Question 1)

Directory

CWD

* Gitlet
* .gitlet
  + Staging
    - Add\_map.txt
    - Remove\_map.txt
  + Commits
    - Files writing commit objects
    - Branches.txt storing the branches
  + Blobs
    - Storing files named after sha1 ID for a blob object

Question 2)

Adding: if not the same file with the same content existing already in the commit pointed by head, create a new blob and store it in a file in blobs named after the sha1 ID and add a mapping in the add mapp then store it in add\_map.txt.

Committing: get the committed filename to blobs mappings from the parent commit and in addition to that, replace or add mappings of filenames to blobs from the current add\_map.txt then save the hashmap.

Exit(0) if failures occur

Question 3)

When branch called, add a mapping with the branchname to front commit in the branches hashmap stored in branches.txt

When checkedout, update the commit pointed by head to the commit pointed by that particular branchname in the hashmap.

When reset is called, points head to that particular commit ID in the branches hashmap

Set the add\_map hashmap to a new empty hashmap.

Serialization and Persistence

Add:

* Adds a mapping to the hashmap under the Stage class stored in add\_Map.txt under stage directory
* Needs to store the hashmap of mapping between filenames and blobs added. Stored in add\_Map.txt
* If file doesn’t exist, exit with message.

If file has the same content as it does in the most recent commit, do not stage it

Else, create a new blob and with its sha1ID save the content under this name in directory blobs

* Needs to save the update the hashmap storing new added mappings