

Git and GitHub case study assignment

Question :

Scenario:

You are part of a small development team tasked with managing git tasks for a simple java/*.net/python/ruby application.

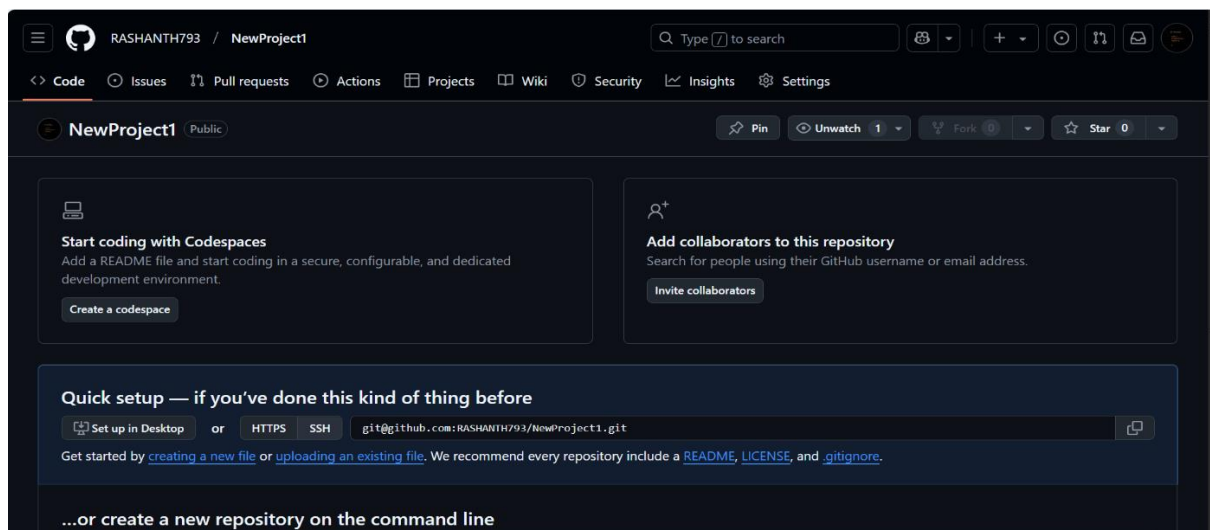
The application should allow users to:

Get/Create a simple application.

Project Setup:

- Create a new Git repository for the project.
- Initialize the repository with a README.md file explaining the project.
- Create a .gitignore file to exclude unnecessary files and directories from version control (e.g. *.class files, *.jar files etc.).

1. Created a Git Repository



2. Initialized the repository with a README.md file explaining the project. And added .gitignore file.

```
MINGW64/c/Users/Administrator/NewProjectGit
$ cd ..
Administrator@0257530497995b1 MINGW64 ~ (master)
$ mkdir NewProjectGit
Administrator@0257530497995b1 MINGW64 ~ (master)
$ cd NewProjectGit
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (master)
$ git init
Initialized empty Git repository in C:/Users/Administrator/NewProjectGit/.git/
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (master)
$ git remote add origin git@github.com:RASHANTH793/NewProject.git
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (master)
$ ls
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (master)
$ git branch -M main
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ ls
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ ls
service.js
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ ls
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ echo "This is readme file" >> Readme.md
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ ls
Readme.md
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ ls
Readme.md
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ ls -a
./ ../ .git/ .gitignore Readme.md
```

Initial Development:

- Create a new branch for the initial development (feature/initial-development).
- Get/Develop the core functionality of the application.
- Make multiple commits
- Commit your changes regularly with meaningful commit messages.
- Push your changes to your remote repository (e.g., GitHub).

```
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git checkout -b InitialDevelopment
Switched to a new branch 'InitialDevelopment'
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ ls
Readme.md service.js
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git add service.js
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git commit -m "Service File is uploaded"
[InitialDevelopment 7341453] Service File is uploaded
1 file changed, 19 insertions(+)
create mode 100644 service.js
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git push
fatal: The current branch InitialDevelopment has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream origin InitialDevelopment

To have this happen automatically for branches without a tracking
upstream, see 'push.autoSetupRemote' in 'git help config'.
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git push -u origin InitialDevelopment
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 572 bytes | 572.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'InitialDevelopment' on GitHub by visiting:
remote:   https://github.com/RASHANTH793/NewProject/pull/new/InitialDevelopment
remote:
To github.com:RASHANTH793/NewProject.git
 * [new branch]      InitialDevelopment -> InitialDevelopment
branch 'InitialDevelopment' set up to track 'origin/InitialDevelopment'.
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ |
```

