**1) Explain what is SVN?**

SVN or Subversion is an open source control system; it is used to trace all the changes made to your source code or files.  It is a repository used to manage files, folders, directories and the modification made to these files over a period of time.  While SVN repository provides a complete history of changes made to the files and can easily track if someone had made changes in the file.

**2) Mention what is the difference between GIT and SVN repository?**

The difference between SVN and GIT is

* Git does not support “commits” across multiple branches or tags. Subversion allows the creation of folders at any location in the repository layout
* Gits are unchangeable while subversion enables committers to treat a tag a branch and to create multiple revisions under a tag root
* Git is less preferred for handling large files or frequently changing binary files while SVN is capable of handling multiple projects stored in the same repository

**3) List out what all things should be stored in SVN repository?**

In SVN repository you can store

* Source Code
* Build scripts
* Test data used by QA
* DB schema
* Project settings (When whole team is using the same IDE)
* Project documentation (Internal and External)
* Minutes of meetings, significant e-mails and info from the web
* Expensively generated artifacts
* And other documents related to the project

**4) Mention what is the command to add a file or dir?**

To add a file or dir in SVN the command you will use

* svn add filename
* svn add dirname

**5) List out the common subversion commands?**

Common subversion commands include

* Import
* Checkout
* Commit
* Update

Other than these it also has command like revert, move, copy and merge.

**6) Explain what is the difference between commit and update?**

Update is used to update the local workspace with the changes made by the team to the repository, while commit is the process to implement changes from local to repository, in simple words, upload a file into repository.

**7) Explain how you can apply a patch in SVN?**

To apply a patch in SVN, you are required to “Create Patch” by making changes and generating the .diff file.  Then this .diff file can be implemented to the new code base using “Apply Patch” .

**8) Mention what is the command to create a new directory under version control?**

Command to create a new directory under version control includes

* svnmkdir directory
* svnmkdir<http://url/directory>

**9) Mention how you can import your existing directory into the new repository?**

The command you will use to import your existing directory into the new repository you have to write

svn import/home/mysurface/programming file:///home/mysurface/repo/programing\_repo-m “initial import”

**10) Mention what is the command to see what is inside the repository?**

Command svn list file:///home/mysurface/repo/programming\_repo is used to see what is inside the repository.

**11) Mention what is the command use to view the difference between the local version and repository version?**

The command uses to view the difference between the local and repository version is

* svn diff filename
* svn diff dirname

**12) Mention what does the result codes G and R in svn indicates?**

The result codes G and R in svn indicates

* **G code:** Changes on the repo were automatically merged into the working copy
* **R code:** This code indicates that item has been replaced in your working copy. This means the file was programmed or scheduled for deletion, and a new file with the same name was scheduled for addition in its place

**13) Mention what is the function of Revert in subversion?**

“Revert” function will remove your local changes and reload the latest version from the repository.

**14) Explain how you can revert to a previous version?**

To retrieve a previous version, you have to use “revert” command. But revert command will simply erase local edits, what you actually need is to “merge” command. For example, you have a file [abc.txt] and the current version is 101, and you want version 201. Then you will use the command like

* svn merge –r 101:201 abc.txt
* svn commit –m “Reverted to revision 201” abc.txt

**15) Mention what are the command that can be used to move some subset of code and history of this code from one SVN repo to another?**

Following commands can be used

* svnadmin dump
* svndumpfilter include
* svnadmin load
* svn remove

**16) List out what is the best practices for SVN?**

Best practices for SVN is

* Update and Test before commit
* Work from your own local workspace
* Commit small autonomous changes
* Validate the files you are committing, you actually changed
* Keep in touch with repository
* Watch for conflicts
* Always group your check-in logically
* Use comment

**17) Explain what checkout command is and how to use the checkout command in SVN?**

Check-Out command in SVN is used to create a local workable copy of your project retrieved from the local repository.

For example, you have a project located in the repository created at URL location http://www.davood.com/svn/myrepo/myproject.  So you have to checkout myproject into your local system assuming myrepo is a public repository. You will use code

* svn co http://www.davood.com/svn/myrepo/myproject .

This command will copy all your files to your current directory. If you want checkout the directory which is in a private repository, you will then use the following command

* svn co http://www.davood.com/svn/privaterepo/myproject –username admin –password admin

18) **What is the difference b/n trunk,branch,tags?**

* **Trunk**: The main development area. This is where your next major release of the code lives, and generally has all the newest features.
* **Branches**: Every time you release a major version, it gets a branch created. This allows you to do bug fixes and make a new release without having to release the newest - possibly unfinished or untested - features.
* **Tags**: Every time you release a version (final release, release candidates (RC), and betas) you make a tag for it. This gives you a point-in-time copy of the code as it was at that state, allowing you to go back and reproduce any bugs if necessary in a past version, or re-release a past version exactly as it was. Branches and tags in SVN are lightweight - on the server, it does not make a full copy of the files, just a marker saying "these files were copied at this revision" that only takes up a few bytes. With this in mind, you should never be concerned about creating a tag for any released code. As I said earlier, tags are often omitted and instead, a changelog or other document clarifies the revision number when a release is made.

19) When do u create a new branch or tag?

20) What branching strategies or branching model you are following in ur project or org?

In this scenario your team creates a branch to stabilize the release and then merges the release branch back into the main source tree after the software is released. The following is a view showing branching for releases:

**My Team Project**

└ **Main** → Main integration branch

│   └ **Source**

└ **Releases**

      └ **Release 1** → Release branch

               └ **Source**

22) How do u release the code? What is the release process you are following?

