Software Engineering Tools Lab

Assignment 3

2020BTECS00205

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Module 3- GitHub

Q 1. Create a repository on GitHub named SET Lab and add files into it (you can add implementation files of previous assignment) perform below operations on it. (Add screenshot as an answer to every question)

```
...or create a new repository on the command line

echo "# SET-Lab" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/M74-dot/SET-Lab.git
git push -u origin main


...or push an existing repository from the command line

git remote add origin https://github.com/M74-dot/SET-Lab.git
git branch -M main
git push -u origin main
```

1. Perform commit on added files
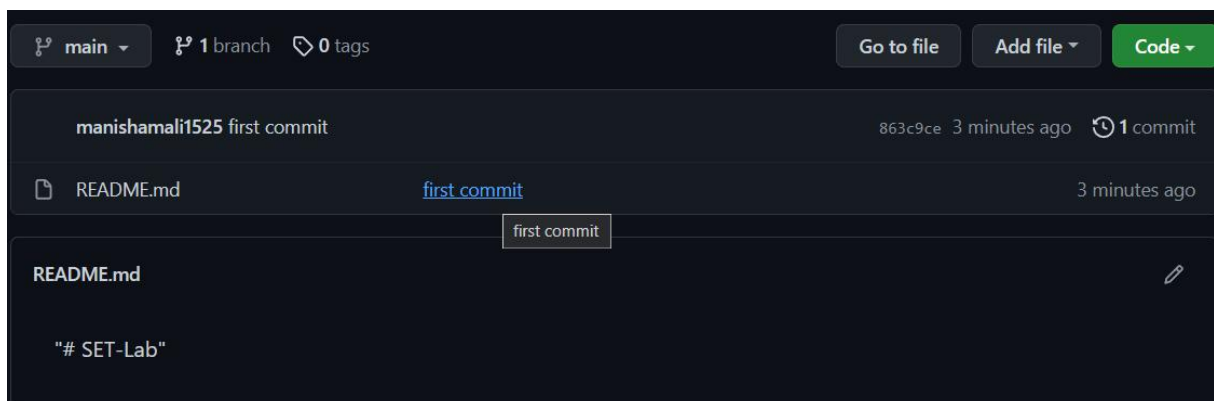
2. Perform update to the existing files (show history)

3. Create another branch

```
$ git checkout -b <branch-name>
```

4. Create pull request

```
D:\>cd SET LAB - MY CV

D:\SET LAB - My CV>git checkout -b newbranch
Switched to a new branch 'newbranch'
```

```
D:\SET LAB - My CV>git branch -a
  main
* newbranch
  remotes/origin/main
```

```
D:\SET LAB - My CV>git push --set-upstream origin newbranch
Enumerating objects: 21, done.
Counting objects: 100% (21/21), done.
Delta compression using up to 8 threads
Compressing objects: 100% (16/16), done.
Writing objects: 100% (21/21), 8.99 MiB | 150.00 KiB/s, done.
Total 21 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
remote:
remote: Create a pull request for 'newbranch' on GitHub by visiting:
remote:      https://github.com/M74-dot/SET-Lab/pull/new/newbranch
remote:
To https://github.com/M74-dot/SET-Lab.git
 * [new branch]      newbranch -> newbranch
Branch 'newbranch' set up to track remote branch 'newbranch' from 'origin'.
```

