

SHIFT-LEFT TESTING



WHAT IS SHIFT-LEFT TESTING?

Shift-Left Testing is a practice in software development where testing is performed earlier in the software development lifecycle (SDLC), rather than waiting until the later stages.

KEY PRINCIPLES OF SHIFT-LEFT TESTING

- **Early Involvement of Testers:** Testers are involved from the beginning of the development process, including the requirements gathering and design phases. This helps in identifying potential issues and ambiguities early on.
- **Continuous Testing:** Testing is performed continuously throughout the development cycle.
- **Automation:** Test automation is a crucial component of shift-left testing. Automated tests are run frequently to catch defects as soon as they are introduced.
- **Feedback Loop:** A tight feedback loop is established between development and testing teams. Quick feedback on code changes helps developers fix defects immediately, improving the overall quality of the product.
- **Review:** Introducing review at every stage of development. (From acceptance criteria to code review).
- **Customer Involvement:** Involve customer in the product discovery.

BENEFIT OF SHIFT-LEFT TESTING

- More customer centricity
- More quality transparency in the development team
- Establish of a whole team quality mindset
- Testers are involved much earlier in the software development process
- Faster time to market
- Lower development costs

CHALLENGES OF SHIFT-LEFT TESTING

- **Cultural Shift:** Teams may need to change their mindset from the traditional testing approach to a more integrated and continuous testing approach.
- **Skills and Training:** Testers need to acquire new skills, such as understanding the code, writing automated tests, and using new tools for early testing activities.
- **Tooling and Integration:** Selecting and integrating the right tools for continuous testing, automation, and CI/CD can be challenging.
- **Initial Overhead:** Setting up automated tests, CI/CD pipelines, and other shift-left practices requires an initial investment of time and resources.

CONCLUSION

By integrating testing into the early stages of the SDLC and fostering collaboration between development and testing teams, shift-left testing helps ensure that defects are caught and resolved early, leading to a more efficient and effective development process.