

Question based on Lec 2 – version controlling system

Single Answer

1. What is the primary purpose of version control?
 - a) To delete old code revisions
 - b) To track and manage software code changes
 - c) To obfuscate source code
 - d) To automate deployment
2. Which of the following is a centralized version control system?
 - a) Git
 - b) Mercurial
 - c) Subversion (SVN)
 - d) Fossil
3. What does git init do?
 - a) Creates a new branch
 - b) Initializes a new Git repository
 - c) Stages all files for commit
 - d) Pushes changes to a remote repository
4. Which Git command is used to stage all modified files?
 - a) git commit
 - b) git add .
 - c) git status
 - d) git push
5. What is the purpose of the staging area in Git?
 - a) To permanently save changes to the repository
 - b) To prepare changes for commit
 - c) To delete unwanted files
 - d) To merge branches
6. What does a merge conflict indicate?
 - a) A branch has been deleted
 - b) Two branches have modified the same part of a file differently
 - c) A repository is corrupted
 - d) A branch cannot be merged due to missing commits
7. Which Git command is used to switch to another branch?
 - a) git branch
 - b) git checkout <branch_name>
 - c) git merge <branch_name>
 - d) git pull

8. What is the difference between Git and GitHub?
- a) Git tracks changes locally; GitHub is a cloud-based hosting service for Git repositories.
 - b) Git provides CI/CD tools; GitHub does not.
 - c) GitHub works offline; Git requires an internet connection.
 - d) There is no difference between them.
9. Which of the following is NOT an alternative to GitHub?
- a) Bitbucket
 - b) Azure Repos
 - c) AWS CodeCommit
 - d) Docker Hub
10. What does `git reset --hard HEAD~1` do?
- a) Discards all uncommitted changes in the working directory.
 - b) Undoes the last commit and discards changes permanently.
 - c) Stages all changes for commit.
 - d) Deletes the last branch created.

Multiple Answer

11. Which of the following are benefits of version control? (Select two correct answers.)
- a) Collaboration among team members
 - b) Obfuscating sensitive data
 - c) Tracking changes and authors
 - d) Automating deployment pipelines
12. Which commands are used to work with remote repositories? (Select three correct answers.)
- a) `git remote add origin <repository_url>`
 - b) `git clone <repository_url>`
 - c) `git push origin <branch_name>`
 - d) `git checkout <branch_name>`
13. Which features are supported by Git? (Select two correct answers.)
- a) Stashing changes
 - b) Built-in CI/CD pipelines
 - c) Multiple branches and tags
 - d) Cloud-based hosting
14. Which protocols are supported by Git for communication? (Select two correct answers.)
- a) HTTP
 - b) FTP
 - c) SSH
 - d) SMTP
15. What are valid ways to resolve merge conflicts in Git? (Select three correct answers.)
- a) Accept current change (HEAD).
 - b) Accept incoming change (feature branch).
 - c) Discard all changes in both branches automatically.
 - d) Manually merge both versions.

Fill in the Blanks

16. The [git fetch](#) command in Git is used to download updates from the remote repository without merging them into your local branch.
17. A [branch](#) in version control refers to a copy of the code used for feature development or bug fixes.
18. [staging](#) allows developers to group related changes into one commit before saving them permanently in the repository.
19. The [git merge](#) command is used to merge one branch into another in Git.
20. In case of overlapping changes, [merge conflict](#) occurs, requiring manual resolution before merging branches.