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ART 277 ASSIGNMENT

1. **Explain in your words the term Git and GitHub.**

Git: A version control system, or a software for tracking changes in any set of file, usually used for coordinating works among programmers collaboratively developing source code during software development.

GitHub: A provider for internet hosting for software development and version control using Git.

2. Explain the steps to download, install, and configure Git on your Pc.

Download Git for Windows

Step 1. Browse to the official Git website: https://git-scm..com/downloads

Step 2. Click the download link for Windows and allow the download to complete.

Extract and launch Git Installer

Step 3. Browse to the download location (or use the download shortcut in your browser).

Double-click the file to extract and launch the installer.

Step 4. Allow the app to make changes to your device by clicking **Yes on the** User Account Control dialog that opens.

Step 5. Review the GNU General Public License, and when you're ready to install, click **Next**

Step 6. The installer will ask you for an installation location. Eave the default, unless you have a reason to change it, and click **Next**.

Step 7. A component selection screen will appear. Leave the defaults unless you have a specific need to change them and click **Next**.

Step 8. The installer will offer to create a start menu folder. Simply click **Next**.

Step 9. Select a text editor you'd like to use with Git. Use the drop-down menu to select Notepad (or whichever text editor you prefer) and click **Next**.

Step 10. The next step allows you to choose a different name for your initial branch. The default is 'master' Unless you're working in a team that require a different name, leave the default option and click **Next**.

Step 11. This installation step allows you to change the **PATH environment.** The **PATH** is the default set of directories included when you run a command from the command line. Leave this on the middle (recommended) selection and click **Nex**t.

Server Certificates, Line Endings and Terminal Emulators

Step 12. The installer now asks which SSH client you want Git to use. Git already comes with its own SSH client, so if you don't need a specific one, leave the default option and click **Next**.

Step 13. The next option relates to server certificates. Most Users should use the default. If you're working in an Active Directory environment, you may need to switch to Windows Store certificate. Click **Next**

Step 14. The next selection converts line endings. It is recommended that you leave the default selection. This relates to the way data is formatted and changing this option may cause problems. Click **Next**.

Step 15.Choose the terminal emulator you want to use. The default MinTTY is recommended, for its features. Click **Next**.

Step 16. The installer now asks what the **git pull** command should do. The default option is recommended unless you specifically need to change its behavior. Click **Next** to continue with the installation.

Step 17. Next you should choose which credential helper to use. Git uses credentials helpers to fetch or save credentials. Leave the default option as it is the most stable one, and click **Next.**

Additional Customization Option

Step 18. The default option are recommended, however this step allows you to decide w which extra option would like to enable. If you use symbolic links, which are like shortcuts for the command line, tick the box. Click **Next.**

Complete Git Installation Process

Step 19. Once the installation is complete, tick the boxes to view the Release Notes or Launch Git Bash, than click **Finish.**

Git installation on Windows is done.

3. Discuss the process to create and initialize a project in Git.

Answer: Create a directory to contain the project. Go to the new directory and type ***git init***. Write some code, and type ***git add*** to add the file. At last type ***commit***.

4. Explain the steps to pull and push from a local repository to a remote repository

1. Create a new repository on GitHub and initialize it with a README file
2. Create a folder on your local machine
3. Open terminal and move to that folder
$ cd FOLDER
4. Add the remote URL as origin
$ git remote add origin https://github.com/ObediahPaaper/ART-277-Section-4#art-277-section-4

5. Now using the pull command, you can 'pull' down the README file onto the local folder
a. $ git pull origin master
6. Add your current files in the local folder to the staging area
a. $ git add –-all
7. Commit your changes
$ git commit -m "your commit message e.g. First commit"
8. Push your changes to the master branch
$ git push origin master

5. In your own words, explain the term push, pull, commit, stage , and branch in Git.

Answer: The Git ***push*** command is used to upload local repository content to a remote repository. Pushing is how you transfer commits from your local repository to a remote repo.

Answer: The Git ***pull*** command is used to fetch and download content from a remote repository and immediately update the local repository to match that content.

Answer: ***Commit*** keep track of our progress and changes as we work. Git consider each commit change point or " save point'. It is a point in the project you can go back to if you find a bug, or want to make a change

Answer: One of the core functions of Git is the concepts of the Staging Environment. As you are working, you may be adding, editing and removing files. But whenever you hit a milestone or finish a part of the work, you should add the files to a Staging Environment. Staged files are files that are ready to be committed to the repository you are working on.

Answer:***Branch*** In Git ***branch*** is a new/separate version of the main repository.***Branch*** allow you to work on different branches and work on different projects without the interfering with each other.

6. Create a Git-hub account (if you don't have) and a repository and submit the repository link with your assignment. (The account username should reflects your full name and the repository name should be "ART277"

REPOSITORY LINK: https://github.com/ObediahPaaper/ART-277-Section-4#art-277-section-4

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