

①. Bootcamp overview.

Devops tools you will learn

- ① O.S - linux.
- ②. Version control - Git.
- ③. Build Tools - maven gradle npm.
- ④ artifact repository manager - nexus
- ⑤ CI - CD - Jenkins
- ⑥. cloud Iaas - AWS.
- ⑦. Infrastructure provisioning - Terraform
- ⑧ programming - python
- ⑨. Container - Docker.
- ⑩. Container orchestration - Kubernetes.
- ⑪. Configuration management using Ansible
- ⑫. Monitoring - Prometheus.

* How to use bootcamp efficiently.

① Videos

② Handbook / checklist.

you learn the most when you use the tool

* cloud platform usage

aws,	Digitalocean,	linode.
one small	60 days	60 days
server for free	free	free
for a year.		

eks, ec2 instance - cost you

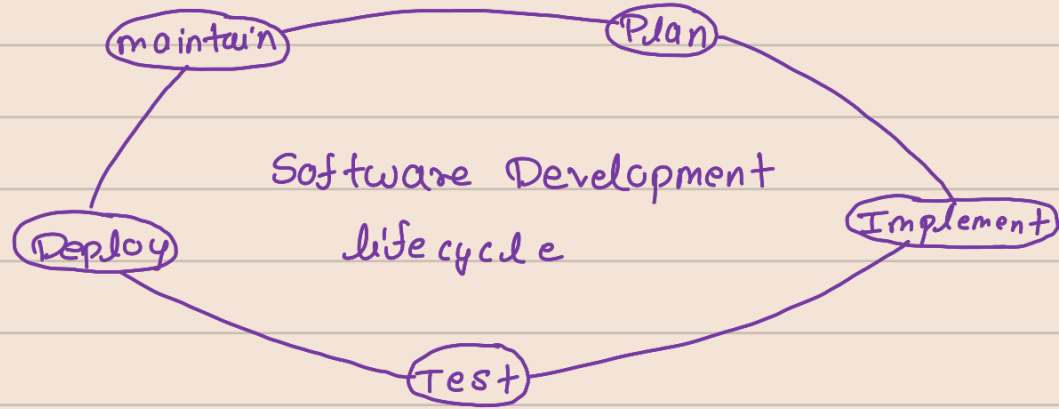
- charged for usage based on resources and time.

- be aware and check out the prices!

- delete all resources when done learning.

* Certificate of completion.

②. Introduction to Devops.



* Complete software Development process.

eg- Facebook

- To build such an application requires an different IT roles.

①. Programming.

- Software is programmed by developers.
- in different programming languages
eg - Java, python, Javascript.
- one team per app or per feature.
eg- fb messenger. fb pixel
fb shops fb conversions api
- new functionality
- fix bugs.

②. Software testing.

- test the new features.
- test the old code (functionality).
- Testing is done by developers and dedicated testers.
- automated testing (program testing the application)
(code test the code)

③. Release of software. (Operations)

- build application
- run on server.
- upgrade existing software.
- run software in production.

* ^{Dev} Traditional : Development vs operations

- programming languages
- Test frameworks
- Databases
- version control.
- OS, mostly linux
- command-line
- Scripting
- monitoring tools
- communication is important.
- in reality silos between these two.
- Dev Team documents instructions.
- operation team tries to follow the instructions.
 - x not clear enough
 - x something missing.
 - x release takes long.

How to solve it?

Solution: Devops culture.

- Devops was just a way of working between Dev's and OP's.
- Common language to communicate.
- Became its own role and job.
- many new concepts and tools.

Devops engineer.

Devops task and responsibilities.

- need some know-how from Dev and ops Team.
- additional Devops specific skills and know-how.
- CI/CD pipeline

waterfall vs agile

- influences speed and process of software development.
- the way an organization is developing applications.

→ Traditional waterfall.

Requirements - plan everything beforehand

x ineffective process

Development - dev code completes app

Testing - Testing after everything has developed

Operations - huge preparation

- x over time new requirements may arise
- x many places of failure miscommunication
- x no fast feedback.

→ Agile methodology

✓ speed of development, testing and deployment cycle.

- each feature gets tested, deployed
 - immediate feedback
 - fast development and deployment process.
 - Scrum and Kanban - specific implementation.
- CI - CD.