

DEVOPS LAB
ASSIGNMENT 1

(1) What are the 4P's in Software Engineering?
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Four P's are: People
Product
Process
Project.

People: Identifying the roles people play in almost any given project as the first step to a successful project. People are the primary resource on every project and a well-managed team can greatly increase the chance for success. Some of the different roles people play in project management includes project manager, project team members, sponsors, stakeholders, business analysts, and information technology developers.

Product: As the name implies, this is the deliverable of the project. The project manager should define the product scope to ensure a successful outcome, control "scope creep", as well as technical hurdles that he or she may encounter.

Process: The third P of project management is Process. Project managers and team members should have a methodology and plan that outlines their approach. Without a clearly defined process, team members will not know what to do and where to carry out project activities. However, this problem can be avoided through comprehensive early stage process planning.

Project: The fourth and final P ^{is} project. This is where the project manager's role and responsibilities come into play. He or she must guide team members to achieve the project's goals and objectives. The project manager must delegate tasks, help team members when needed and ultimately strive to accomplish all requirements set forth in the project scope.

(2) Define Software Engineering.
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Software engineering is defined as a process of analyzing user requirements and their designing, building and testing software application which will satisfy their requirements.

(3) What are the important phases in the waterfall model?

⇒ The waterfall model, the whole process is divided into several phases. The outcome of one phase acts as an input to the next stage.

- ① conception
- ② Initiation
- ③ Analysis
- ④ Design
- ⑤ construction
- ⑥ Testing
- ⑦ Production / Implementation
- ⑧ Maintenance.

(4) What are advantages & disadvantages of Waterfall model?



Advantages of Waterfall Model:

- ① Uses clear structure
- ② Determines the end goal clearly
- ③ Transfers information well.

Disadvantages of Waterfall model:

- ① Makes changes difficult.
- ② Excludes the client and/or end user.
- ③ Delays testing until after completion.

(5) What do you mean by Scrum?



Scrum is a process framework used to manage project development and other knowledge work. Scrum project management is a methodology for managing software delivery that comes under the broader umbrella of agile project management.

(6) What are the roles and responsibilities of Scrum master and Product Owner?

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Scrum Master Roles & Responsibilities:

- ① Implement Project Management / Best Practices.
- ② Keep all Parties on Track and Informed.
- ③ Introduce Agile Engineering Practices.

Product Owner Roles:

- ① Defining the vision
- ② Managing the product backlog.
- ③ Prioritizing needs.
- ④ Overseeing development stages.
- ⑤ Anticipating client needs.
- ⑥ Acting as primary liaison.
- ⑦ Evaluating product progress at each iteration.

(7) What is pair programming?

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Pair Programming is an agile software development technique in which two programmers work together at ~~once~~ one workstation.

(6) What are the phases in DevOps?

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Phases of DevOps are as followed:

① Continuous Development.

② Continuous Integration.

③ Continuous Testing.

④ Continuous Monitoring

⑤ Continuous feedback.

⑥ Continuous Deployment

⑦ Continuous operations.