

# Mini Project – Git Branching and Merging

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This project demonstrates how multiple developers (Tom and Jerry) can collaborate on a project using Git branching and merging strategies. It outlines the process of creating and reviewing Pull Requests (PRs) before merging into the main branch.

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## Workflow Overview

The project simulates collaboration between two developers, each working on their own branch:

- Tom: update-navigation
- Jerry: edit-contact (formerly add-contact-info)

Both developers push their changes, create Pull Requests, and merge into the main branch.

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## Understanding Pull Requests

A Pull Request (PR) is a GitHub feature that enables developers to:

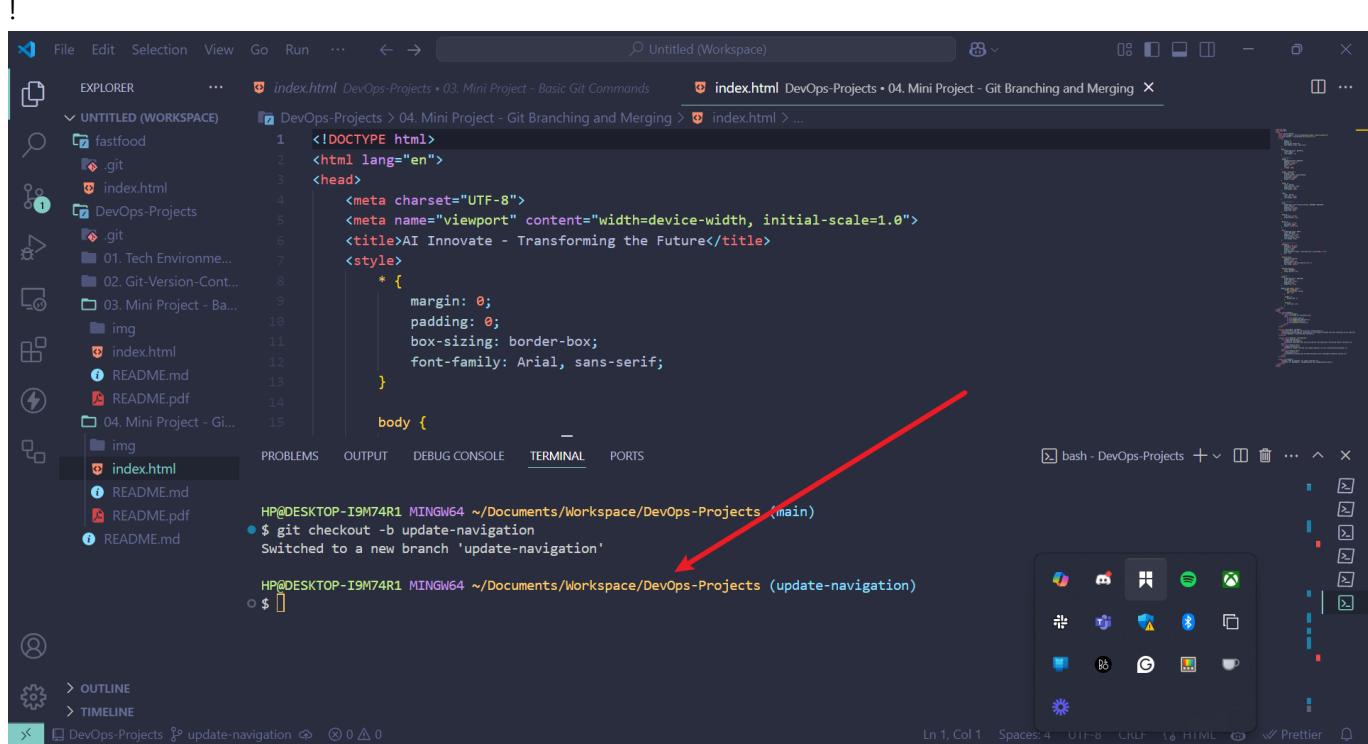
- Propose code changes,
  - Request code reviews,
  - Collaborate on improvements,
  - Merge only approved contributions into shared branches.
- 

