Task_Chapter3 Version Control with git and github

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1.Open Ended Questions:

1.1.blob file stores data only without any meta-data about file
git objects: commit refer to tree , tree refers to blos, blob refer to content, tag refer to version selected

commit → tree → blob

1.2.lets start to define very important three git keywords: system, global, local
git config --system: set configurations for all system users
git config --global : set configurations for the current user only
git config --local : set configurations for the current repo only

the higher priority for local first, global second and system the last one
it is useful because it get flexibility and security

1.3. .gitignore and .git/info/exclude this tow files used to select files to be untracked but the difference between : gitignore global for all team to ignore files but .git/info/exclude for local only the current user ignored files.

1.4. git diff compare the changes between working directory and staged area but git diff –staged compare between staged area and repo

1.5. use git reset –staged <filename> to remove this file from stage area, but file still in the working directory, this necessary if you staged a file in stage area by mistake you can remove this file before commit changes and if you want to see changes between this file in stage area and repo area.

1.6. the first rule to use git : the first word must be git we can alias commit by ci in git configrautions like this: git config --global alias.ci commit
or by alias by bash.

1.7. git init creates a branch named master but by using init.defaultBranch team can set the branch name, they must set differently name to be avoid conflicts.

1.8. every commit in git refer to only one tree object why ? Becouse every commit store the changes form the last modifications “take snapshot” and stores it as a new she, what if we want to back to any version or compare this version to

any last version we we use this unique tree to this object , the rule “any commit take a new snapshot for modified files”

1.9. lets define some key lines if we created ane branch from the main branch the new branch will take all versions “commits” from the main but aby change after this time any branch have no dependency to other branch and any changes in each other will not see at another branch without merge.

1.10. this tow commands creates new branches but git add switch command becouse checkout multiple use command in other needs and its make some conflict so git added switch to create and switch branches

2.MCQ Questions:
01. c) Automatic bug fixing
02. b) On a single central server
03. b) Linus Torvalds, 2005
04. c) git --version
05. c) Clone
06. b) Staging area (index)
07. b) git branch -M main
08. a) git clone
09. b) To suggest merging changes from one branch into another
10. b) Add Peter as a collaborator

Tasks theo questions:

5.fast-forward merge: uses when main branch has no changes but 3-way merge uses when main branch and another branch have changes, git create new commit for 2 branches changes then merge .

6.git restore –staged remove file from staging area(index) without any removing in work tree but –worktree remove the last changes and replace with last commit , and rm –cached remove file from tracking anyway.