- Merging the Two Different Branches with Fast Forward Merge.

```
MINGW64/c/Users/Administrator/NewProjectGit
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git push
fatal: The current branch InitialDevelopment has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream origin InitialDevelopment

To have this happen automatically for branches without a tracking
upstream, see 'push.autoSetupRemote' in 'git help config'.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git push -u origin InitialDevelopment
Enumerating objects: 4, done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 572 bytes | 572.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'InitialDevelopment' on GitHub by visiting:
remote:   https://github.com/RASHANTH793/NewProject/pull/new/InitialDevelopment
remote:
To github.com:RASHANTH793/NewProject.git
 * [new branch]      InitialDevelopment -> InitialDevelopment
branch 'InitialDevelopment' set up to track 'origin/InitialDevelopment'.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git merge main
Already up to date.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (InitialDevelopment)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git merge InitialDevelopment
Updating e15dd3..7341453
Fast-forward
 service.js | 19 +++++
 1 file changed, 19 insertions(+)
 create mode 100644 service.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$
```

- Creating different branches and adding file, committing it and pushing the files to remote repository.

```
MINGW64/c/Users/Administrator/NewProjectGit
Fast-forward
 service.js | 19 +++++
 1 file changed, 19 insertions(+)
 create mode 100644 service.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git push
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:RASHANTH793/NewProject.git
    e15dd3..7341453  main -> main

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git checkout -b MainFunction
Switched to a new branch 'MainFunction'

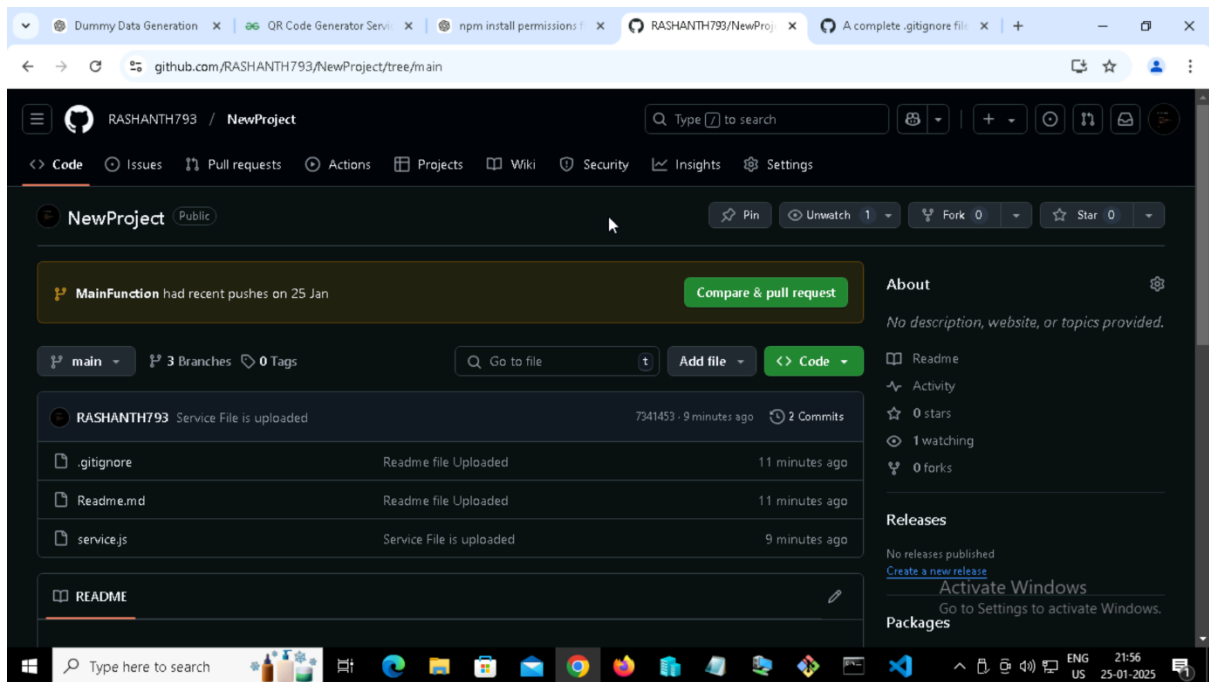
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (MainFunction)
$ ls
Readme.md app.js service.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (MainFunction)
$ git add app.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (MainFunction)
$ git commit -m "Main Function of Application Uploaded"
[MainFunction 8852732] Main Function of Application Uploaded
 1 file changed, 17 insertions(+)
 create mode 100644 app.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (MainFunction)
$ git push -u origin MainFunction
Enumerating objects: 4, done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 563 bytes | 563.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'MainFunction' on GitHub by visiting:
remote:   https://github.com/RASHANTH793/NewProject/pull/new/MainFunction
remote:
To github.com:RASHANTH793/NewProject.git
 * [new branch]      MainFunction -> MainFunction
branch 'MainFunction' set up to track 'origin/MainFunction'.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (MainFunction)
$
```



- Merging different branches and Creating different branch and performing ort merging.

