1. Jenkins is an [open source](https://en.wikipedia.org/wiki/Open_source) automation server. It helps automate the parts of [software development](https://en.wikipedia.org/wiki/Software_development) related to [building](https://en.wikipedia.org/wiki/Software_build), [testing](https://en.wikipedia.org/wiki/Test_automation), and [deploying](https://en.wikipedia.org/wiki/Software_deployment), facilitating [continuous integration](https://en.wikipedia.org/wiki/Continuous_integration) and [continuous delivery](https://en.wikipedia.org/wiki/Continuous_delivery). It supports [version control](https://en.wikipedia.org/wiki/Version_control) tools, including [AccuRev](https://en.wikipedia.org/wiki/AccuRev_SCM), [CVS](https://en.wikipedia.org/wiki/Concurrent_Versions_System), [Subversion](https://en.wikipedia.org/wiki/Subversion_(software)), [Git](https://en.wikipedia.org/wiki/Git_(software)), [Mercurial](https://en.wikipedia.org/wiki/Mercurial), [Perforce](https://en.wikipedia.org/wiki/Perforce), [ClearCase](https://en.wikipedia.org/wiki/ClearCase) and [RTC](https://en.wikipedia.org/wiki/Rational_Team_Concert), and can execute [Apache Ant](https://en.wikipedia.org/wiki/Apache_Ant), [Apache Maven](https://en.wikipedia.org/wiki/Apache_Maven) and [sbt](https://en.wikipedia.org/wiki/Sbt" \o "Sbt) based projects as well as arbitrary [shell scripts](https://en.wikipedia.org/wiki/Shell_script) and Windows [batch commands](https://en.wikipedia.org/wiki/Batch_file).
2. Connect to Jenkins

After that click on dashboard

Manage Jenkins > Manage Credentials

1. Continuous integration is a DevOps software development practice where developers regularly merge their code changes into a central repository, after which automated builds and tests are run.
2. Git cherry-pick is a powerful command that enables arbitrary Git commits to be picked by reference and appended to the current working HEAD. Cherry picking is the act of picking a commit from a branch and applying it to another. git cherry-pick can be useful for undoing changes.

Git cherry-pick (commit id)

1. Go to Jenkins dashboard >click new items >into the screen enter the item name and click freestyle project style >the screen will comes where you can specify the details of the job >we need to specify the location of the file which needs to be built >now go to build section and click built step> save it >you can click built option to see if you have successfully defined the job.
2. Go to Jenkins > Manage and assigned roles> manage roles >Provide role name to create on Role to add and click Add>read under overall , all under view

Go to Jenkins> Manage and assigned role> Assign Role

1. Git checkout is to change to branch

git checkout -b BRANCH\_NAME creates a new branch and checks out the new branch while git branch BRANCH\_NAME creates a new branch but leaves you on the same branch

1. **Git Pull: Fetches**the changes**AND merges**them**into the local branch of the same name.**

**Git Cherry Pick: Fetches** the commit **and plays it on top of the current local branch,** thus **creating an entirely new commit** which happens to have same changes as the one it fetched.

1. Go to Jenkins > Manage Jenkins> Manage Plugins
2. An agent is typically a machine, or container, which connects to a Jenkins controller and executes tasks when directed by the controller**.**

Go to Jenkins> dashboard> Manage Jenkins >Manage nodes and cloud Items>New mode on side menu> fill the requirements and save.