## Developer 1: Tom – update-navigation

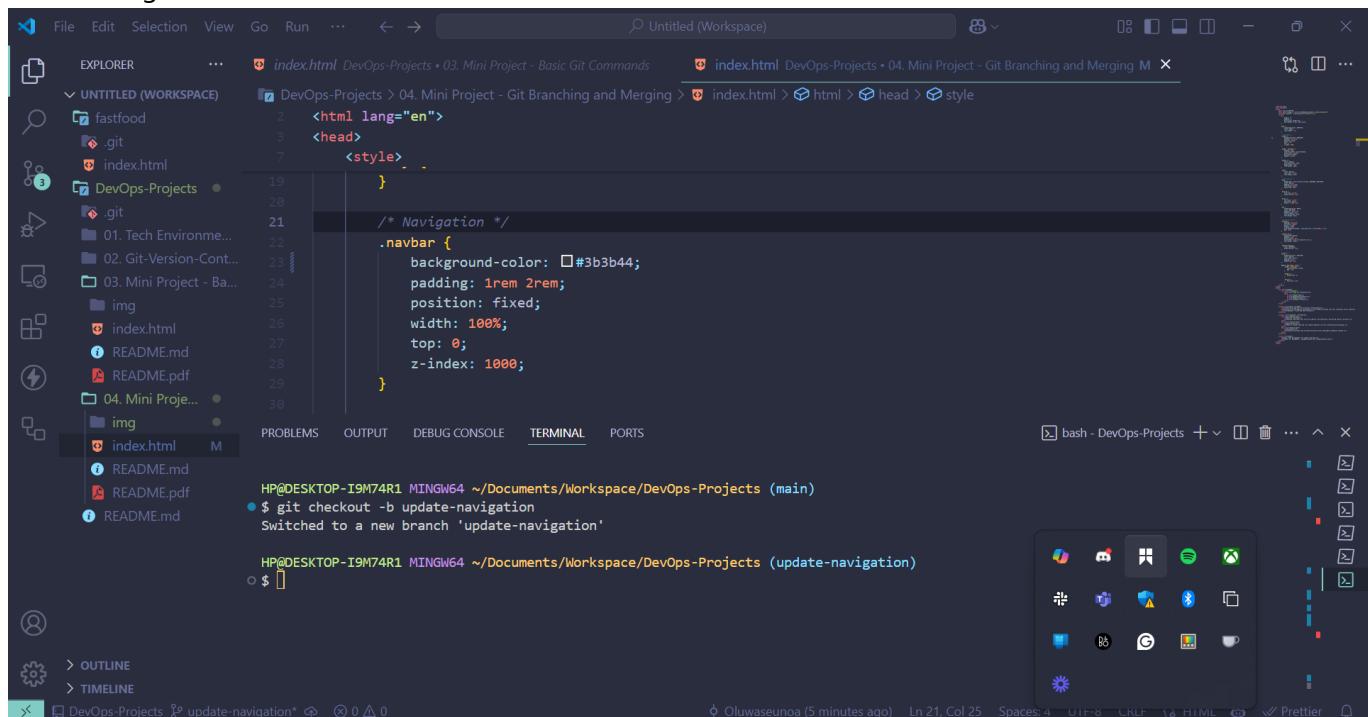
### Step-by-Step Workflow

1. Create and switch to feature branch:

```
git checkout -b update-navigation
```



## 2. Edit navigation content. !



### 3. Stage and commit changes:

```
git add .
git commit -m "Update navigation menu"
```

#### 4. Push the feature branch to GitHub:

```
git push origin update-navigation
```

The screenshot shows the VS Code interface. In the Explorer sidebar, there are two workspace folders: 'fastfood' and 'DevOps-Projects'. The 'index.html' file under 'DevOps-Projects' is open in the editor. A red arrow points from the code editor down to the terminal window.

```

<html lang="en">
  <head>
    <style>
      body {
        ...
      }

      /* Navigation */
      .navbar {
        background-color: #3b3b44;
        padding: 1rem 2rem;
        position: fixed;
        width: 100%;
        top: 0;
        z-index: 1000;
      }
    </style>
  </head>
  <body>
    ...
  </body>
</html>

```

The terminal window shows the command \$ git push origin update-navigation and its output:

```

$ git push origin update-navigation
Enumerating objects: 13, done.
Counting objects: 100% (13/13), done.
Delta compression using up to 8 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (8/8), 509.57 Kib | 15.44 MiB/s, done.
Total 8 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To https://github.com/Oluwaseunoa/DevOps-Projects.git
  157453b..3842ee2 update-navigation -> update-navigation

```

## 5. Open GitHub Repository and switch to update-navigation branch

The screenshot shows the GitHub repository page for 'DevOps-Projects'. A red arrow points from the 'Contribute' button in the repository header down to the 'Open pull request' button in the commit details.

