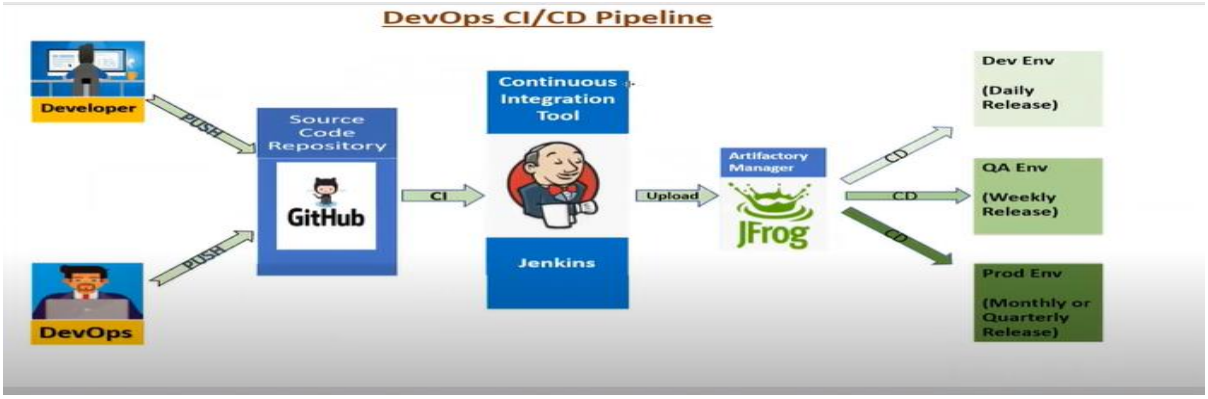
DEVOPS-

- Devops is a software development approach which involves continuos development,continuos testing,continuous integration,continuous deployement and continuous monitoring of the software throughout its development lifecycle.

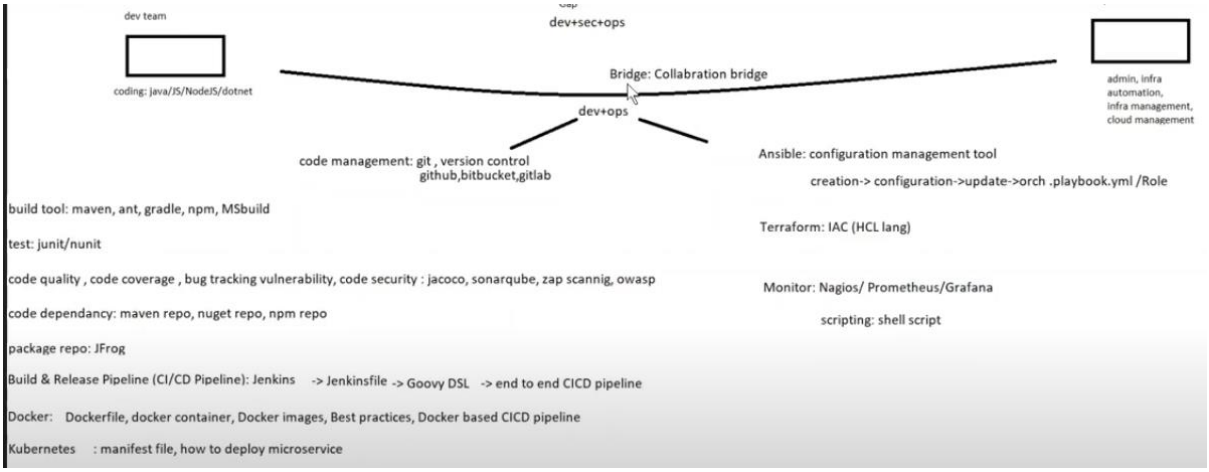


  - Different developers working on one feature say Payment via Wallet .Once the feature is developed ,it will be deployed on Dev environement(Dev environment means developers doing unit level test cases/or developers doing some testing).
  - QA never does testing on a dev environement.Need to deploy first this feature on a QA environement.QA will do manual and automation testing …so here whatever the test cases written will be executed in this enviroenment against that particular feature Say F1.Executing these test cases you will do component testing or feature testing.
  - Same is done for other features.
  - Then comes Staging.
  - Please note all features will be deployed one by one on these environments.
  - Build means –merge the code from different developers.
  - Environement means some server is running.
  - Dev server-some tomcat and database and application servers.
  - In QA envionemnt-Features will be tested and then whatever bugs found out will be fixed and again send to Dev and QA environemnet once QA confirms now ki all features working fine then will be sent to next environment i. e Staging which is a replica of prod environment.Componenet testing is done though QA environment.
  - Staging Environment-all the features along with bug fix will be deployed on staging enviroenment.
  - Regression testing is done through stage environment.
  - From staging feature is deployed on PROD environment.
- In that also not for all customer at a go.first to thousands customers only or in a specific location.

