Q1 Why is devOps a major requirement 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 requirement because it is a s/w development and operational approach that enables faster developments of new product & easy maintaince of Existing deployments.

Some important benefits of devOps as a major requirement

- 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 to improve organization efficiency & Security by automating several key process

DevOps tooling Ecosystem Planning, coding, building, Testing, deployment, lean management & continous 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. it's licensed under apache.

Build tols ⇒ 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's an open source build automa" sys. popular in java, groovy, scala ecosystem. used for automate. the creation of application. provides building, testing, deploying s/w on many plateforms.

Testing tools ⇒
Junit ⇒ it's a java library for testing source code. preffered for equally for automation testing. can also be used along with the selenium web driver.

Selenium → open source trol-thed automerts web browsers
used for test across browes for web applica".

Deployment & operational tool → Chef, Ansible, Jenkins.

Jenkins → open source automated server. helps automate the
parts of s/w development. its essentically an open source
CI/CD server that helps in automating the
different stages of deliveries pipler
It allow us to Setup & Cos-tomise CD Pipeline
as per individual needs. it Runs on linux,
window & macos