**Repository Header:**

- Code (selected)
- Issues
- Pull requests
- Actions
- Projects
- Wiki
- Security
- Insights
- Settings

**Commit Details:**

Oluwaseunoa · Change Nav Menu bg color from #161617 to #3b3b44 · 1 commit ahead of main · last week

This branch is 1 commit ahead of main.

**Contribute Buttons:**

- Compare & pull request
- Contribute
- Open pull request

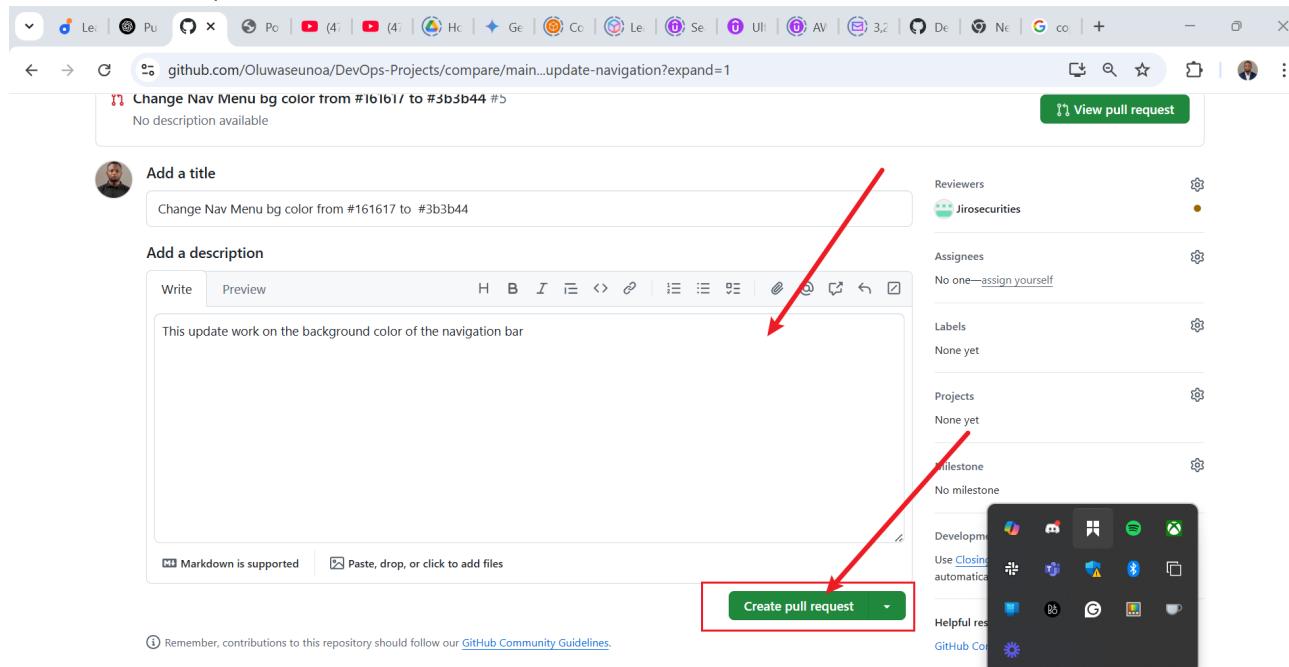
**Repository Statistics:**

- Activity
- 0 stars
- 1 watching
- 0 forks

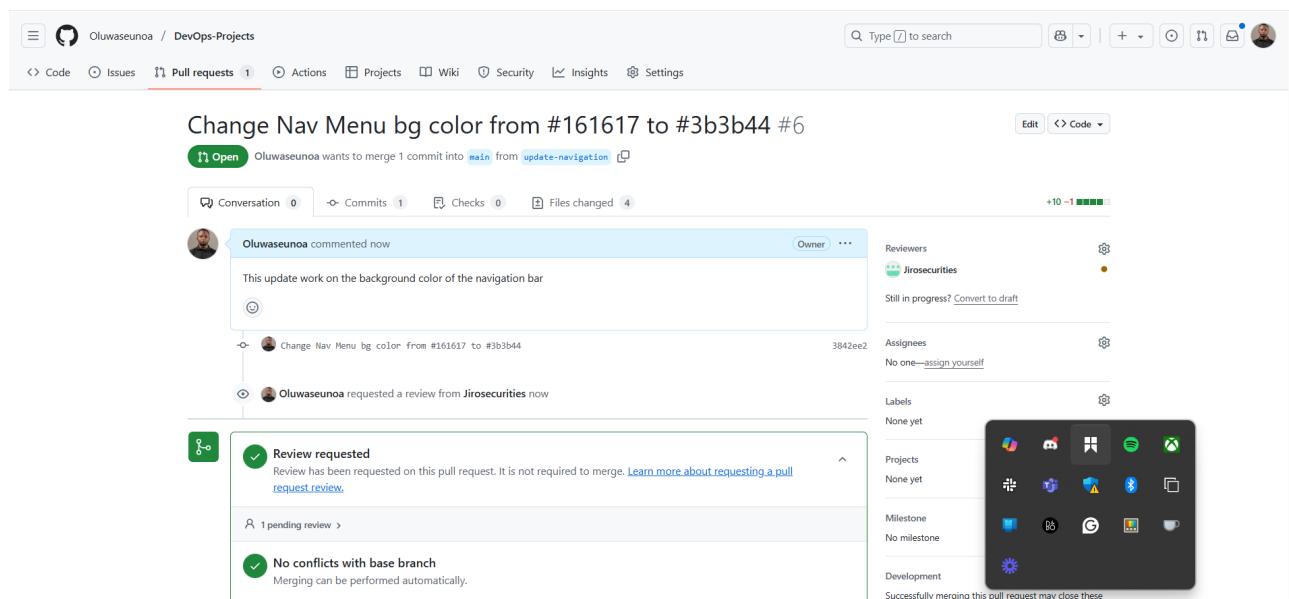
**Releases:**

No releases published · Create a new release

## 6. Create a Pull Request



A screenshot of the GitHub pull request creation interface. The title of the PR is "Change Nav Menu bg color from #161617 to #3b3b44 #6". The description field contains the text: "This update work on the background color of the navigation bar". A red arrow points from the "Create pull request" button at the bottom right of the editor area. The right sidebar shows review settings: "Reviewers" set to "Jirosecurities", "Assignees" set to "No one—assign yourself", and other fields like Labels, Projects, Milestone, Development, and Helpful resources.



A screenshot of the GitHub pull request details page for PR #6. The title is "Change Nav Menu bg color from #161617 to #3b3b44 #6". The description field shows the same update message. The right sidebar displays the pull request status: "Still in progress? Convert to draft", "Assignees" set to "No one—assign yourself", and other details like Labels, Projects, Milestone, Development, and Helpful resources. A red box highlights the "Review requested" section, which notes that a review has been requested and merging can be performed automatically.

