Experiment -1.3

### Creating branches with GitHub

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| **Branch:** | CSE(DEVOPS) | **Section/Group:** 22BCD-1/B |
| **Semester:** | 4th | **Date of Performance:** 31-01-2024 |
| **Subject Name:** | Git and GitHub | **Subject Code:** 22CSH-293 |

1. **Aim/Overview of the practical:** To create and explore pull and push request.
2. **Task to be done:** Examine the Git configurations, how to create branches, resolve conflicts, resetting, commits, merge techniques etc.
3. **Steps for experiment:**

# Open Git Bash on your system.

# Using cd command move to the directory where you want to work on existing repository or create new one.

# Initialize the repository using git init command.

# 

# Login using git config and enter your credentials.

# 

# Using git clone and link to your repository on GitHub make a local copy of repository in current directory.

# 

# Using ls command check the contents of the local repository created using clone command.

# Now using git pull command check to if local repository is up to date or not and also connect remote repository to local repository.

# 

# Create text files using touch command; Enter text in any file using vi command.

# Check the contents of file using cat followed by name of file.

# 

# 10) Create a new branch using git checkout -b command and switch current working directory.

# 11) Using ls command to check and match the contents of file with main branch.

# 

# 12) Now checkout to main branch to add and commit the file along with the contents using git add and git commit.

# 

# 13) Now switch back to branch and make changes to the same text file as used in main branch using vi command.

# 

# 14) You can check if the contents have been updated or not using cat command.

# 15) Now add the file to staging area and commit the file in branch.

# 

# 16) Now switch back to the main branch and merge the changed file contents into main branch using git merge.

# 

# 17) Now check the contents of file in main branch using cat command to see the changes after merging.

# 

# 18) Now we have to push these changes from local repository to remote repository using git pull command.

# 

# 19) Now authenticate git bash access to GitHub to push changes to the repository.

# 

# 20) Now the changes are visible in the GitHub account repository. For pull command make some changes to the file in remote repository.

# 

# 21) Now type git pull on git bash to get the updated repository in your cloned local repository.

# 

# 22) Now using ls command check if the files in local and remote repository are same.

# 23) Using cat command check to see if the contents of file updated in GitHub remote repository are showing in local repository also.

# 

# Learning outcomes (What I have learnt):

* 1. Learnt about GitHub and Git.
  2. Learnt about commit, merge and add commands.
  3. Learnt about various git commands that can be applied on Git Bash.
  4. Learnt about repositories, branches and local and remote repository.
  5. Learnt about how to pull request and push in git bash.

**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

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| --- | --- | --- | --- |
| Sr. No. | Parameters | Marks Obtained | Maximum Marks |
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
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