GLOBAL INFORMATION TRACKER (GIT)

Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. Git is a DevOps tool used for source code management.

Git is the most commonly used version control system. Git tracks the changes we make to files, so we have a record of what has been done, and we can revert to specific versions we ever need to. Git also makes collaboration easier, allowing changes by multiple people to all be merged into one source.

SOURCE CODE MANAGEMENT (SCM)-

Source code management is used to track modifications to a source code repository. SCM tracks a running history of changes to a code base and helps resolve conflicts when merging updates from multiple contributors.

As software projects grow in lines of code and contributor head count, the costs of communication overhead and management complexity also grow. SCM is a critical tool to alleviate the organizational strain of growing development costs.

MINIMUM VIABLE PRODUCT (MVP)

It is a product with enough features to attract early-adopter customers and validate a product idea early in the product development cycle. In industries such as software, the MVP can help the product team receive user feedback as quickly as possible to iterate and improve the product.

In other words, a MVP is when we do the least possible work in order to test our idea/hypothesis/assumptions while measuring a specific set of “metrics” in order to learn what people actually want us to solve/build.

Building a MVP helps prevent our initial product from unwanted and unneeded features. This means that our new customers will get a simple product that exactly performs what it is showcased to the audience.

TRUNK BASED DEVELOPMENT (TBD)

TBD is a branching model for software development where developers merge every new feature, bug fix, or other code change to one central branch in the version control system. It is called the master branch in Git.

Every Git repository has a trunk (also referred to as main, mainline, or the master branch). In trunk-based development, the trunk is the central branch to which all developers send their code changes.

Trunk based development eases the friction of code integration. When developers finish new work, they must merge the new code into the main branch. Yet they should not merge changes to the trunk until they have verified that they can build successfully. During this phase, conflicts may arise if modifications have been made since the new work began. In particular, these conflicts are increasingly complex as development teams grow and the code base scales. This happens when developers create separate branches that deviate from the source branch and other developers are simultaneously merging overlapping code. Luckily, the trunk-based development model reduces these conflicts.

REPOSITORY

It is a place where we have all codes. A Git repository tracks and saves the history of all changes made to the files in a Git project. It saves this data in a directory called git, also known as the repository folder. Git uses a version control system to track all changes made to the project and save them in the repository.

To create a new Git repository-

1. Create a directory to contain the project.
2. Go into the new directory.
3. Type git init.
4. Write some code.
5. Type git add to add the files.
6. Type git commit.

Local Repository- local repositories are physical, locally-managed repositories into which we can deploy artifacts. Using local repositories, Artifactory gives us a central location to store our internal binaries. Through repository replication, we can even share binaries with teams that are located in remote locations.

REMOTE REPOSITORY- A remote repository in Git, is a Git repository that’s hosted on the internet or another network. It will take us through pushing changes to a remote repository on GitHub, viewing a remote’s branches, and manually adding remote.

BITBUCKET

Bitbucket is more than just Git code management. Bitbucket gives teams one place to plan projects, collaborate on code, test, and deploy.

Bitbucket Cloud is a Git based code hosting and collaboration tool, built for teams. Bitbucket’s best-in-class Jira and Trello integrations are designed to bring the entire software team together to execute on a project.