## 7. Review and approve the PR

The screenshot shows a GitHub pull request page for a repository named "DevOps-Projects". A specific pull request (#6) has been opened by "Oluwaseunoa" to merge changes from the "update-navigation" branch into the "main" branch. The commit message is "Change Nav Menu bg color from #161617 to #3b3b44". The review interface includes a "Finish your review" panel with a "Good" rating, a rich text editor toolbar, and a "Review changes" button. The main area displays the diff of the changes made, showing additions and deletions in the file "04. Mini Project - Git Branching and...".

## 8. Merge the PR into main

The screenshot shows the final step of merging the pull request. The user is presented with a "Merge pull request #6 from Oluwaseunoa/update-navigation" dialog. It includes fields for the commit message ("Merge pull request #6 from Oluwaseunoa/update-navigation") and an extended description ("Change Nav Menu bg color from #161617 to #3b3b44"). Below the dialog are sections for "Assignees" (set to "No one—assign yourself"), "Labels" (set to "None yet"), "Projects" (set to "None yet"), "Milestone" (set to "No milestone"), "Development" (set to "Successfully merging this pull request may close these issues"), and "Notifications" (set to "You're receiving notifications for this repository"). On the right, there is a participant list showing "1 participant" (Oluwaseunoa) and a "Lock conversation" button. A dark overlay with various icons is visible in the background.

