Git

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Day 1

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Version Controlling

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This is the process of maintaining different versions of the code

All the team members upload their code into the remote version

contolling system. The VCS accepts the code uploads from multiple

team members and creates an integrated project. Next time when the

team members download the code they will be able to see all the

code created by the entire team. The process of uploading into a

VCS is called as checkin and downloading is called as checkout.

VCS's also preserve older and later versions of the code so that

at anypoint we can jump between whichever version that we want

VCS's also keep a track of who is making what kind of changes

VCS's are of two types

1 Centralised Version Controlling System

2 Distributed Version Controlling System

Centralised Version Controlling System

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Here we have a remote server where all the team members upload the code

and version controlling happens only on that remote server

Distributed Version Controlling System

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Here we have a local repository installed on every team members machine and

version controlling happens here at the level of individual developer,

from the local repository the code is uploaded to the remote repository

where version controlling happens at the level of the entire team

Installing git on Windows

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1 Open https://git-scm.com/downloads

2 Download git for windows

3 Install it

4 Once git is installed we get an application called gitbash

where we can fire the git commands

Installing git on Ubuntu Linux

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1 Connect to a ubuntu linux

2 Update the apt repository

sudo apt-get update

3 Install git

sudo apt-get install -y git

Installing git on RHEL, Centos, Fedora

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1 Update the yum repository

yum -y update

2 Install git

yum install -y git

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Setting up username ans email globally for all users on a system

git config --global user.name "sai krishna"

git config --global user.email "intelliqittrainings@gmail.com

To see the list of configurations done

git config --global --list

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Git uses three sections when working on the local machine

Working directory

Staging Area

Local Repository

Working Directory is the location where the team initially stores the

data and all the files present here are initially called untracked files

Staging Area is the intermediate buffer zone of git where the files

are sent into and these files are called as stagged files

Local Repository is the location where the files are moved into from the

staging area and the files here are called as commited file. Version controlling

happens only when the code comes into the local repository

1 To initialise the current folder as a git repo

git init

This command will create a hidden folder called as ".git" where it

stores all the configurations related to git

2 To send a files from working directory to staging area

git add filename

To send multiple files to stagging area

git add file1 file2 file3

To send all the files and folders from working dir to staging area

git add .

4 To send the files from staging area back to working directory

git rm --cached filename

or

git reset filename

5 To send files from staging area to local repository

git commit -m "Some message"

6 To see the status of untracked and staged files

git status

7 To see the list of version sent into local repository

git log

.gitignore: This is a special configuration file which is used

to hide the private files info. Any file whose name is mentioned

in .gitignore will no longer be accessed by git

1 Create few files

touch f1 f2 f3 f4 f5

2 Check the status of git

git status

This will show the above 5 files as untracked files

3 Create .gitignore and store the above 5 file names in it

cat > .gitignore

f1

f2

f3

f4

f5

To come out of cat command press ctrl+d

4 Check the status of git

git status

This will only show .gitignore as untracked

f1-f5 are no longer accessible by git