Assignment

① Git vs Github vs Gitlab

*Git:

It is an open-source version control program used by devops teams to handle small and large scale software development projects that allows you to save your work and keep track of changes.

→ It supports non-linear development, allowing multiple members of a team to modify, add or delete files at any time.

→ You will be able to save "snapshots" of your work. If you need to go back to previous versions or histories of your project, you can do easily. and you can work on various branch versions all at same time and merge them.

*Github and Gitlab

Github and Gitlab are seperate web-based Git repositories. They are owned and operated by different companies:

GitHub by Microsoft

GitLab by eponymous organization.

They are each spaces for developers to work on Git projects, collaborate and share and test their work. There are several overlaps between them:

- They offer cloud based storage
- They contain issue trackers
- Runs on Linux servers
- Free and paid plans are available
- There are plenty project management and other tools

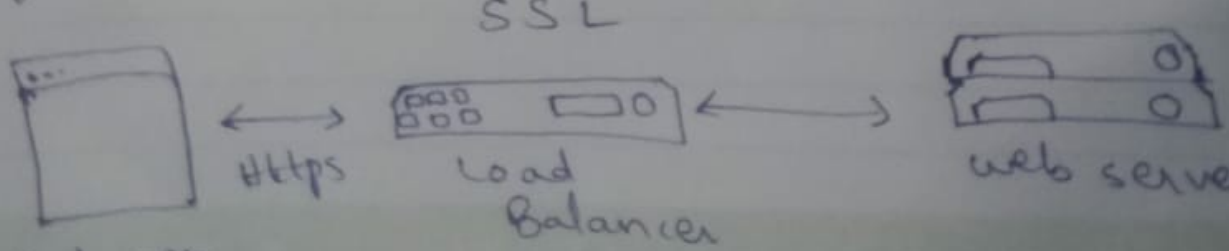
GitHub Vs GitLab

Feature	GitHub	GitLab
Release Date	2008	2011
Authentication level	Role based	Read/write access determined by owner/ developer.
Free version	Public repos only	Public and private repos
Collaboration	code is free and available for public for collabs	only gitlab's web developers can collaborate on code
owner	Microsoft	Gitlab
Import/Export feature	No	Yes
Integrations	offered by third party vendors	Built-in
open source	No	open-core
Time Tracking	No	Yes
CI/CD	Must integrate yourself	CI/CD and devops built-in

SSL Termination

SSL termination describes the transition process when data traffic becomes encrypted and unencrypted. This happens at server end of SSL connection.

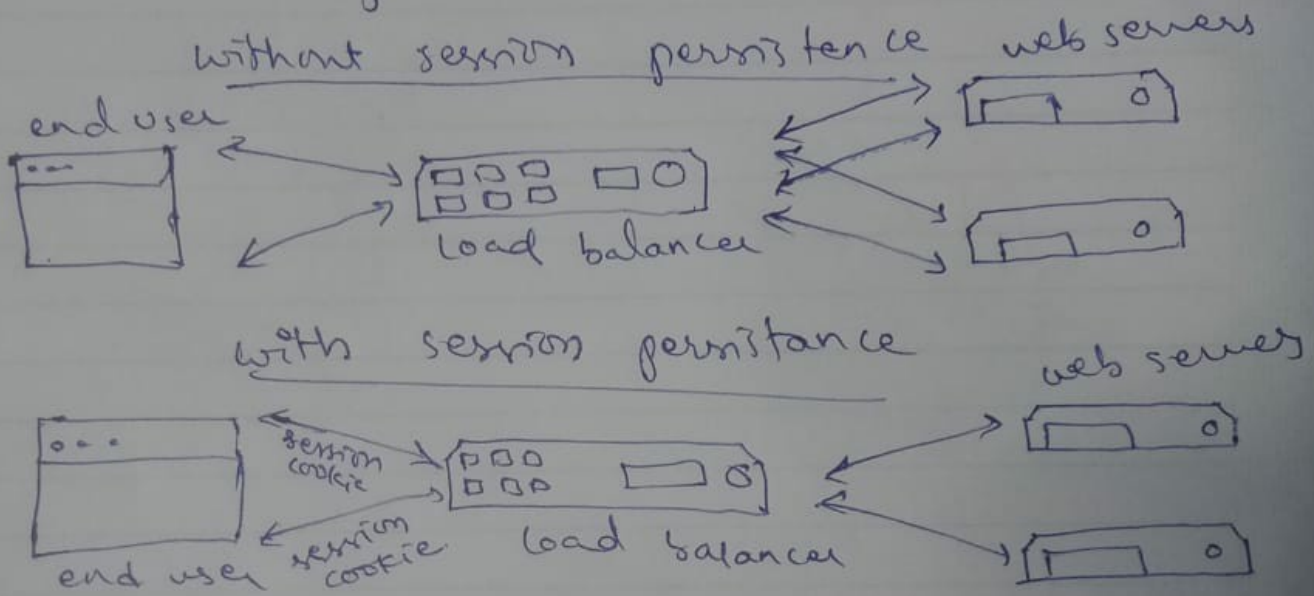
* Instead of relying upon the web server to do this computationally intensive work, you can use SSL termination to reduce the load on your servers, speed up the process, and allow the web server to focus on its core responsibility of delivering web content.
* SSL termination intercepts encrypted https traffic when a server receives data from a SSL connection in a SSL session. SSL termination or SSL offloading decrypts and verifies data on the load balancer instead of app server.
* Speed of having to organize incoming conn; the server can prioritize on other tasks. SSL termination represent end or termination point of SSL connection



SSL Termination.

Session Persistence

Session persistance involves directing a user's request to one application or backend web server for the duration of a "session". The session is the time it takes user to complete a transaction or task that might include multiple requests.



* Session persistence ensures that a client will remain connected to same server throughout a session of time. Because load balancing may, by default, send users to unique servers each time they connect, this can mean that complicated or repeated request or slowed down.

Web Application Firewall:

* A web Application firewall protects web applications from a variety of application layer attacks such as XSS, SQL injection and cookie poisoning, among others.
* WAF helps to protect your web apps by filtering, monitoring and blocking any malicious HTTP/s traffic travelling to web app, and prevents any unauthorized data from leaving the app.
* It does this by adhering to a set of policies that helps to determine what traffic is malicious and what traffic is safe.
* It is a type of reverse-proxy protecting the server from exposure by having clients pass through the WAF before reaching the server.