## 9. Confirm merge success

Change Nav Menu bg color from #161617 to #3b3b44 #6

Merged Oluwaseunoa merged 1 commit into `main` from `update-navigation` now

Conversation 0 Commits 1 Checks 0 Files changed 4

Oluwaseunoa commented 38 minutes ago This update work on the background color of the navigation bar

Change Nav Menu bg color from #161617 to #3b3b44 384ee2

Oluwaseunoa requested a review from Jirosecurities 38 minutes ago

Oluwaseunoa merged commit `da45e3f` into `main` now

Pull request successfully merged and closed You're all set — the `update-navigation` branch can be safely deleted.

Add a comment

Write Preview

Revert

Reviewers Jirosecurities

Still in progress? Convert to draft

Assignees No one—assign yourself

Labels None yet

Projects None yet

Milestone No milestone

Development Successfully merging this pull request may close these

Status: update-navigation successfully merged into main

## Developer 2: Jerry – edit-contact

### Step-by-Step Workflow

#### 1. Create and switch to new feature branch:

```
git checkout -b edit-contact
```

File Edit Selection View Go Run ... ← → Untitled (Workspace) PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS bash - DevOps-Projects

EXPLORER ... index.html README.pdf README.md

fastfood .git index.html

DevOps-Projects .git

01. Tech Envir... img README.md README.pdf

02. Git-Version-Cont... img README.md README.pdf

03. Mini Project - Ba... img README.md README.pdf

04. Mini Proj... img index.html README.md README.pdf

OUTLINE TIMELINE

HP@DESKTOP-I9M74R1 MINGW64 ~/Documents/Workspace/DevOps-Projects (update-navigation)

```
$ git checkout -b edit-contact
Switched to a new branch 'edit-contact'
```

HP@DESKTOP-I9M74R1 MINGW64 ~/Documents/Workspace/DevOps-Projects (edit-contact)

\$

#### 2. Pull the latest updates from main:

```
git pull origin main
```

```
$ git pull origin main
remote: Enumerating objects: 1, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (1/1), 925 bytes | 185.00 KiB/s, done.
From https://github.com/Oluwaseunoa/DevOps-Projects
 * branch      main      -> FETCH_HEAD
   5bef9c2..da45e3f  main      -> origin/main
Updating 3842ee2..da45e3f
Fast-forward
```

### 3. Confirm branch status:

```
git status
```

```
$ git status
On branch edit-contact
nothing to commit, working tree clean
```

