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Q1 Why is devOps a major requirment in todays scenario?

In a nutshell devOps model allows companies to create viable application and programmers within a much shorter time frame, thus accelerating the speed of innovation.

it is a major requirment because it is a s/w development and operational approach that enables faster developments of new product & easy maintainence of existing deployments.

Some important benefits of devOps as a major requirment

- faster solution
- Increased efficiency
- Improved Customer Experience
- faster ROI
- Improved performance
- Continuous improvement
- Reduce failures & Roll back.

⇒ Create stability of it ~~sectors~~ s/w applications as it brings various departments such as IT, product, Engineering, cyber security, operations, & more and unites them in Common objectives of achieving business targets

⇒ in this approach the s/w is seen as a tool & improve organization efficiency & security by automating several key process

Devops tooling Ecosystem planning, coding, building, Testing, deployment, lean management & continuous development

① Planning & coding tool for devops:- Git ⇒ it provide the means for tracking changes in a source code. fully distributed system that keeps the track of different S/w versions. it is fast, insuring data integrity.

② Jira ⇒ S/w project & S/w product dev. allows tracking of the bugs, assignment of task to developers. provide deeper service operation & support capabilities in the scope of your devops project.

③ Subversion ⇒ used for maintaining current and historical version of projects. its an open source version control system. its licensed under apache.

Build tools ⇒ Programs that automates the process of building an executable application from source code. boost ability in the S/w dev & deployment too.

① maven ⇒ build automation tool used for java projects. also be used to build & manage project written in C#, Ruby, Scala. it is hosted by apache S/w foundation, where it was formerly part of the Jakarta project.

② Gradle ⇒ for multi language S/w dev. it is an open source build automation sys. popular in java, groovy, scala ecosystem. used for automate the creation of application, provides building, testing, deploying S/w on many platforms.

Testing tools ⇒

Junit ⇒ its a java library for testing source code. beneficial for equally for automation testing. can also be used along with the Selenium web driver

Selenium → open source tool that automates web browsers used for test across browsers for web applica"

Deployment & operational tool → Chef, Ansible, Jenkins

Jenkins → Open source automated server. helps automate the parts of S/W development. its essentially an open source CI/CD server that helps in automating the different stages of deliveries pipe

It allow us to setup & customise CD Pipeline as per individual needs. it runs on linux, window & macos