Assignment Number 3

Git Operation

**Aim:** To perform various Git operations.

**LO mapped:** LO1, LO2

**Theory:**

There are various git operations performed using git bash and they are mentioned below with their usage and syntax.

Usage: Initializes a new Git repository in the current directory.

Syntax:

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| 3.1 Initialized empty git repository |

1. git clone

Usage: Creates a copy of a remote repository on your local machine.

Syntax: git clone <repository\_url>

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| 3.2 Cloning existing repository from GitHub |

1. git add

Usage: Adds changes or new files to the staging area, preparing them for a commit.

Syntax: git add <file\_path>

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| 3.3 Adding file to staging area |

1. git commit

Usage: Records the changes in the staging area and creates a new commit with a message.

Syntax: git commit -m "commit message"

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| 3.4 Process of commit |

1. git status

Usage: Shows the current status of the repository, including changes and staged files.

Syntax: git status

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| 3.5 Checking status of initialized repository |

1. git log

Usage: Displays a list of commits in reverse chronological order.

Syntax: git log

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| 3.6 Display commit’s history |

1. git push

Usage: Sends local commits to the remote repository.

Syntax: git push <remote\_name> <branch\_name>

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| 3.7 Pushing folder to origin from branch master |

1. git pull

Usage: Fetches and merges changes from the remote repository to your local branch.

Syntax: git pull <remote\_name> <branch\_name>

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| 3.8 Applying Git Pull Command |

1. git branch

Usage: Lists all branches in the repository.

Syntax: git branch

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| 3.9 List branch currently present in repository |

1. git checkout

Usage: Switches to a different branch or a specific commit.

Syntax: git checkout <branch\_name/commit\_id>

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| 3.10 Adding new branch into repository |

1. git merge

Usage: Combines changes from one branch into another.

Syntax: git merge <source\_branch>

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| 3.11 Merged Two branches |

1. git remove

Usage: This removes file from local repository.

Syntax: git rm <file \_name>

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| 3.12 Removing file name namely “other.html” |

1. git fetch

Usage: Downloads changes from the remote repository without merging.

Syntax: git fetch <remote\_name>

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| 3.13 Using git fetch command |

1. git reset

Usage: Removes changes from the staging area, but keeps the modifications in the working directory.

Syntax: git reset <file\_path>

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| 3.14 Resetting the file “my.html” |

1. git revert

Usage: Reverts one or more commits, creating a new commit to undo the changes.

Syntax: git revert <commit\_id>

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| 3.15 To revert to specific commit |

1. git remote

Usage: The git remote command lets you create, view, and delete connections to other repositories.

Syntax: git remote add origin <url\_to\_be\_specified>

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| 3.16 Adding repository to remote origin |

**Conclusion:** By this assignment we learned various kinds of git operations and implement them using git bash.