Git and Github

Part- 2

Assignment Questions

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1. **How to check if git is available on your system ?**

   Ans : To check if Git is available on your system, you can use one of the following methods depending on your operating system:

   Command Line (Terminal or Command Prompt):
   Open a terminal or command prompt and enter the following command :

```
git --version
```

If Git is installed, it will display the version number. If Git is not installed, you will see an error message stating that the command is not recognized.

2. **How to initialize a new Git repository ?**

   Ans :

   1) **Open your terminal or command prompt.**

   2) **Navigate to the directory where you want to create the repository. You can use the cd command to change directories. For example, if you want to create the repository in the "Documents" folder, you would use cd Documents.**

   3) **Once you're in the desired directory, run the following command to initialize a new Git repository:**
      git init
      This command will create a new empty Git repository in the current directory.

3. How to tell git about your name and email?

Ans :

1) Open your terminal or command prompt.

2) Set your name using the following command:

```
git config - -global user.name “user name”
```

3) Replace "user name" with your actual name. The --global flag sets the configuration globally, so it will be applied to all your Git repositories on the machine.

4) Set your email address using the following command:

```
Git config - -global user.email “user email”
```

Replace with your actual email address.

4. How to add a file to the staging area ?

Ans : To add all the files to the staging area you can use the following command :

```
git add .
```

The . refers to the current directory, so this command will recursively add all files in the current directory and its subdirectories.

Once you have added the file(s) to the staging area, they are ready to be included in the next commit. You can review the status of your changes using the git status command.

5. How to remove a file from the staging area?

Ans : Remember, this command only removes the file from the staging area. It does not delete the file from your working directory or from the Git history. If you want to completely remove the file from your repository, you can use the "git rm - -cached (file name)" command

6. How to make commit ?

Ans : Commit the changes with a meaningful commit message using the "git commit" command For example:

```
Git commit -m “commit message”
```

Replace "Commit message" with a concise description of the changes you made. The message should be clear and provide enough information about the purpose of the commit

7. How to send your changes to a remote repository ?

Ans : After merging the changes or if there are no conflicting changes, you can push your local commits to the remote repository using the "git push" command:

```
git push origin (branch name)
```

After pushing your changes, they will be visible to others who have access to the remote repository. They can fetch and merge your changes into their own local repositories.

8. What is the difference between clone and pull ?

Ans :

Clone and pull are two different operations in Git that serve distinct purposes:

1) Clone: The "git clone" command is used to create a local copy of a remote repository. When you clone a repository, you create a complete copy of all the files, branches, commit history, and other repository data. Cloning is typically performed when you want to start working with a repository for the first time or when you want to create a local copy of a remote repository.

   The syntax for cloning a repository is:

   ```
   git clone (repository url)
   ```

2) Pull: The "git pull" command is used to update your local repository with the latest changes from the remote repository. It combines the "git fetch" and "git merge" commands into a single operation. When you pull, Git fetches the latest commits from the remote repository and automatically merges them into your current branch.

   The syntax for pulling changes from a remote repository is:

   ```
   git pull
   ```

- Clone creates a local copy of a remote repository, including all its history and files, while pull updates your existing local repository with the latest changes from a remote repository.

- Clone is typically used when setting up a repository for the first time, while pull is used to synchronize your local repository with the latest changes from the remote repository after it has been cloned.