

مراحل طی شده در آزمایش:

فاز ۱:

1. در ابتدا repo را ساخته و آن را فعلا private می کنم. همچنین گزینه ی README را هم می زنم که اضافه شود:

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)


Required fields are marked with an asterisk (*).

Repository template

No template ▾

Start your repository with a template repository's contents.

Owner *

 amirmohammadeftekhar ▾

Repository name *

/

✔ iot-platform-smart-buildings is available.

Great repository names are short and memorable. Need inspiration? How about **redesigned-sniffle** ?

Description (optional)

☒ Public



Anyone on the internet can see this repository. You choose who can commit.

☐ Private



You choose who can see and commit to this repository.

Initialize this repository with:

☒ Add a README file

This is where you can write a long description for your project. [Learn more about READMEs.](#)

2. سپس هم گروهی ها را به repo اضافه می کنم:

Add people to iot-platform-smart-buildings



Cancel

Add p.enayati0990@yahoo.com

3. سپس شرایط گفته شده برای branch مستر را اعمال می‌کنم. برای merge کردن هم ۱ approval در نظر می‌گیرم.

Branch protection rules



Classic branch protections have not been configured

Define branch rules to disable force pushing, prevent branches from being deleted, or require pull requests before merging. Learn more about [repository rules](#) and [protected branches](#).

Add branch ruleset

Add classic branch protection rule

☒ Require a pull request before merging

Require all commits be made to a non-target branch and submitted via a pull request before they can be merged.

Hide additional settings ^

Required approvals

1 ▾

The number of approving reviews that are required before a pull request can be merged.



Dismiss stale pull request approvals when new commits are pushed

New, reviewable commits pushed will dismiss previous pull request review approvals.



Require review from Code Owners

Require an approving review in pull requests that modify files that have a designated code owner.



Require approval of the most recent reviewable push

Whether the most recent reviewable push must be approved by someone other than the person who pushed it.



Require conversation resolution before merging

All conversations on code must be resolved before a pull request can be merged.

Allowed merge methods Preview

Merge, Squash, Rebase ▾

When merging pull requests, you can allow any combination of merge commits, squashing, or rebasing. At least one option must be enabled.

☒ Require status checks to pass

Choose which status checks must pass before the ref is updated. When enabled, commits must first be pushed to another ref where the checks pass.

4. حال README را آپدیت می‌کنم و بروزرسانی می‌کنم. برای نوشتن آن از هوش مصنوعی استفاده کردم.

```
~/uni/az-narm/1
> git clone git@github.com:amirmohammaddeftekhar/iot-platform-smart-buildings.git && cd iot-platform-smart-buildings
Cloning into 'iot-platform-smart-buildings'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.

~/uni/az-narm/1/iot-platform-smart-buildings master
> vim README.md

~/uni/az-narm/1/iot-platform-smart-buildings master !1
> git add README.md

~/uni/az-narm/1/iot-platform-smart-buildings master +1
> git commit -m "Update README"
[master 2af2e2c] Update README
1 file changed, 7 insertions(+), 1 deletion(-)

~/uni/az-narm/1/iot-platform-smart-buildings master ↑1
> git push origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 442 bytes | 442.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:amirmohammaddeftekhar/iot-platform-smart-buildings.git
   b5e9ad6..2af2e2c  master -> master

~/uni/az-narm/1/iot-platform-smart-buildings master
> 
```

