My Git

Algorithm –

1. Take input from user.
   A. If input == “init”.

      Create “.mygit” directory.

      a. Make “version_no.txt” file and store ’0’ to it.
      b. Make “log.txt” file.
      c. Make “0” directory and create an “index.txt” file.
      d. Make a “base” directory. And now transfer all the user files that reside outside the “.mygit” folder to this “base” folder.

   B. If input == “status”.
      a. Store all the files of current working directory to a vector (files).
      b. Go to “version_no.txt” file and store the version no to a variable suppose x.
      c. Go to x folder. And go to “index.txt” file. And store the content of “index.txt” file to a map (index_map).
      d. Create a map for main working directory and store the sha of files vector in it.
      e. If file exists in files map but not in index_map then it is a new file store this new file to a vector let newFiles.
      f. If sha if same file name doesn’t match then it is modified file. Store this file to a vector let modifiedFiles.
      g. If file exists in map but not in vector than it is a deleted file add this to a vector let deletedFiles.
      h. Return the size of vectors as git status.
      i. And write the log.

   C. If input == “add”.
      a. Get files into a vector from the current working directory.
      b. Go to “version_no.txt” file and read the version no.
      c. Go to the current version index file and create a map.
      d. Comparing for new, modified and deleted files.
      e. Display all the files.
      f. Display all the new files.
      g. Display all the modified files.
      h. Display all the deleted files.
      i. Write the log.

   D. If input == “commit”.
      a. In “.mygit” directory create a new version folder.
      b. Copy all files to new version from older version.
      c. Edit log.

   E. If input == “rollback”
      a. Retrieve version no.
      b. Remove files from current version.
      c. Copy files from previous version no to current version no.
      d. Edit log.

F. If input == “log”.
    a. Go to “log.txt” file which resides in “.mygit” folder.
    b. Take the current time and store it in log file.
    c. Print all the logs.
G. If input == “pull”.
    a. Create pull folder and copy current version file to it.
    b. Edit log.
H. If input == “push”.
    a. Create push folder and copy all the files of pull folder to it.
    b. Edit log.
I. If input == “merge”.
    a. Remove files from current working directory.
    b. Move files from push folder to current working directory.
    c. Edit log.
J. If input == “retrieve_version_no”.
    a. Read version no. from current working directory.
    b. Edit log.
K. If input == “retrieve_sha”.
    a. Get current working directory.
    b. Retrieve sha of given files.
    c. Edit log.
L. If input == “retrieve_filename”.
    a. Get current working directory.
    b. Retrieve filename of given files.
M. Else return error with some suggestions.