Git Quiz Arun

1)What is Git ?

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Git is widely used version control system for software development. It is a free and open source version control system. Git is speedy with simple design and provides strong support for non-linear development. It identifies its data more like a stream snapshots.

2) In what form is Git being used in your Company?

a) Git is used as [version control system](https://en.wikipedia.org/wiki/Version_control_system) for [software development](https://en.wikipedia.org/wiki/Software_development) It is a [distributed revision control](https://en.wikipedia.org/wiki/Distributed_revision_control) system with an emphasis on speed data integrity, and support for distributed, non-linear workflows

It is used as version Control system.

To maintain the code in the central repository and integrate with the automation tools to automate build and deployment.

Different companies use git in different forms, some use, GitHub, some use pure Git on a central server with GitWeb to view repositories in browser, some companies use GitLab

3) What are the different Tools that you integrated Git with in your company?

a)mavens,jenking,artifactory and eclipse.

4) What are Git hooks ?

a) Hooks are little scripts you can place in $GIT\_DIR/hooks directory to trigger action at certain points.

1. applypatch-msg

2. pre-applypatch

3. post-applypatch

4. pre-commit

5. prepare-commit-msg

6. post-commit

7. pre-rebase

5) Give us an example of a Git Hook that you implemented?

enforcing Developers to include Jira ticket number in their commit message, else, commit will fail. This is example of a pre-commit hook.

6) List all commands a developer uses to push to git starting from clean workspace ?

a)

step1 : git init

step2 : git clone

step3 : placing our working files in git repository

step4 : git add filename

step5 : git commit –m “msg”

step6 : git status

step7 : git push origin master

7)Difference between Git push and Git pull

a) Git push : is used to push our files into git repository from our local machine.

Git pull : pull is used to acquire any changes or modifications happened in git repository to our local machine.

8) Different between Git Rebase and git pull

a)Git Rebase is one of the ways to integrate changes from one branch into another. whereas  git pull is used to get changes done in git repository to our local machine.

9) How do you what branch you are currently on ?

a)git rev –parse –abbrev-ref HEAD command is used to know in which branch we are currently in.

git branch

10) How do you what other git branches exist on the git server ?

a)the easiest way to check that other branch exist is by using git branch command based on various options available.

Git –a: shows all local and remote branches, while

Git –r: shows only remote branches.

11) what is a git remote ?

a) Manage the set of repositories (remotes) whose branches you track.

12) How can you temporarily save changes before pulling/merging or switching branches?

a)git stash is used to save temporary changes before pulling and switching branches.

13) difference between git branches and git tags ?

a)1. A tag represents a version of a particular branch at a moment in time. A branch represents a separate thread of development that may run concurrently with other development efforts on the same code base.

2. Both branches and tags are essentially pointers to commits.

3. The big difference is that the commit a branch points to changes as you add new commits, and a tag is frozen to a particular commit to mark a point in time.

14) what are different types of git tags available ? give exact commands on how to create each type of tag ?

a)annotated tag : git tag -a v1.4 -m 'my version 1.4'

checkout tags : git checkout -b version2 v2.0.0

lightweight tags : git tag v1.4-lw

15) what command do you use to merge two branches ? give example

a)git merge command is used to merge branches.

git checkout master

Switched to branch 'master'

$ git merge iss53

16) How do you know current state of your workspace to that on git server ?

a)git status

17) What command is used to fetch the latest updates by others?

Git pull

18) What command is used to create a git repo for your personal development?

a)  you need a remote machine with Git and SSH installed on it. Establish an SSH connection to the server, then create and initialize a bare Git repository

mkdir repo.git

cd repo.git

git init --bare

19) Explain the relationship between the working directory,

the index, the repository

A working directory is the local space on the hard drive that a repository is mapped to. The working directory generally mirrors the repository structure. A working directory must be set before you can work with files. The git “index” is where you place files you want committed to the git repository. Before you “commit” files to the git repository, you need to first place the files in the git “index”. Git stores this information in a data structure called a repository. A gitrepository contains a set of commit objects.

20) How can a Git merge fail? What do you do?

Git can fail to start the merge and this occurs because git knows there are changes in either your working directory or staging area that could be written over by the files that you are merging in. If this happens, there are no merge conflicts in individual files. You need to modify or stash the files it lists and then try to do a git pull again. Git can fail during merge and this occurs because you have committed changes that are in conflict with someone else's committed changes. Git will do its best to merge the files and will leave things for you to resolve manually in the files it lists. For this problem, we have git merge tools to resolve.

21) what command do you use to know list of previous commits ?

a)git log –follow filename

22) What is 3a525393f6a5c47fa08d91ef16c16927ed3cd33a? What are the benefits of this?

23) command to rename a file in Git?

a) Git mv oldfile newfile

24) What git command is used to undo changes made to your local repo? What are the variations and how do they work?

a)git revert command is used to undo the changes made I local repo.

This will create a new commit that's the opposite (or inverse) of the given SHA. If the old commit is "matter", the new commit is "anti-matter"—anything removed in the old commit will be added in the new commit and anything added in the old commit will be removed in the new commit.