Collaboration:

- Create a pull request to merge your feature/initial-development branch into the main branch.
- Simulate a code review by requesting feedback from a classmate (or an imaginary reviewer) and addressing their comments.
- Implement merge using different strategies like
- Rebase your branch onto the main branch before merging to maintain a clean linear history.
- Fast-Forward
- 3 way commit
- With conflict fix the conflict
- Please ensure to push all changes to github so that we have traceability.
- Ensure all changes are done with Verified user commit (signatures).

```
MINGW64/c/Users/Administrator/NewProjectGit

Merge made by the 'ort' strategy.
controller.js | 19 ++++++++
1 file changed, 19 insertions(+)
create mode 100644 controller.js

Administrator@DESKTOP-955111 MINGW64 ~/NewProjectGit (main)
$
```

Activate Windows
Go to Settings to activate Windows.

Dummy Data Generation x QR Code Generator Servi x npm install permissions f x Updating an Readme file x A complete .gitignore file x +

github.com/RASHANTH793/NewProject/pull/1

Updating an Readme file #1

[Open](#) RASHANTH793 wants to merge 1 commit into `main` from `ProjectRequestingPull`

Conversation 0 Commits 1 Checks 0 Files changed 1 +16 -1

RASHANTH793 commented in 4 minutes

Setting up the project steps detailed description

Updating an Readme file f7acfab

RASHANTH793 self-assigned this in 4 minutes

Checking for ability to merge automatically...
Hang in there while we check the branch's status.

Merge pull request You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Reviewers
No reviews
Still in progress? [Convert to draft](#)

Assignees
RASHANTH793

Labels
None yet

Projects
None yet

Milestone
Go to Settings to activate Windows

Activate Windows
Go to Settings to activate Windows.

Updating an Readme file #1

RASHANTH793 wants to merge 1 commit into main from ProjectRequestingPull

Conversation 0 Commits 1 Checks 0 Files changed 1 +16 -1

RASHANTH793 commented in 4 minutes

Setting up the project steps detailed description

Updating an Readme file f7acfab

RASHANTH793 self-assigned this in 4 minutes

Require approval from specific reviewers before merging

Rulesets ensure specific people approve pull requests before they're merged. Add rule

This branch has no conflicts with the base branch

Merging can be performed automatically.

Reviewers

No reviews

Still in progress? Convert to draft

Assignees

RASHANTH793

Labels

None yet

Projects

None yet

Milestone

No milestone

16

Updating an Readme file #1

RASHANTH793 wants to merge 1 commit into main from ProjectRequestingPull

RASHANTH793 self-assigned this in 4 minutes

Require approval from specific reviewers before merging

Rulesets ensure specific people approve pull requests before they're merged. Add rule

This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request You can also open this in GitHub Desktop or view command line instructions.

Try the new merge experience

Add a comment

Write Preview

Add your comment here...

Labels

None yet

Projects

None yet

Milestone

No milestone

Development

Successfully merging this pull request may close these issues.

None yet

Notifications

Customize

Unsubscribe

You're receiving notifications because you're watching this repository.

Go to Settings to activate Windows.

