

202101928

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Software architect

Description

A software architect is a software expert responsible for planning and organizing a software system. This expert dictate software coding standards and choose optimal tools for custom software development. They also help translate ideas into technical tasks and correctly distribute them to the development team. The position of a software architect requires a profound knowledge of software functionality, performance, viability, scalability, comprehensibility, security, and technological constraints. An architect is engaged throughout all stages of the software development process, making high-level decisions regarding the tools, coding standards, or platforms to be used.

Roles of the software architect in the software development process

1. Pre-Development stage

In the initial stage of software development, the architect will help identify the client's business problems and necessary resources. A software architect will study requirements and consider constraints. Then gather early functional and non-functional requirements, select a technology stack, estimate development time and deliver a high-level architectural design.

2. Prototyping

At this stage the architect decides how to build the solution from the approved proposal by addressing possible risks and constraints, providing detailed architectural blueprints and approve the solution's viability.

3. Development

Once the development process starts, the software architect will continue designing components and features. They set quality standards and ensure code compliance with predefined requirements. In case of changes, the software architect will ensure they don't negatively affect the expected product characteristics by setting quality standards and further architectural specifications.

4. Quality assurance

At this stage the architect make critical decisions on deployment methods, environments and infrastructures, and code freezes. The architect can initiate changes in the project structure or infrastructure with consideration of the project budget and timeline.

5. Post-development

Once the product is developed, the architect ensures that the requirements set by the client have been met in full. The architect also ensures regular check-ups and all prompt addressing of the detected issues.

Conclusion

A software architect's roles and responsibilities involve taking clients requirements and figuring out how to embody them in software for long-lasting impact.