5. Perform merging of both branches

```
D:\SET LAB - My CV>git checkout main
Switched to branch 'main'
A       .vscode/settings.json
Your branch and 'origin/main' have diverged,
and have 1 and 1 different commits each, respectively.
  (use "git pull" to merge the remote branch into yours)
```

```
D:\SET LAB - My CV>git merge newbranch
Already up to date.
```
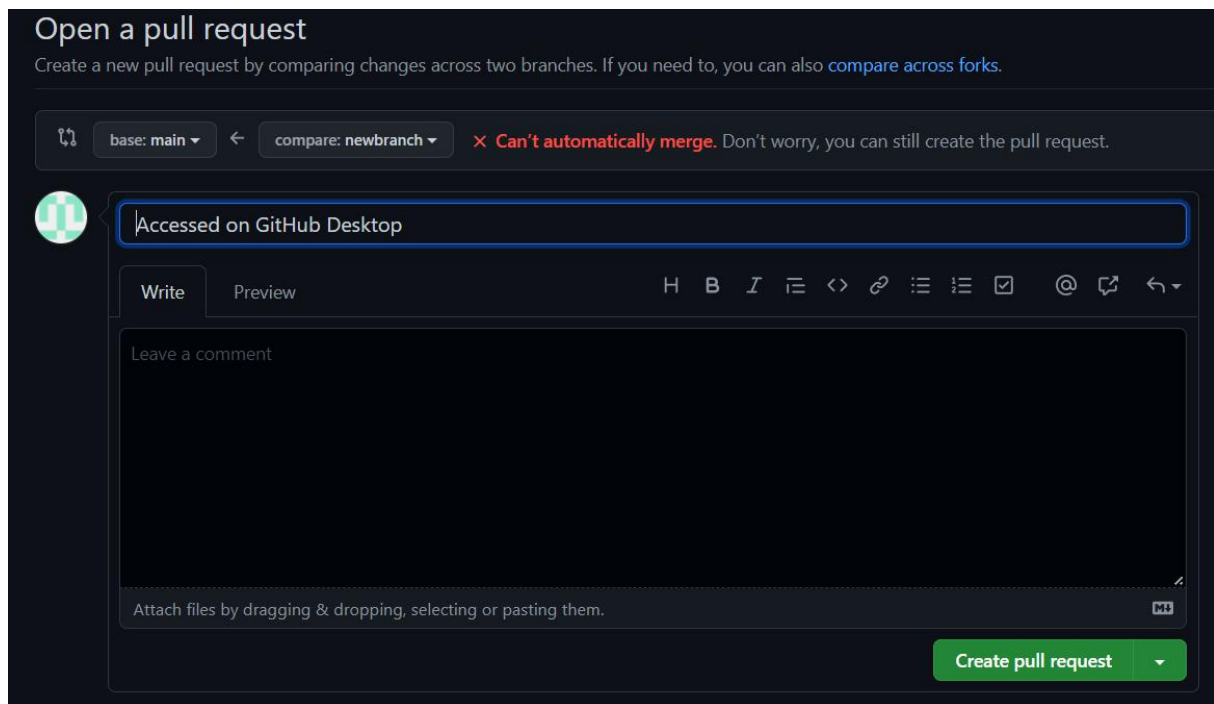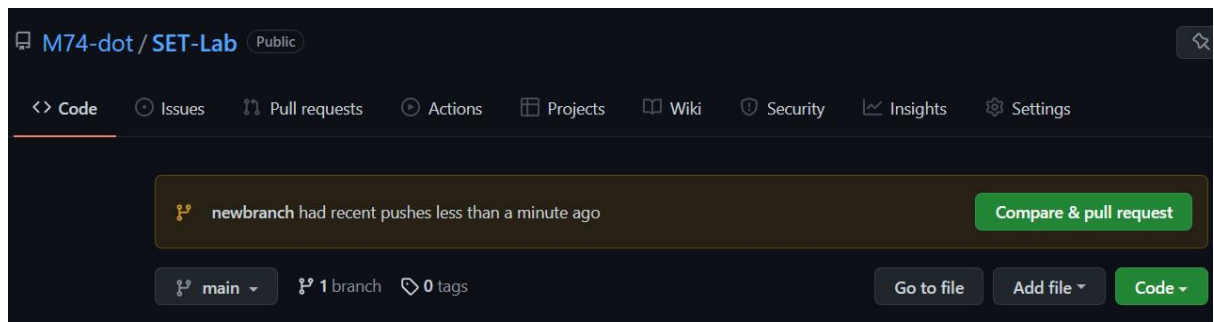
6. Perform Fork operation