- Jekins is used to bulid and deployement.Then to create particular pipeline.
- Now all the features are merged with the master branch.
- In stage environment ,u can configure like this-if there are 20 test cases and if all are working fine then only job will be deployed to next stage which is production or else if test cases are fail then notification email will be triggered to the previous level.

- Devops is a software development approach which involves continuos development,continuos testing,continuous integration,continuous deployement and continuous monitoring of the software throughout its development lifecycle.
- Ultimate aim is to deliver code(product) in the market ASAP. Objective of company is to get code developed and deliver to the market.
- Code to production within short span of time.
- Customer uses the product and gives the feedback back to company -Customer falls under operation side.
- It may be bugs,enhancement,new feature. It should go to developer asap.
- Developers will add code in repository (Git) like D1,D2,D3 like templerun game and we have various levels of templerun.
- Product is a combination of all coding from d1 to d3.is a integration.through integration we are integrating all the codes as built.create complete game.here Jenkins will be used having inside tools like ant,maven if java ,
- Once you have code available,it will get transferred to next phase -Test PHASE
- Once done will go to final stage-pre-production-Production

==========
==========
==========



- **Output of every stage is artifacts.**

Artifacts is a combination of –Code,Document,Configuration,Environment.

Developer do the coding on laptop.-1 layer

And once go to test server –becomes 2 layer architect.(Webserver and database).(2 tier architecture)

In pre production it may have 5 layer-**Load balancer,weblayer,db1,db2,cashing layer**.

In real time go to 1tt people.-**complex structure.**

Going from 1 systm-2-3-5t-1tt system.

And to manage these 1tt system for 1 person manually is quite dificult.

Here need automation.

In real time when supporing customer is impossible without automation.

Means getting the code from developer and putting in to production

All phase should be automatic.

Means continuos integration and continuos delivery/deployment.

How product will go.

As a devops engineer ,we have to make sure things are going smoothly.

Continuos delivery means u r moving ur product from one environmentto other environement.

A lot of environment are available.

QA environemnt.

test Environemnt.

So what we give from one phase 2 next.

1.code

2.Configuration

3.Environment factor.2-3-4 system

4.Documention.you will deploy some tool which automatically generates document and pass on.

Infrastrure-webserver,database server,

Where we use this devops.

Data Centers.

Cloud

Continuous Deployement-When produt goes from preproduction to production is called continuos D

Companies using

Google

Facebook

Gmail'

All goes with conftinuos integration and continuous Delivery.

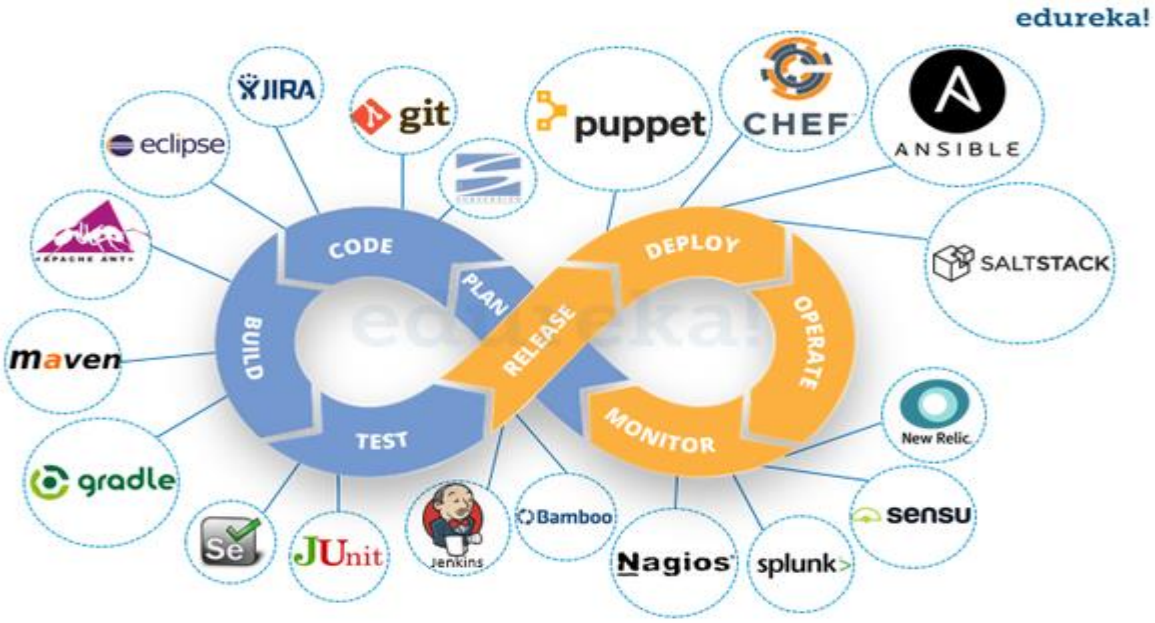
their sever will never go off.Serers are available with capacity 24*7*365.