5. سپس branch های گفته شده را در سیستم خود ساخته و به github پوش می کنیم:

```
~/uni/az-narm/1/iot-platform-smart-buildings master
> git checkout -b feature/iot-sensors
Switched to a new branch 'feature/iot-sensors'

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git push origin feature/iot-sensors
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/iot-sensors' on GitHub by visiting:
remote:   https://github.com/amirmohammaddeftekhar/iot-platform-smart-buildings/pull/new/feature/iot-sensors
remote:
To github.com:amirmohammaddeftekhar/iot-platform-smart-buildings.git
 * [new branch]      feature/iot-sensors -> feature/iot-sensors

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git checkout main
error: pathspec 'main' did not match any file(s) known to git

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

~/uni/az-narm/1/iot-platform-smart-buildings master
> git checkout -b feature/web-dashboard
Switched to a new branch 'feature/web-dashboard'

~/uni/az-narm/1/iot-platform-smart-buildings feature/web-dashboard
> git push origin feature/web-dashboard
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/web-dashboard' on GitHub by visiting:
remote:   https://github.com/amirmohammaddeftekhar/iot-platform-smart-buildings/pull/new/feature/web-dashboard
remote:
To github.com:amirmohammaddeftekhar/iot-platform-smart-buildings.git
 * [new branch]      feature/web-dashboard -> feature/web-dashboard

~/uni/az-narm/1/iot-platform-smart-buildings feature/web-dashboard
>
```

6. سپس README را بروزرسانی می‌کنم:

```
~/uni/az-narm/1/iot-platform-smart-buildings feature/web-dashboard
> git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

~/uni/az-narm/1/iot-platform-smart-buildings master
> vim README.md

~/uni/az-narm/1/iot-platform-smart-buildings master !1
> git add README.md

~/uni/az-narm/1/iot-platform-smart-buildings master +1
> git commit -m "Update README: Add description about branches"
[master 8729c08] Update README: Add description about branches
1 file changed, 2 insertions(+)

~/uni/az-narm/1/iot-platform-smart-buildings master !1
> git push origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 393 bytes | 393.00 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:amirmohammadeftekhhar/iot-platform-smart-buildings.git
2af2e2c..8729c08 master -> master

~/uni/az-narm/1/iot-platform-smart-buildings master
> 
```

7. سپس دوباره README را آپدیت می‌کنم و مطابق milestone های گفته شده توضیحاتی را جمع به ورژن می‌دهم. برای نوشتن متن هم از هوش مصنوعی کمک گرفتم

```
~/uni/az-narm/1/iot-platform-smart-buildings master
> vim README.md

~/uni/az-narm/1/iot-platform-smart-buildings master !1
> git add README.md

~/uni/az-narm/1/iot-platform-smart-buildings master +1
> git tag -a v1.0.0 -m "Initial module development"

~/uni/az-narm/1/iot-platform-smart-buildings master +1
> git commit -m "docs: Update README"
[master d5c57f2] docs: Update README
1 file changed, 9 insertions(+)

~/uni/az-narm/1/iot-platform-smart-buildings master ?1
> git push origin --tags

Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 183 bytes | 183.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:amirmohammadeftexhar/iot-platform-smart-buildings.git
 * [new tag]          v1.0.0 -> v1.0.0

~/uni/az-narm/1/iot-platform-smart-buildings master ?1
> git push origin master

Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 516 bytes | 516.00 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:amirmohammadeftexhar/iot-platform-smart-buildings.git
 8729c08..d5c57f2  master -> master

~/uni/az-narm/1/iot-platform-smart-buildings master
> 
```

فاز دوم:

1. ابتدا به برنچ مربوطه سویچ میکنیم:

```
PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-building
s (master)
$ git checkout feature/iot-sensors
Switched to a new branch 'feature/iot-sensors'
branch 'feature/iot-sensors' set up to track 'origin/feature/iot-sensors'.

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-building
s (feature/iot-sensors)
```

2. ایجاد اسکریپت شبیه سازی سنسور (مثال: sensor_simulation.py):

```
#!/usr/bin/env python3
import random
import time

def read_sensor():
    # شبیه سازی دریافت داده از سنسور
    return round(random.uniform(20.0, 30.0), 2)

if __name__ == '__main__':
    for _ in range(10):
        print("سنسور خوانش:", read_sensor())
        time.sleep(1)
```