Q 2. For the diagram given below create a GitHub repository and perform operations given in the diagram. (Perform commit operations as given)(Add screenshots as an answer to this question)

Root

Add File ABC → Branch Out — Branch 2 → Modify ABC to ensure merge conflict

Branch 1

Modify ABC

Add File PQR

Get PR 1 merged Commit ← Raise PR on master

Get PR 2 merged Commit ← Resolve conflicts ← Raise PR on master

---
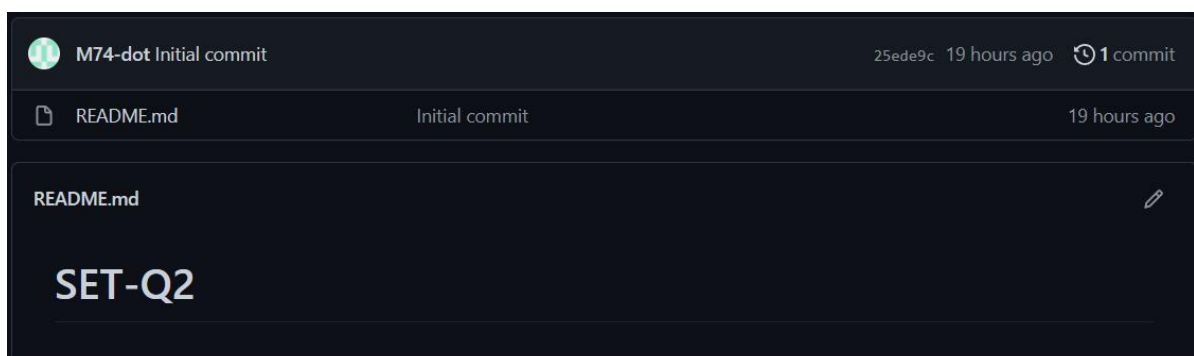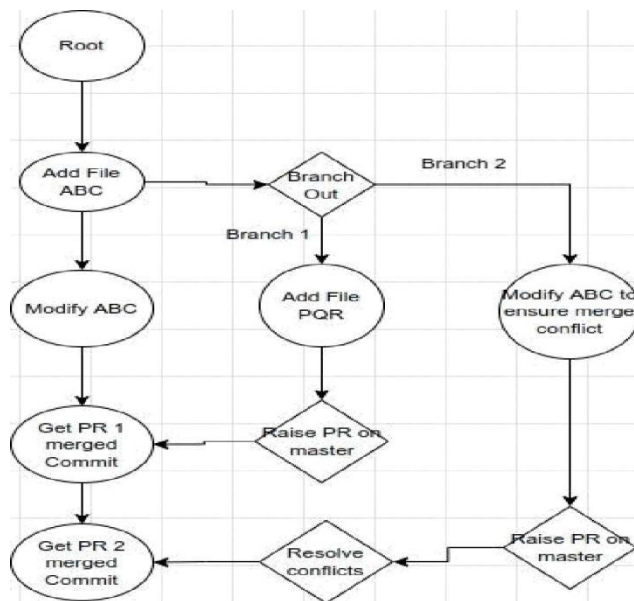
Raw   Blame   %   ⊔

Commit changes

Modified ABC File

O• Commit direnly to the   branch.

}§ Create a new branch for this commit and start a pull request.

Commit

Commit new file

Created PQR

O•   Commit directly to the •   Dranch.

}§ Create a new branch for this commit and start a pull request.

---

branch2 had recent pushes less than a minute ago   Compare & pull request

---

Merge pull request #1 from M74-dot/branch2

Updated ABC by branch2

Cancel

Pull request successfully merged and closed   Delete

Write   F - -

Q 3. What is GitHub desktop? How to install GitHub on local machine? Install GitHub on your local machine and access repository created in question no 1 (add screenshots).

