**Q1. What is the need for DevOps?**

Instead of releasing big sets of features, companies are trying to see if small features can be transported to their customers through a series of release trains. This has many advantages like quick feedback from customers, better quality of software etc. which in turn leads to high customer satisfaction. To achieve this, companies are required to:

1. Increase deployment frequency
2. Lower failure rate of new releases
3. Shortened lead time between fixes
4. Faster mean time to recovery in the event of new release crashing

DevOps fulfills all these requirements and helps in achieving seamless software delivery.

**Q2. How is DevOps different from Agile / SDLC?**

Agile is a set of values and principles about how to produce i.e. develop software. Agile software development methodology focuses on the development of software but DevOps on the other hand is responsible for development as well as deployment of the software in the safest and most reliable way possible.

**Q3. Which are the top DevOps tools? Which tools have you worked on?**

The most popular DevOps tools are mentioned below:

* Git : Version Control System tool
* Jenkins : Continuous Integration tool
* Selenium : Continuous Testing tool
* Puppet, Chef, Ansible : Configuration Management and Deployment tools
* Nagios : Continuous Monitoring tool
* Docker : Containerization tool
* If you have experience with all the above tools then you can say that I have worked on all these tools for developing good quality software and deploying those softwares easily, frequently, and reliably.
* If you have experience only with some of the above tools then mention those tools and say that I have specialization in these tools and have an overview about the rest of the tools.

**Q4. How do all these tools work together?**

Given below is a generic logical flow where everything gets automated for seamless delivery. However, this flow may vary from organization to organization as per the requirement.

1. Developers develop the code and this source code is managed by Version Control System tools like Git etc.
2. Developers send this code to the Git repository and any changes made in the code is committed to this Repository.
3. Jenkins pulls this code from the repository using the Git plugin and build it using tools like Ant or Maven.
4. Configuration management tools like puppet deploys & provisions testing environment and then Jenkins releases this code on the test environment on which testing is done using tools like selenium.
5. Once the code is tested, Jenkins send it for deployment on the production server (even production server is provisioned & maintained by tools like puppet).
6. After deployment It is continuously monitored by tools like Nagios.
7. Docker containers provides testing environment to test the build features.

PLAN +CODE : GIT , JIRA , SUBVERSION

BUILD : ANT , MAVEN , GRADLE

TEST : JUNIT , SELENIUM

JENKINS : CONTINUOUS INTEGRATION TOOL

DEPLOY + OPERATE : PUPPET ,ANSIBLE ,CHEF , SALTSTACK

MONITOR : NAGIOS , SENSU , NEW RELIC

**Q5. What are the advantages of DevOps?**

Technical benefits:

* Continuous software delivery
* Less complex problems to fix
* Faster resolution of problems

Business benefits:

* Faster delivery of features
* More stable operating environments
* More time available to add value (rather than fix/maintain)