23) What is conflict? What is merge?

Once in a while, you will get a *conflict* when you update/merge your files from the repository or when you switch your working copy to a different URL. There are two kinds of conflicts:

file conflicts

A file conflict occurs if two (or more) developers have changed the same few lines of a file.

tree conflicts

A tree conflict occurs when a developer moved/renamed/deleted a file or folder, which another developer either also has moved/renamed/deleted or just modified.

24. I have 1GB source code in trunk, if I create a branch what will be the size of repository. How do u justify?

The size of the repository will be 2GB because branch is nothing but a copy of trunk.

25. I have trunk and development branch. I release the code to production with version 1.2.3.After this 1.2.3 release I am working on a new branch for next release or different release. If I get a bug on my production 1.2.3.code how do u plan bug fix release for this?

We will have tag of version 1.2.3 we clear the bug in that tag and merge to the trunk and new release branch, because new release branch is the copy of old branch only.

26. What is conflict? What is merge?

Once in a while, you will get a *conflict* when you update/merge your files from the repository or when you switch your working copy to a different URL. There are two kinds of conflicts:

File conflicts

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Tree conflicts

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Merge is nothing but synchronizing trunk with new branch in which have we increments.

26. How do u merge the code from our branch to another Branch?

For merging we have a svn command

Svn merge “svn://url/” of another branch “path of our branch” in which we want to merge.

27.Who will merge the code?

Build & release engineer will merge the code

28. How do u do identify owner of conflicted code?

We use svn command “svn log “to find the owner of conflict code.

29. Do u merge the code manual or using script?

We merge the code manually

30. When do u get a conflict?

* 1. We have a file name file.txt

Developer one modified the file

Like a=23

Committed to repository

And another developer modified the same file and same line

Like a=50

Second developer try to commit the file to repository without updating his workspace

He get a message ur work space revision is out of date update first

Then developer try to update his workspace then he get a conflict.

31. What is switch command in svn?

Switch command is used to switch from one branch to other branch without checking out

Svn switch “url of which branch u want to check out”

32. What is annotate/blame/praise?

Annotate/blame/praise is a svn command which is used to find author of file who modified which line.

33. Have u performed admin activities in svn?

Yes I have actively participated SVN admin Activities.

34. How do u take backup for svn repo?

Backup of svn repository can be taken by using SVN command dump

Svnadmindump “Path of repository”

35. How you migrate the code from svn server to another svn server?

Svn migrate command is used to migrate the code from svn server to another svn server

36. Why do u use svndumpfilter command?

Svndump filter command is used to take backup of svn repository including or excluding of tags or branches

37. How do u manage users and access for your svn repo?

We use authz and passwd to manage users and access for svn repo

38. What kind of authentication you are using for your svn?

Svn use its own authentication “authz”

39. How do u move a file from one place to another place?

For moving a file we use “ svn mv “ command

40. How do u co the source code at a particular revision?

Svn co –r2 svn://Ubuntu/hp/branch

41. How do u update the workspace at a particular revision?

Svn update –r4

42. What is .svn?

.svn is heart of svn workspace

.svn contains url, revisions, checksum code

43. What happened if I delete .svn from my workspace?

If we delete .svn then our work space becomes just a copy of svn repo

We can’t perform any svn commands

44. When do u use svn cleanup command?

Svn cleanup command is used when we get an interruption while checking out code from repo

45. How svn store changes in the repository?

Svn store its changes as revisions or increments

46. What do you mean by global revision?

Svn saves all it revisions as global

Folder----r4

|

File--------r4

47. What is the repository structure?

Repository structure usually

Trunk branch tag

48. How do u see content of the file without co?

Svn cat “svnurl of file”

49. How can u co single file in svn?

Svn co --depth=empty “svn file url”

50. What svn version you are using?

Svn –version is used to find svn version

51. What svn protocol you are using?

Svn://

http://

52.

**Q1.  What is Jenkins ?**

Ans. It is a continuous integration tool written in Java.

**Q2.  What is the difference between Maven, Ant and Jenkins ?**

Ans. Maven and Ant are Build Technologies whereas Jenkins is a continuous integration tool.

**Q3.  Which SCM tools Jenkins supports ?**

Ans.  AccuRev, CVS, Subversion, Git, Mercurial, Perforce, Clearcase and RTC

**Q4.  What are the various ways in which build can be scheduled in Jenkins ?**

Ans. Builds can be triggered by source code management  commits.

Can be triggered after completion of other builds.

Can be scheduled to run at specified time ( crons )

Manual Build Requests

**Q5.  What is the relation between hudson and Jenkins ?**

Ans. Hudson was the earlier name and version of current Jenkins. After some issue , the project name was changed from Hudson to Jenkins.

**Q6.  What you do to make sure that your project build doesn't break in Jenkins ?**

Ans. I make sure that I perform successful clean install on my local machine with all unit tests.

Then I make sure that I check in all code changes.

Then I do a Synchronize with repository to make sure that all required config and POM changes and any difference is checked into the repository.

**Q7.  What you do when you see a broken build for your project in Jenkins ?**

Ans. I will open the console output for the build and will try to see if any file changes were missed.

If not able to find the issue that way, Will clean and update my local workspace to replicate the problem on my local and will try to solve it.