Assignment NO 2 (GitHub):

The following describes the detailed procedure each individual member of the group followed to ensure the collaboration of group members on GitHub.

GitHub Account:

To use GitHub, a GitHub account is required. Once the account was created, a private GitHub repository was made where all the work was to be uploaded.

Git And Git Bash:

To track the files, git was installed on Windows and to interface with git and GitHub using commands, git bash was installed. Git bash is like command terminal.

SSH key:

For the local machine to communicate with GitHub and to verify the account user, an SSH key is required. An SSH is key is created using git bash.

Two keys are generated, a public key and a private key. Public key is copied and pasted into the SSH keys section in the settings of GitHub account. The private key is entered every time git bash is launched in order to verify the user. In order to enter the key, first SSH agent is started and then it is added using the appropriate command.

GitHub Repository and Branches:

In the GitHub repository, multiple branches were created for individual tasks (in our case creating block such as ALU block, counter block etc.). A main branch was also created where the individual components were grouped together (some parts of microprocessor were created in main branch such as address and data buses).

Cloning the repository:

To save a copy of repository in the local machine(cloning), following command is used:

git clone <repository location>

The repository location is copied from GitHub website.

HTTPS   **SSH**   GitHub CLI

git@github.com:aghani-coder/4_bit_microcontro

Use a password-protected SSH key.

Creating a new branch:

The branches in the repository are created for individual work. This is done using the following command:

git checkout -b <branch name>

Directory change:

To access and make change in the directory in git bash terminal, directory is changed using following command:

cd <file location>

Changing the branch:

To access different branches, the branch must be changed by the following command:

git checkout <branch name>

Checking status:

If changes are made in the selected repository and selected branch, the following command is used to check the changes made:

git status

Adding changes:

For git to track changes, these changes have to be added and that is done using following command:

git add .

Committing changes:

After changes have been made, they have to be committed. Following is the command used:

git commit -m "message"

Pushing changes:

The changes made are in local machine. For them to be uploaded to GitHub we use the following command:

git push origin <branchname>

origin can be added by the following command:

git remote add origin <SSH>