3. ثبت تغییرات:

```
PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-building
s (feature/iot-sensors)
$ git add sensor_simulation.py

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-building
s (feature/iot-sensors)
$ git commit -m "Added script of simulating sensor data for module"
[feature/iot-sensors 069c5fa] Added script of simulating sensor data for module
1 file changed, 12 insertions(+)
create mode 100644 sensor_simulation.py

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-building
s (feature/iot-sensors)
$ git push origin feature/iot-sensors
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 24 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 551 bytes | 551.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/amirmohammaddeftekhar/iot-platform-smart-buildings
2af2e2c..069c5fa feature/iot-sensors -> feature/iot-sensors
```

4. برای بخش ماژول web-dashboard به برنج مورد نظر سویچ میکنیم:

```
PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/iot-sensors)
$ git checkout feature/web-dashboard
Switched to a new branch 'feature/web-dashboard'
branch 'feature/web-dashboard' set up to track 'origin/feature/web-dashboard'.

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashboard)
$ |
```

5. ایجاد فایل HTML نمونه (مثال: index.html):

```
<!DOCTYPE html>
<html lang="fa">
<head>
  <meta charset="UTF-8">
  <title>داشبورد اینترنت اشیا</title>
  <script>
    function showMessage() {
      alert("به داشبورد اینترنت اشیا خوش آمدید!");
    }
  </script>
</head>
<body onload="showMessage()">
  <h1>داشبورد اینترنت اشیا</h1>
  <p>این یک نمونه داشبورد برای نمایش داده‌های سنسور است.</p>
</body>
</html>
```


6. ثبت تغییرات (add, commit, push):

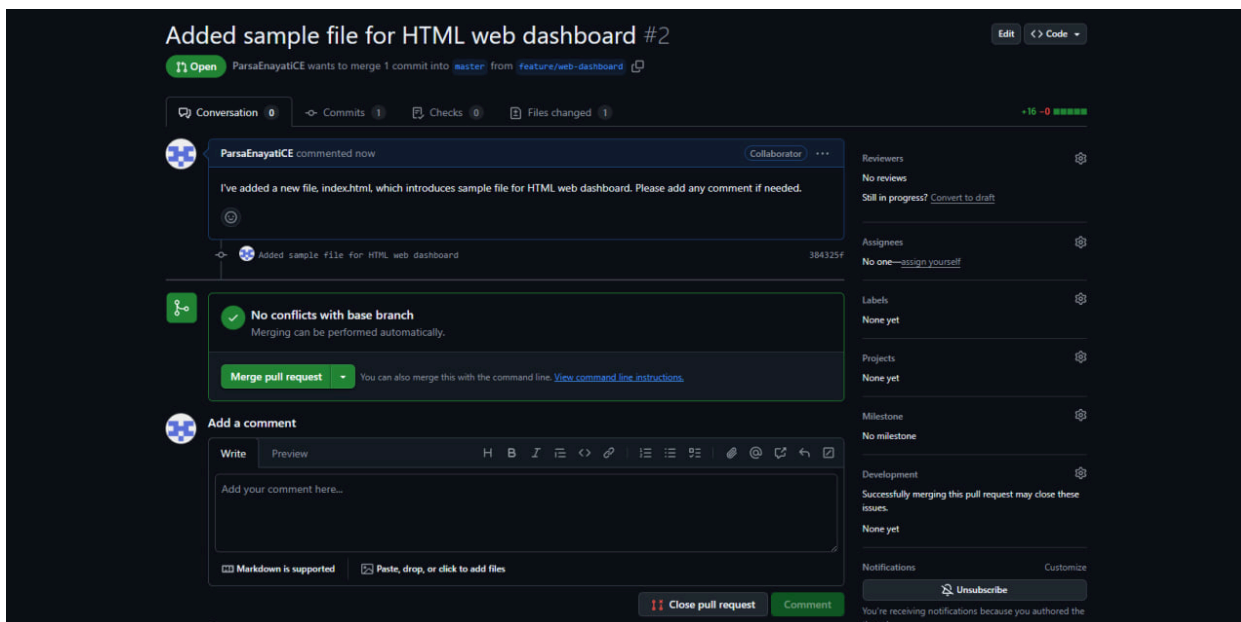
```
PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
ard)
$ git add index.html

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
ard)
$ git commit -m "Added sample file for HTML web dashboard"
[feature/web-dashboard 384325f] Added sample file for HTML web dashboard
1 file changed, 16 insertions(+)
create mode 100644 index.html

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
ard)
$ git push origin feature/web-dashboard
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 24 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 592 bytes | 592.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/amirmohammaddeftekhar/iot-platform-smart-buildings
 2af2e2c..384325f feature/web-dashboard -> feature/web-dashboard
```