1 participant

```
MINGW64/c/Users/Administrator/NewProjectGit
error: failed to push some refs to 'github.com:RASHANTH793/NewProject.git'

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (ProjectRequestingPull)
$ git push -u origin ProjectRequestingPull
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 500 bytes | 500.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'ProjectRequestingPull' on GitHub by visiting:
remote:   https://github.com/RASHANTH793/NewProject/pull/new/ProjectRequestingPull
remote:
To github.com:RASHANTH793/NewProject.git
 * [new branch]      ProjectRequestingPull -> ProjectRequestingPull
branch 'ProjectRequestingPull' set up to track 'origin/ProjectRequestingPull'.

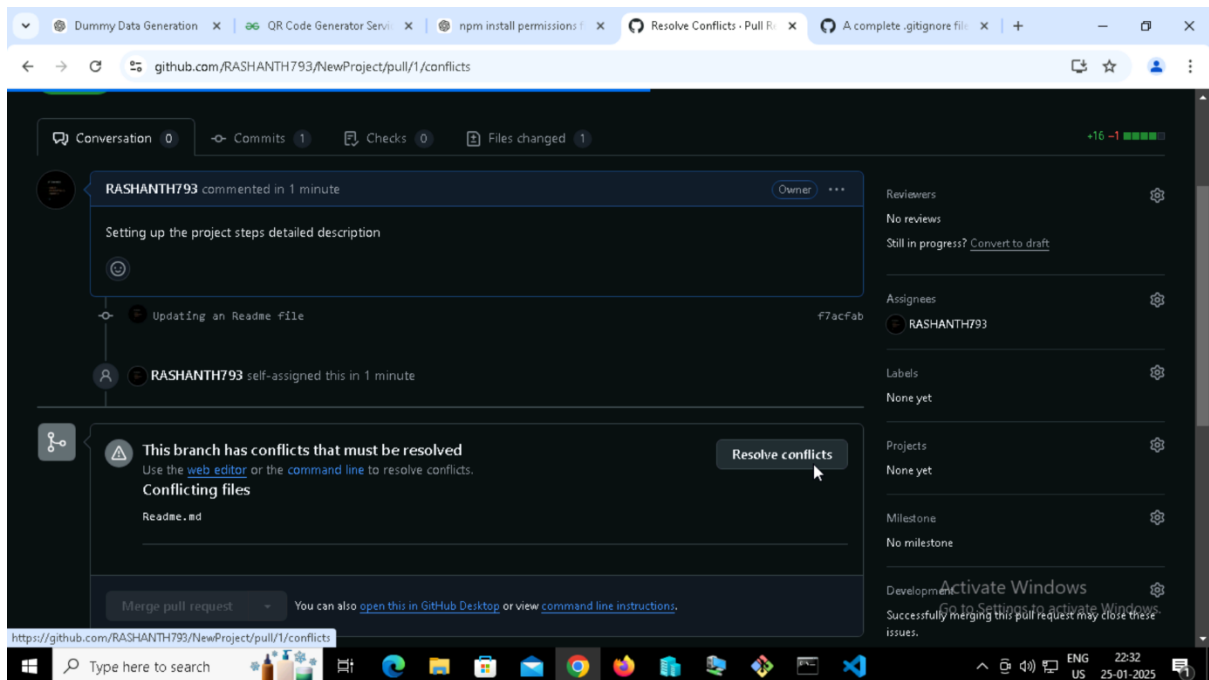
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (ProjectRequestingPull)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

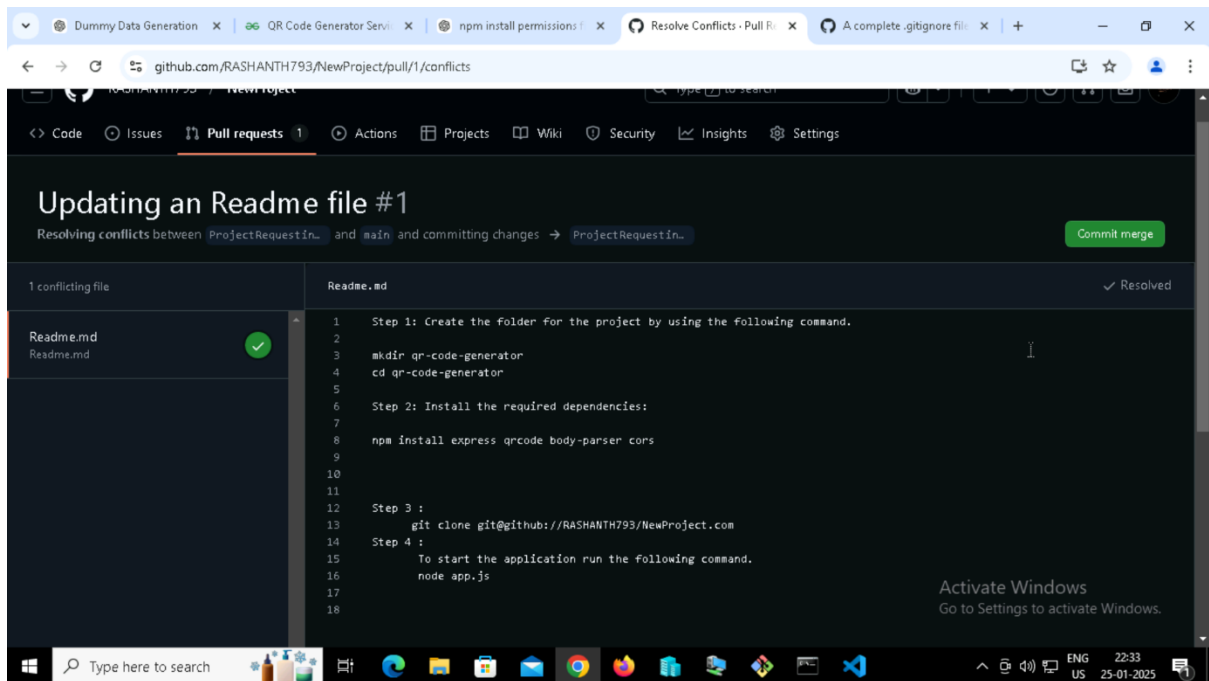
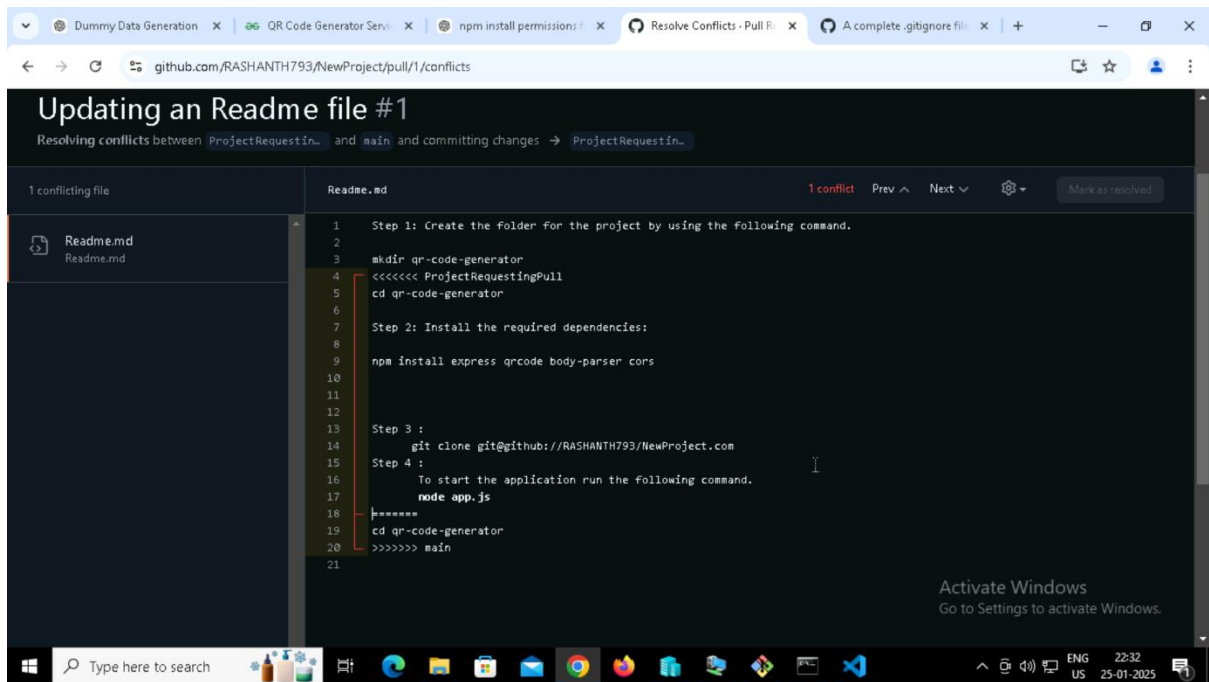
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git add Readme.md

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git commit -m "Updated Readme File"
[main b2d6bae] Updated Readme File
1 file changed, 4 insertions(+), 1 deletion(-)

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 359 bytes | 359.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:RASHANTH793/NewProject.git
   b00aae2..b2d6bae  main -> main

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ |
```





