecture?

- The data stored in the file or database is occupying at the center of the architecture.

- Data centered architecture helps integrity.
- Data between clients using this background mechanisms
- The processes are independently by the client components

Q) Data flow architecture :-

- This architecture is applied when the input data is converted into a series of manipulation components into output data.
- A pipe and filter pattern is a set of components called a filter.
- Filters are components connected through pipes and transfer data from one component before next components.

Q-3.

- Extreme Programming is an agile software development framework that aims to produce higher quality software, and higher quality of life for the development team.
- Advantages of extreme programming.
- The main advantages of extreme programming is that this methodology allows software development companies to save costs and time required for project realization.
- Simplicity is more advantage of extreme programming.
- The whole process in XP is visible and accountable. Developers commit what they will accomplish and show progress.
- XP assist to create software faster than to the regular testing at the development stages.
- It contributes increasing employee satisfaction and retention.

- Functional spikes analyze solution behaviour and to determine the best approach to take.
- How to break down a process into manageable parts.
- How to organize your work
- To learn where risks exist as well as other intricate details.
- Technical spikes research various approaches and processes in the solution domain
- To define the process in build versus buy decision process-
- Assess the implementation of specific technical approaches.