7. مدیریت PR (Pull Request):

The screenshot displays a GitHub Pull Request (PR) interface. At the top, the title is "Added script of simulating sensor data for module #1". Below the title, a green button labeled "Open" is visible, followed by the text "ParsaEnayatiCE wants to merge 1 commit into master from feature/iot-sensors". The interface shows a conversation tab with a comment from ParsaEnayatiCE stating, "I've added a new file, sensor_simulation.py, which introduces the functionality to simulate module data sensors. Please add any comment if needed." Below the comment, a green box indicates "No conflicts with base branch" and "Merging can be performed automatically." A green button labeled "Merge pull request" is present. On the right side, there are sections for "Reviewers" (No reviews), "Assignees" (No one—assign yourself), "Labels" (None yet), "Projects" (None yet), "Milestone" (No milestone), and "Development" (Successfully merging this pull request may close these issues). At the bottom, there is a section for "Add a comment" with a text input field and a "Write" button.



8. حال بقیه اعضا هم اقدام به commit جدید می کنند ولی به دلیل وجود pull request موقع push کردن مشکل می خوریم که از rebase استفاده می کنیم.

```

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors ?1
> git add sensor_api.py

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors +1
> git commit -m "feat: add sensor API placeholder"

[feature/iot-sensors 0a5724f] feat: add sensor API placeholder
1 file changed, 1 insertion(+)
create mode 100644 sensor_api.py

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git push origin feature/iot-sensors

To github.com:amirmohammedftekhar/iot-platform-smart-buildings.git
 ! [rejected]        feature/iot-sensors -> feature/iot-sensors (non-fast-forward)
error: failed to push some refs to 'github.com:amirmohammedftekhar/iot-platform-smart-buildings.git'
hint: Updates were rejected because the tip of your current branch is behind
hint: its remote counterpart. If you want to integrate the remote changes,
hint: use 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git pull