Browser tabs: Dummy Data Generation, QR Code Generator Servi, npm install permissions f, Updating an Readme file, A complete .gitignore file

URL: github.com/RASHANTH793/NewProject/pull/1/

Conversation 0 | Commits 1 | Checks 0 | Files changed 1 | +16 -1

RASHANTH793 commented in 36 seconds

Setting up the project steps detailed description

Updating an Readme file F7acFab

RASHANTH793 self-assigned this in 37 seconds

Checking for ability to merge automatically...
Hang in there while we check the branch's status.

Merge pull request | You can also [open this in GitHub Desktop](#) or [view command line instructions](#).

Try the new merge experience

Add a comment

Reviewers: No reviews. Still in progress? [Convert to draft](#)

Assignees: RASHANTH793

Labels: None yet

Projects: None yet

Milestone: No milestone

Activate Windows. Go to Settings to activate Windows. Successfully merging this pull request may close these issues.

Windows taskbar: Type here to search, 22:33, 25-01-2025

Dummy Data Generation x QR Code Generator Servi x npm install permissions x Updating an Readme file x A complete .gitignore file x

github.com/RASHANTH793/NewProject/pull/1/

Open Updating an Readme file #1
RASHANTH793 wants to merge 1 commit into main from ProjectRequestingPull

Setting up the project steps detailed description

Updating an Readme File f7acfab

RASHANTH793 self-assigned this in 33 seconds

Merge branch 'main' into ProjectRequestingPull Verified d4345e5

Require approval from specific reviewers before merging
Rulesets ensure specific people approve pull requests before they're merged. Add rule x

This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request You can also open this in GitHub Desktop or view command line instructions.

No reviews
Still in progress? Convert to draft

Assignees
RASHANTH793

Labels
None yet

Projects
None yet

Milestone
No milestone

Development
Successfully merging this pull request may close these issues. Activate Windows
None yet Go to Settings to activate Windows.

MINGW64/c/Users/Administrator/NewProjectGit

```
remote:
To github.com:RASHANTH793/NewProject.git
 * [new branch]      NewControllerBranch -> NewControllerBranch
branch 'NewControllerBranch' set up to track 'origin/NewControllerBranch'.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (NewControllerBranch)
$ git checkout -b "Pull Requesting"
fatal: 'Pull Requesting' is not a valid branch name
hint: See 'man git check-ref-format'
hint: Disable this message with "git config advice.refSyntax false"

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (NewControllerBranch)
$ git checkout -b "ProjectRequestingPull"
Switched to a new branch 'ProjectRequestingPull'

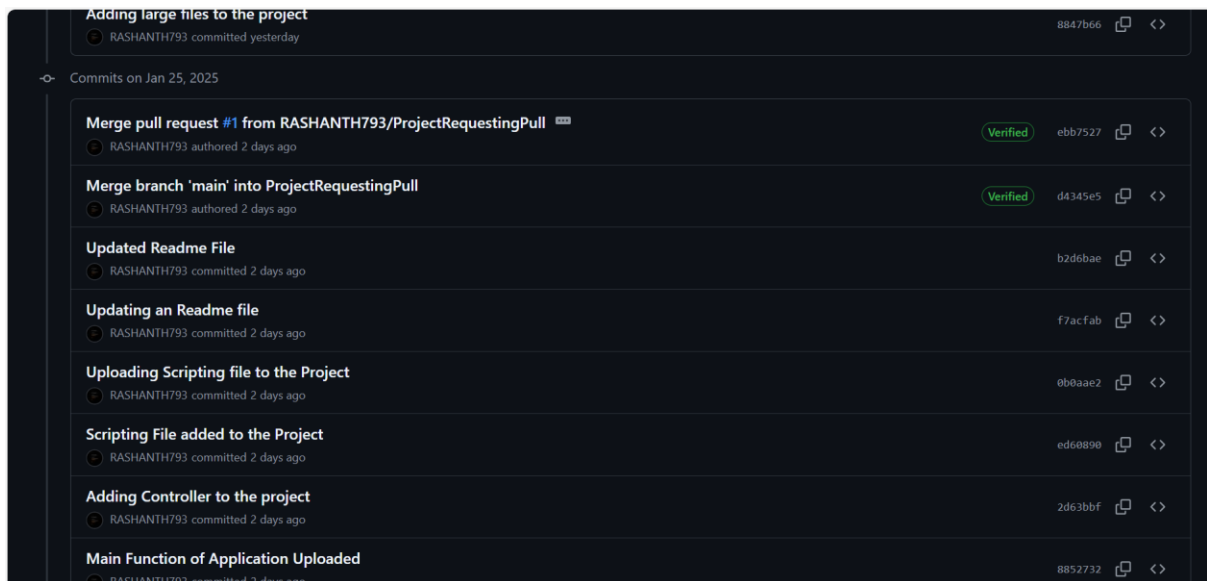
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (ProjectRequestingPull)
$ git add Readme.md
warning: in the working copy of 'Readme.md', LF will be replaced by CRLF the next time Git touches it

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (ProjectRequestingPull)
$ git commit -m "Updating an Readme file"
[ProjectRequestingPull f7acfab] Updating an Readme file
1 file changed, 16 insertions(+), 1 deletion(-)

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (ProjectRequestingPull)
$ git push -u origin ProjectRequestingPull
error: src refspec ProjectRequestingPull does not match any
error: failed to push some refs to 'github.com:RASHANTH793/NewProject.git'

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (ProjectRequestingPull)
$ git push -u origin ProjectRequestingPull
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 500 bytes | 500.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote: Create a pull request for 'ProjectRequestingPull' on GitHub by visiting:
remote:   https://github.com/RASHANTH793/NewProject/pull/new/ProjectRequestingPull
remote:
To github.com:RASHANTH793/NewProject.git
 * [new branch]      ProjectRequestingPull -> ProjectRequestingPull
branch 'ProjectRequestingPull' set up to track 'origin/ProjectRequestingPull'.
```

Activate Windows
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Enhancements:

Git LFS (Optional):

- If your application involves large files (e.g., images, audio), experiment with Git LFS to store them more efficiently.

