**Jenkins Introduction:**

* Meaning of Jenkins
* Jenkins is an open-source automation server that is widely used to facilitate continuous integration and continuous delivery (CI/CD) in software development.
* Jenkins developed by Java language.
* It is the heart of DevOps.
* It is running on port number 8080.
* Jenkins is a plugins-based tool.
* It can be installed on various platforms including Windows, macOS, and Linux.
* It is a CI/CD tool and it is one of the tools in DevOps.

* Continuous integration:
* Continuous integration is a software development practice where developers frequently integrate their code changes into a shared repository.
* Continuous delivery:
* It is a process where you deploy your application on a specific platform to your customer.
* Steps to delivery application
* Unit testing
* Static code analysis
* Code quality vulnerability
* Automation testing
* Reports and
* Deployment.
* CI/CD: continuous integration and continuous delivery:
* It is an approach to software development that combines the practices of CI/CD to make developing applications faster, safer, and more efficient.
* Continuous integration key features:
* Automatic builds/tests: correct the defects early.
* Rapid feedback: immediate feedback about the quality of the application.
* Continuous delivery key features:
* Manual deployment: Manual deployment refers to the process of deploying software applications to production environments through human intervention rather than automated processes.
* Deployment-ready code: code is always maintained in a state.it refers to a version of software that has been thoroughly prepared and validated for deployment to a production environment.
* Continuous deployment key features:
* No human intervention.
* Automatic deployment: the code passes all the tests it is automatically deployment to the production environment.
* Frictionless releases.