GitHub Desktop is **an application that enables you to interact with GitHub using a GUI** instead of the command line or a web browser
You can push to, pull from, and clone remote repositories with GitHub Desktop, and use collaborative tools such as attributing commits and creating pull requests
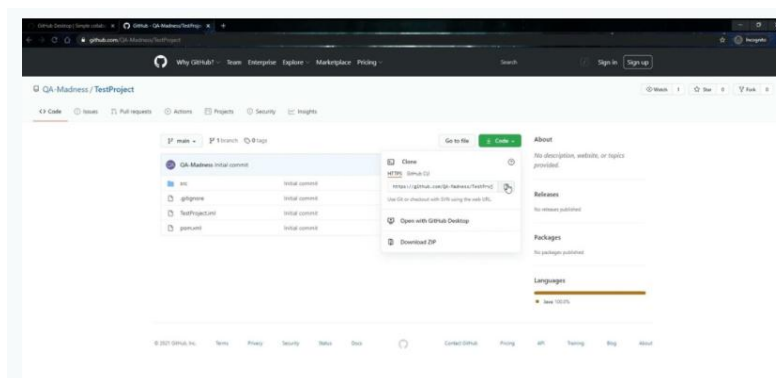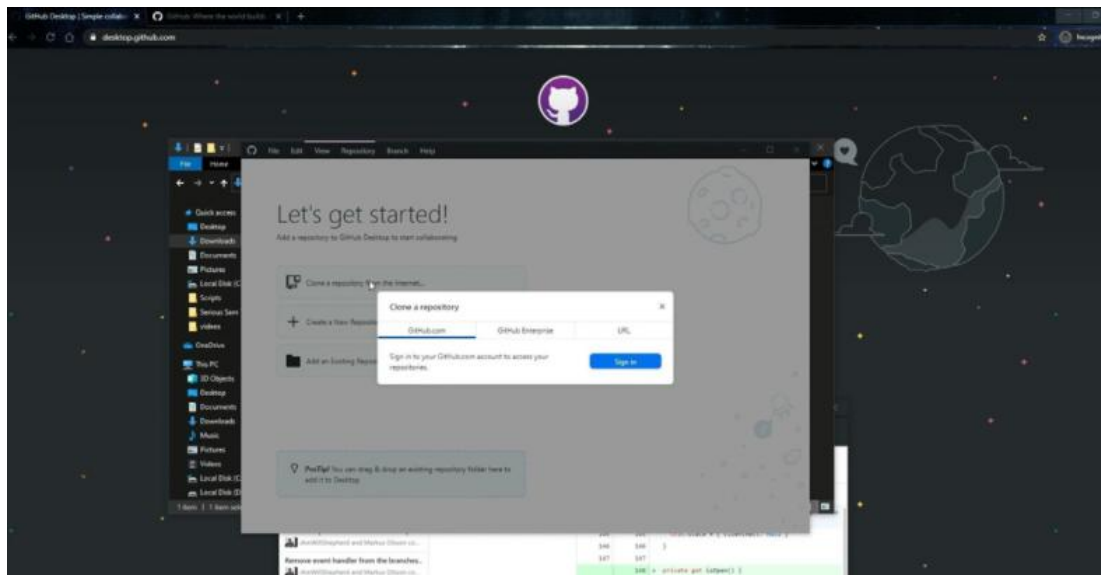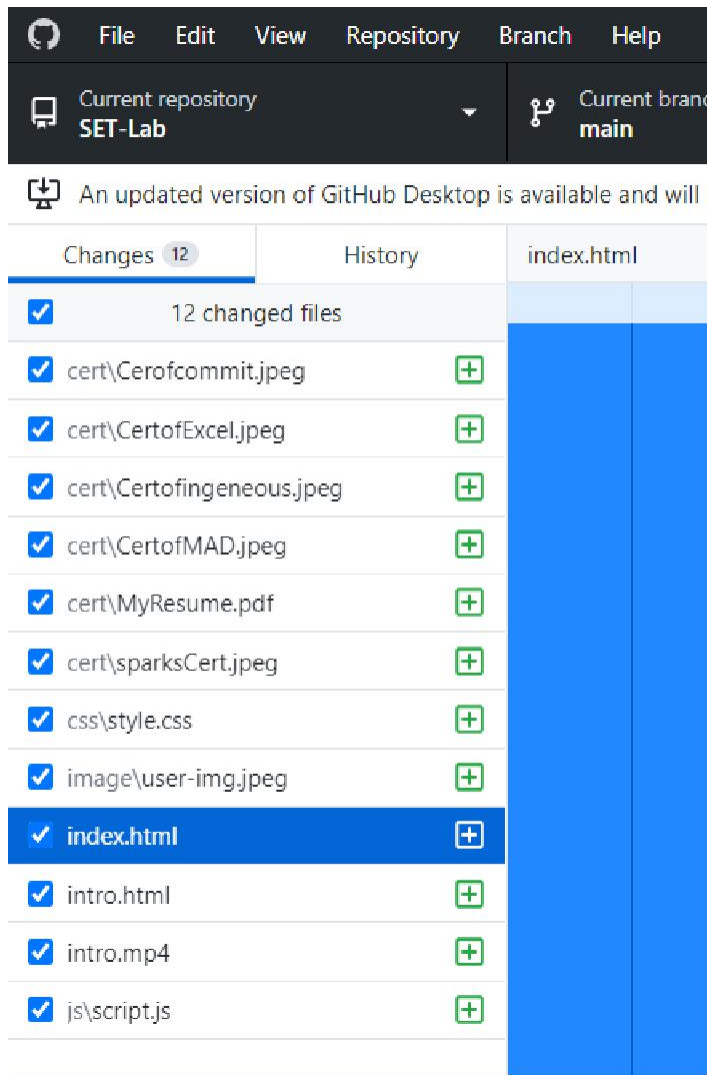
I have installed GitHub desktop on my PC.