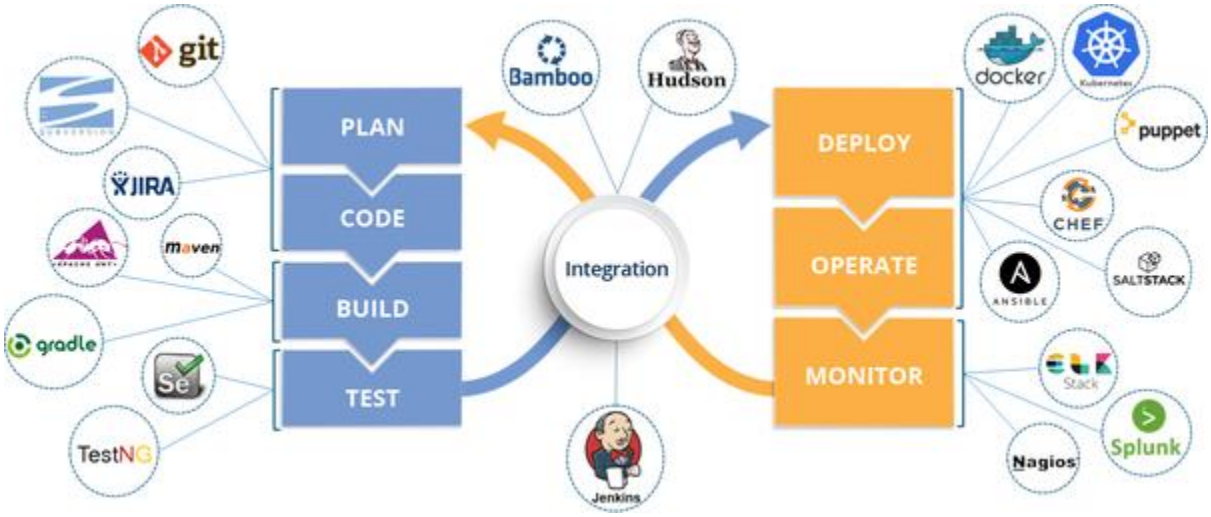
targe of devops that ur server will never go down ,even though it goes down u have clusters .it should be autmatically up.

Difference between Agile and Devops Model

Agile Model	**Devops Model**
Agile focuses on making developers and development cycles more efficient	**DevOps** brings the operations team into play to enable continuous integration and continuous delivery.
Agile addresses gaps in Customer and Developer communications	DevOps addresses gaps in Developer and IT Operations communications
Agile is an iterative approach that focuses on	DevOps is a practice of bringing development and

collaboration, customer feedback and small rapid releases.	operations teams together
The Agile process focuses on constant changes.	DevOps focuses on constant testing and delivery
Agile requires a small team.	DevOps requires relatively a large team
The target area of Agile is Software development	Target area of DevOps is to give end-to-end business solutions and fast delivery.
Agile focuses on functional and non-function readiness.	DevOps focuses more on operational and business readiness
It addresses the gap between customer need and development & testing teams.	It addresses the gap between development + testing and Ops.
Developing software is inherent to Agile.	Developing, testing and implementation all are equally important.
Agile offers shorter development cycle and improved defect detection.	DevOps supports Agile's release cycle.
JIRA, Bugzilla, Kanboard are some popular Agile tools.	Puppet, Chef, TeamCity OpenStack, AWS are popular DevOps tools.
Feedback from customer	Feedback from self
Focus on speed	Focus on speed and automation
Smaller release cycles	Smaller release cycles, immediate feedback




git
JIRA
maven
gradle
TestNG
PLAN
CODE
BUILD
TEST
Bamboo
Hudson
Integration
Jenkins
DEPLOY
OPERATE
MONITOR
docker
puppet
CHEF
ANSIBLE
SALTSTACK
Stack
Splunk
Nagios