GitHub Administration (if applicable):

- If working in a team, explore GitHub's team and organization features.
- Experiment with different access control levels for team members.
- Create a project board to track the progress of the project.

Deliverables:

- A well-structured Git repository with a clear commit history.
- A working to-do list application with the required features.
- A well-documented project with a README file.
- A report summarizing the project, including the challenges faced and the lessons learned.

Assessment:

- Code quality and readability.
- Git usage and best practices (branching, merging, rebasing, tagging).
- Collaboration and communication skills.
- Understanding of Git concepts and commands.
- Ability to solve problems and troubleshoot issues.

```
MINGW64/c/Users/291226
116 cd PractiseNewLfs
117 git init
118 git init
119 git lfs install
120 ls -a
121 cd .git/
122 ls
123 cd hooks/
124 ls -a
125 cd -
126 mkdir NewLfs
128 cd NewLfs
129 git init
130 ls -a
131 cd .git/
132 ls 0a
133 ls -a
134 cd hooks/
135 ls
136 ls -a
137 cd PractiseNewLfs
138 cd PractiseNewLfs
139 git clone git@github.com:RASHANTH793/PublicGit.git
140 cd PractiseNewLfs
141 git lfs install
142 git lfs track "*.jpg"
143 git lfs track "*.png"
144 git lfs track "*.jpg"
145 echo "" >> image.jpg
146 echo "" >> image.jpg
147 git status
148 ls -a
149 cd .gitattributes
150 cd .gitattributes/
151 cat .gitattributes
152 cd -
153 cd -
154 ls
155 cd NewLfs
156 ls
157 git init
158 ls -a
159 cd PractiseNewLfs
160 cd PractiseNewLfs
161 cd -
162 cd PractiseNewLfs
163 ls
164 ls -a
165 cat .gitattributes
166 git track "*.jpeg"
167 git lfs track "*.jpeg"
```

```