### 4. Push updated branch to GitHub:

```
git push origin edit-contact
```

git push origin edit-contact

index.html

```
index.html
  2  <html lang="en">
  3  <body>
  4    <section class="features" id="features">
  5      <div class="feature-card">
  6        </div>
  7    </section>
  8
  9    <footer id="contact">
 10      <p>&copy; 2025 AI Innovate. All rights reserved.</p>
 11      <p>Contact us: +2348110954670 | seun@aiinnovate.com | info@aiinnovate.com</p>
 12
 13  </body>
 14 </html>
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Compressing objects: 100% (22/22), done.  
Writing objects: 100% (22/22), 6.26 MiB | 100.00 KiB/s, done.  
Total 22 (delta 5), reused 0 (delta 0), pack-reused 0 (from 0).  
remote: Resolving deltas: 100% (5/5), completed with 3 local objects.  
remote:  
remote: Create a pull request for 'edit-contact' on GitHub by visiting:  
remote: https://github.com/Oluwaseunoa/DevOps-Projects/pull/new/edit-contact  
remote:  
remote: To https://github.com/Oluwaseunoa/DevOps-Projects.git  
 \* [new branch] edit-contact -> edit-contact

HPDESKTOP-I9M74R1 MINGW64 ~/Documents/Workspace/DevOps-Projects (edit-contact)

Oluwaseunoa (1 hour ago) Ln 167, Col 8 Spaces: 4 UTF-8 CRLF ↵ HTML ↵ Prettier

GitHub.com/Oluwaseunoa/DevOps-Projects

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

**DevOps-Projects** (Public)

edit-contact had recent pushes 1 minute ago

Compare & pull request

main 3 Branches 0 Tags

Switch branches/tags

Find or create a branch...

Branches Tags

main edit-contact update-navigation

View all branches

README

About

No description, website, or topics provided.

Activity 0 stars 1 watching 0 forks

Releases

No releases published Create a new release

Packages

No packages published Publish your first package

Contributors 2

Oluwaseunoa seun-trial

## 5. Open a Pull Request on GitHub

The screenshot shows a GitHub repository page for 'DevOps-Projects'. A yellow banner at the top indicates 'edit-contact' has recent pushes 3 minutes ago. Below it, a green button says 'Compare & pull request'. The main content area shows a list of commits from 'Oluwaseunoa':

- 01. Tech Environment Setup: Added all project images
- 02. Git-Version-Control-Basics: Added 0.3 Mini Project-Git basics project
- 03. Mini Project - Basic Git Commands: Change contact number from 08111095467 to +2348110954670
- 04. Mini Project - Git Branching and Merging: change contact number from 08111095467

A tooltip over the commit list says 'This branch is 2 commits ahead of main.' A red arrow points to the green 'Open pull request' button.

On the right side, there's an 'About' section with 'No description, website, or topics provided.', an 'Activity' section with 0 stars, 1 watching, and 0 forks, and a 'Contributors' section showing 'Oluwaseunoa' and 'seun-trial'.

The screenshot shows the 'Open a pull request' interface. It displays a comparison between 'base: main' and 'compare: edit-contact'. A green success message says 'Able to merge. These branches can be automatically merged.' A red arrow points to the green 'Create pull request' button at the bottom right.

On the right side, there are sections for 'Reviewers' (Jirosecurities), 'Assignees' (No one—assign yourself), 'Labels' (None yet), 'Projects' (Non yet), 'Milestone' (No milestone), and 'Development' (Use Closing keywords in automatically close issue).

#### 6. Review changes and approve

The screenshot shows the GitHub pull requests page for the repository 'Oluwaseunoa/DevOps-Projects'. A red arrow points to the 'Edit contact' link in the list of pull requests. The page includes a search bar, filters, and various sorting options. A modal window titled 'Label issues and pull requests for new contributors' is open, providing instructions for first-time contributors. The bottom right corner features a dark-themed system tray with icons for file operations like copy, paste, and refresh.

The screenshot shows the GitHub pull request files page for the same repository. A red arrow points to the 'Review changes' button in the top right corner of the review interface. The interface includes a sidebar for filtering files, a main area for viewing file differences, and a 'Finish your review' section with a rich text editor and review status options. The bottom right corner features a dark-themed system tray with icons for file operations like copy, paste, and refresh.

## 7. Merge the PR into main

The screenshot shows a GitHub pull request page for a repository named "DevOps-Projects". A red arrow points to the "Confirm merge" button in the bottom right corner of the merge dialog box.

**Pull Request Details:**

- Branch:** edit-contact
- Merge Into:** main
- Commits:** 2 commits (29 minutes ago)
- Author:** Oluwaseunoa
- Message:** Merge pull request #7 from Oluwaseunoa/edit-contact
- Reviewers:** Jirosecurities
- Assignees:** No one—assign yourself
- Labels:** None yet
- Projects:** None yet
- Milestone:** No milestone
- Development:** Successfully merging this pull request may close these issues.
- Notifications:** You're receiving notifications for this repository.

## 8. Confirm successful merge

The screenshot shows the same GitHub pull request page after it has been merged. A red arrow points to the "Merged" status message at the top of the page.

**Merge Status:**

- Status:** Merged
- Message:** Oluwaseunoa merged 2 commits into main from edit-contact now

**Pull Request Summary:**

- Conversation:** 0
- Commits:** 2
- Checks:** 0
- Files changed:** 13

**Comments:**

- Oluwaseunoa commented 7 minutes ago: This update correct error in the contact details from 0811095467 to +2348110954670
- Oluwaseunoa added 2 commits 30 minutes ago:
  - Added all project images
  - change contact number from 0811095467 to +2348110954670
- Oluwaseunoa requested a review from Jirosecurities 7 minutes ago
- Oluwaseunoa merged commit e5b78c5 into main now

**Reviewers:** Jirosecurities

**Assignees:** No one—assign yourself

**Labels:** None yet

**Projects:** None yet

**Milestone:** No milestone

**Development:** Successfully merging this pull request may close these issues.

**Notifications:** You're receiving notifications for this repository.

Status: edit-contact successfully merged into main

## GitHub Repository Validation

🔗 Repository URL: [DevOps Projects GitHub Repo](#)

## Summary

This Git collaboration workflow demonstrates:

- Feature isolation through branching.
- Controlled integration with Pull Requests.

- Conflict prevention via branch synchronization.
- Traceable contributions through commits, screenshots, and PR history.

It highlights DevOps best practices for collaborative software development using Git and GitHub.

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