Perform the following scenario involving Git. Divide yourselves in pairs and perform the following tasks.

1. Sam and Jack are working together on a shared project MY\_PROJECT that is stored in a remote Git repository. Jack performs a clone on the remote repository. What 2 things does Git create when Jack issues the git clone command?

**It Clones a repository into a newly created directory.**

**It creates remote-tracking branches for each branch in the cloned repository and creates and checks out an initial branch that is forked from the cloned repository’s currently active branch.**

After this, Jack edits a file in the project MY\_PROJECT called myfile.py. Then, he does a commit and a push. What does Git do when Jack issues these commands?

**git commit - records changes to the repository.Used in connection with your local repository**

**git push - updates remote refs along with associated objects. It is used to interact with a remote repository**.

Next, Sam does a clone on MY\_PROJECT. Then, Sam and Jack both edit myfile.py simultaneously. The file myfile.py has over 200 lines of code. Sam edits a couple lines at the top of the file, and Jack edits a couple lines at the bottom of the file. Then, Jack does a commit and a push. Finally, Sam does a commit and a push. What does Git do when Sam issues the push command?

**Jack's changes will be pushed to the global repository. His changes will be reflected there. Since sam changes the lines at the top there will be no conflict and git will push those changes into the repository**

What Git commands should Sam issue next and what would the result of these commands be?

**Since jack and sam dont change the same line there will be no conflict and the changes they made will be pushed will be reflected on to the global repository**

2. Consider a Git repository (“repo”) with one commit and one branch (master). A user makes a new commit to the repo. Draw a box-and-line diagram of the repo like the diagrams shown in class. Include all commit nodes (with made-up hashes), all HEAD nodes, and all branch nodes.

(MASTER) (BRANCH)

commit 1 commit 2

3. Continuing the previous scenario, the user creates and checks out a new branch “my-branch” and then makes a new commit. Update the previous diagram to reflect these actions.

master

commit1 commit 2

new branch