MINGW64/c/Users/Administrator/NewProjectGit
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 563 bytes | 563.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'MainFunction' on GitHub by visiting:
remote:   https://github.com/RASHANTH793/NewProject/pull/new/MainFunction
remote:
To github.com:RASHANTH793/NewProject.git
 * [new branch]      MainFunction -> MainFunction
branch 'MainFunction' set up to track 'origin/MainFunction'.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (MainFunction)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git merge MainFunction
Updating 7341453..8852732
Fast-forward
 app.js | 17 ++++++
 1 file changed, 17 insertions(+)
 create mode 100644 app.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git push
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:RASHANTH793/NewProject.git
 7341453..8852732  main -> main

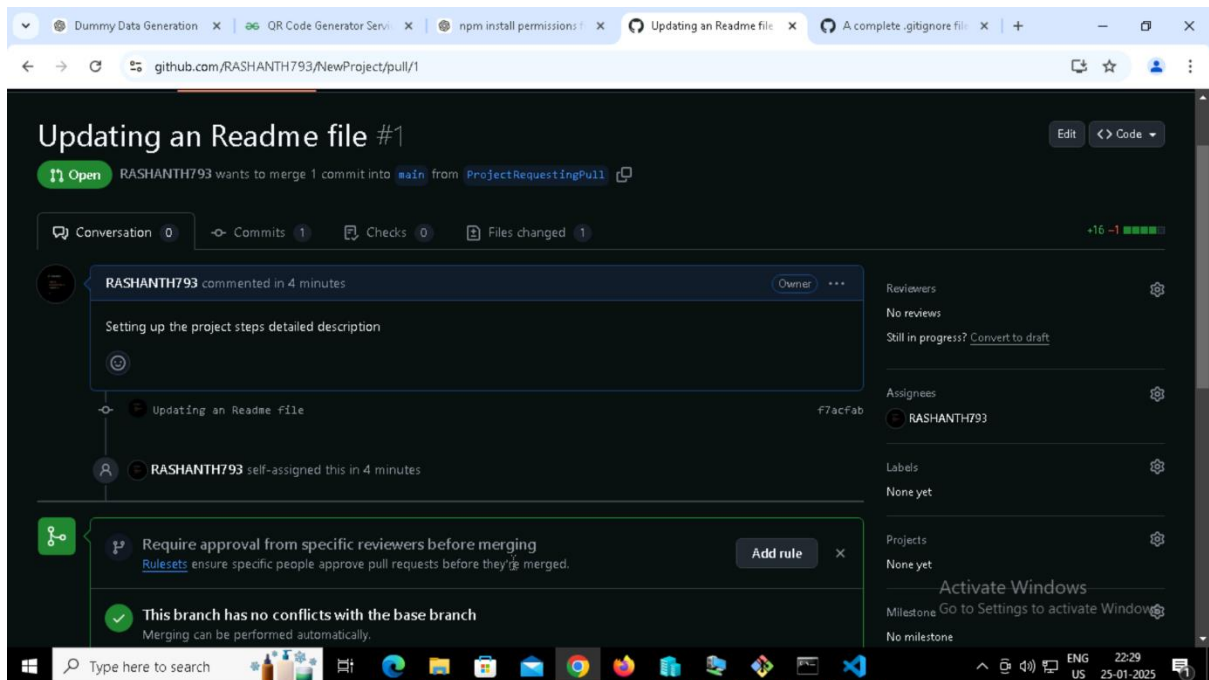
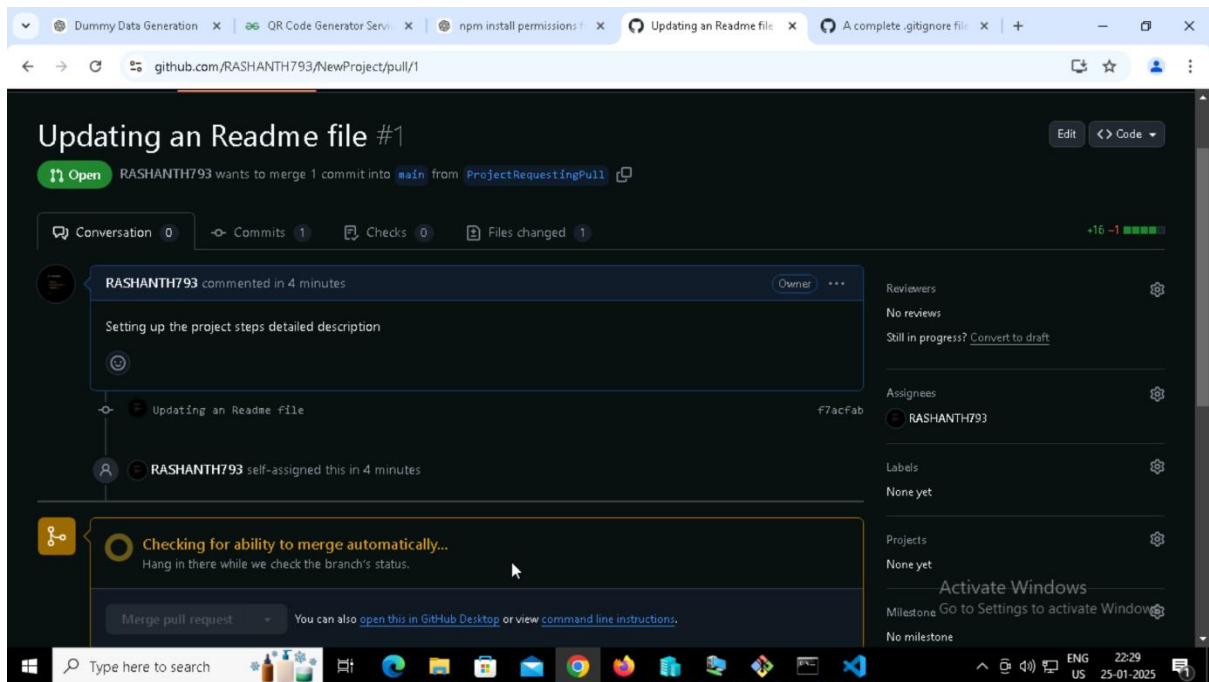
Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (main)
$ git checkout -b NewControllerBranch
Switched to a new branch 'NewControllerBranch'

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (NewControllerBranch)
$ git add controller.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (NewControllerBranch)
$ git commit -m "Adding Controller to the project"
[NewControllerBranch 2d63bbf] Adding Controller to the project
 1 file changed, 19 insertions(+)
 create mode 100644 controller.js

Administrator@0257530497995b1 MINGW64 ~/NewProjectGit (NewControllerBranch)
$
```

Activate Windows
Go to Settings to activate Windows.



For more Please Find Github Link Below:

<https://github.com/RASHANTH793/NewProject>