*Version control, git and GitHub*

*What is a version control system, main advantages of using one?*

1. *A version control system like GitHub is a software that allows any developer to store, change and update software that he/she is currently working on. It works by having a centralised online repository which anyone can access, given they have the URL and they can download all the file within the online repository to their own computers which is called the local repository. Then can then work on the files and upload them back onto the online repository for safe keeping or for when someone else needs the code.*
2. *Main advantages of using an online repository is so that you can store the code of any project there, the necessary files etc. it also means you can go back and access any version of that same code and see where you made changes in the past.*

*Explain the procedure you would follow to obtain a copy of an online git repository, make some changes and then update the online repository with the changes themselves.*

1. *I will answer this problem in 2 ways. The first way is when you are working on your own and the second is when you are within a group*
2. *When you are on your own, it is easy to do. Firstly you must make sure you have the git software downloaded on the computer and if you do not, you must do that first. Secondly, open up the GitHub repository on the browser and copy and paste the link of the repository you want to change. Next you can open the git bash software and you want to first go to where you want the file to be stored at: in my case, it will be the desktop. So you enter cd into desktop*
3. *Next you can either clone the folder by using git clone or you can use git pull if you are working on computer you have already been working on.*
4. *Then cd into the file you are going to change.*
5. *Make all the changes you need within those files and check that they are ready to be committed and also uploaded*
6. *You do this by git status and git add . to add all the files.*
7. *Git status again will show you the files that are ready to be committed*
8. *Using git commit –m “Message” will commit the changes. Note that if you have been using a computer where you have originally signed in then then you won’t need to configure the settings using git config global then adding username and then the password.*
9. *After editing, you press git push and it’ll push the changes onto the remote directory. If you wasn’t previously signed in, it’ll ask for authentication but after that it’ll then push the changes through.*
10. *The second way to do it is if you are working as part of a team and a group.*
11. *You have to have adequate access to the repository in order for you to be eligible to fork the repository and make changes.*
12. *When you do this, you can clone your fork to your local directory to make changes.*
13. *After you do this, you can edit the document on you local repository and push the changes to the main repository.*
14. *Then you go online and press, new pull request and then that will send the pull requests to the group leader and they can either accept or deny the request.*

*What is fork on git, how do you create a fork and obtain a local copy of the fork onto your computer*