Q 4. Differentiate in between GitHub, Git and GitLab.

GitHub

- GitHub is not open source.
- It allows users to have unlimited free repositories.
- GitHub allows users to have free private repository but with a maximum of three collaborators.

    It is owned by Microsoft Corporation

- There is a limited private repository.
- It supports only Git version control.
- GitHub is a service
- GitHub is a graphical user interface
- GitHub is hosted on the Web
- GitHub is maintained by Microsoft.
- GitHub is focused on centralized source code hosting.
- GitHub is a hosting service for Git repositories.
- GitHub was launched in 2008.
- GitHub includes a free-tier and pay-for-use tier.

    GitHub provides a Desktop interface named GitHub Desktop.

Git

Git is a software.

Git is a command-line tool.

Git is installed locally on the system.

Git is focused on version control and code sharing.

Git is a version control system to manage source code history.

Git was first released in 2005.

Git is open-source licensed.

Git provides a Desktop interface named Git Gui.

GitLab

- ➢ GitLab is Open Source for community edition.
- ➢ It allows users to make public repository.
- ➢ GitLab also provides free private repository.

  It is owned by GitLab Inc.
- ➢ GitLab is available with many bugs and it makes the user experience sloppy.
- ➢ It is difficult to manage code reviews for first-timers.

Q 5. Go to this https://github.com/sidp1991/SETAssignment

GitHub repository add your code file (question no 2 solved in assignment no 2) in this repository, then open file Student assignment updates.txt present in above repository and update your details such as Name and PRN and then perform commit(need to create pull request with appropriate comments). (Attach screenshots of this activity)
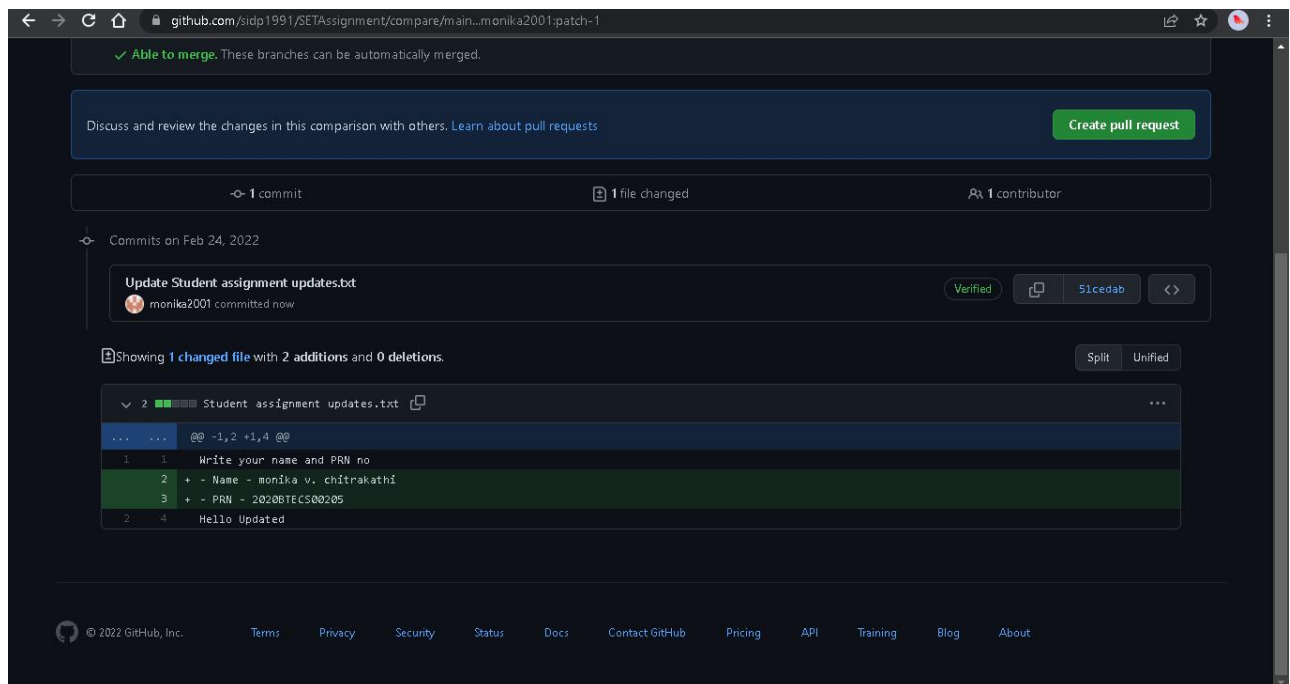
Updated Student

Create pull request

Watch 1 ▾   Fork 42   Star 0 ▾

Public

Code   Wiki

— d   g   on Feb 22

Updated Student File 448

Filters -   :main   : patch - 1

{'j 46 Op   You

#48 opened 4 minutes ago by M74-dot

Search or jump to...

Pull requests   Issues   Marketplace   Explore

sidp1991 / **SETAssignment**   Public

Watch 1 ▾   Fork 76   Star 0 ▾

<> Code   Issues   ⏸ Pull requests 76   Actions   Projects   Wiki   Security   Insights

Update Student assignment updates.txt #81

Edit   <> Code ▾

⏸ Open   **monika2001** wants to merge 1 commit into `sidp1991:main` from `monika2001:patch-1`

💬 Conversation 0   Commits 1   ✓ Checks 0   Files changed 1

+2 −0 ▀▀▀▀▀▀

monika2001 commented now   ☺ •••

No description provided.

Update Student assignment updates.txt   Verified   51cedab

Add more commits by pushing to the **patch-1** branch on **monika2001/SETAssignment**.

✓ **This branch has no conflicts with the base branch**
Only those with write access to this repository can merge pull requests.

Reviewers
No reviews
Still in progress? Convert to draft

Assignees
No one assigned

Labels
None yet

Projects
None yet