There is no tracking information for the current branch.
Please specify which branch you want to merge with.
See git-pull(1) for details.

    git pull <remote> <branch>

If you wish to set tracking information for this branch you can do so with:

    git branch --set-upstream-to=origin/<branch> feature/iot-sensors

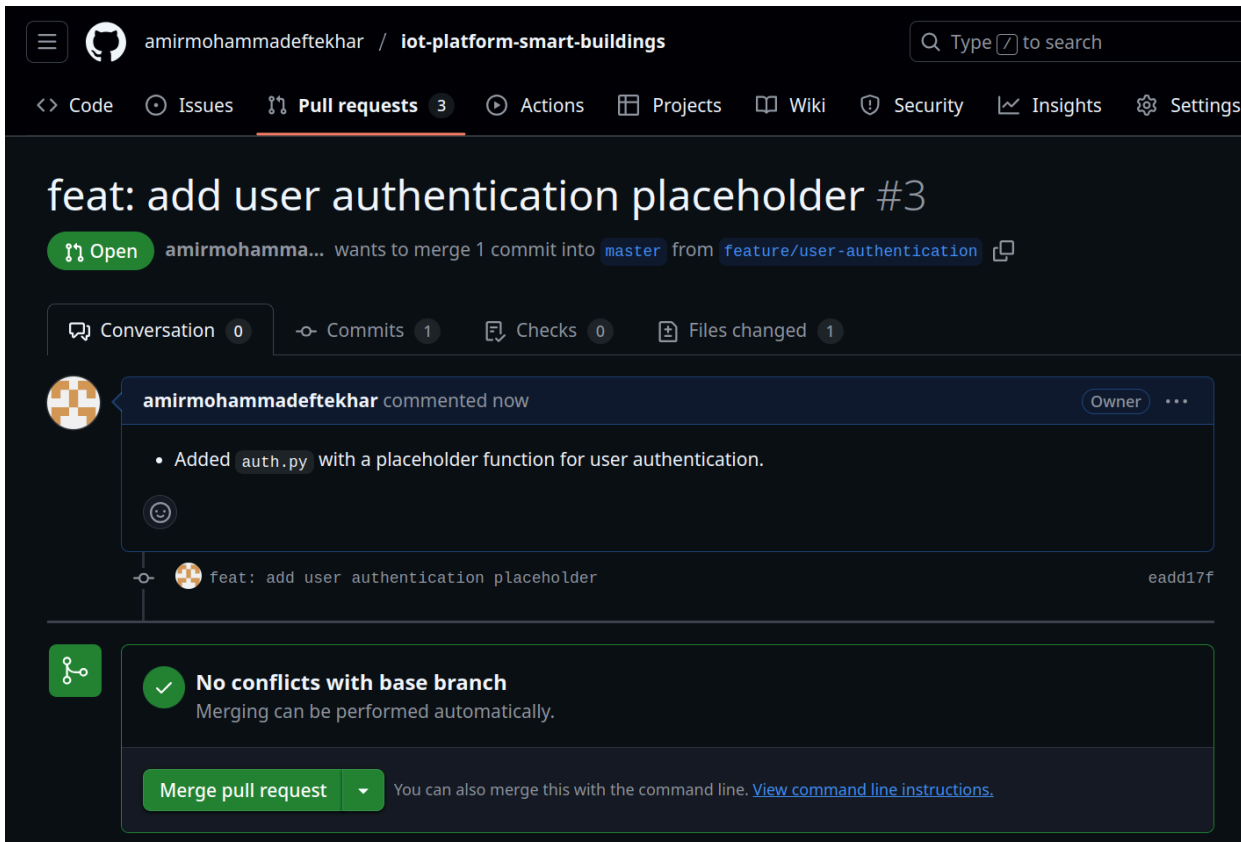
~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git pull origin feature/iot-sensors
From github.com:amirmohammedftekhar/iot-platform-smart-buildings
 * branch                feature/iot-sensors -> FETCH_HEAD
hint: You have divergent branches and need to specify how to reconcile them.
hint: You can do so by running one of the following commands sometime before
hint: your next pull:
hint:
hint:   git config pull.rebase false  # merge
hint:   git config pull.rebase true   # rebase
hint:   git config pull.ff only       # fast-forward only
hint:
hint: You can replace "git config" with "git config --global" to set a default
hint: preference for all repositories. You can also pass --rebase, --no-rebase,
hint: or --ff-only on the command line to override the configured default per
hint: invocation.
fatal: Need to specify how to reconcile divergent branches.

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git config pull.rebase true

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
> git pull origin feature/iot-sensors
From github.com:amirmohammedftekhar/iot-platform-smart-buildings
 * branch                feature/iot-sensors -> FETCH_HEAD
Successfully rebased and updated refs/heads/feature/iot-sensors.

~/uni/az-narm/1/iot-platform-smart-buildings feature/iot-sensors
>

```



9. حال برای اضافه کردن alias به مسیر دیرکتوری یوزر خود رفته و فایل gitConfig را ادیت میکنیم:

```
[alias]
  pr-fetch = "!f() { git fetch origin pull/$1/head:pr-$1; }; f"
```

```
PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
$ git fetch origin pull/2/head:pr-branch
From https://github.com/amirmohammaddeftekhar/iot-platform-smart-buildings
* [new ref]          refs/pull/2/head -> pr-branch
```

10. مستندسازی در فایل GitCommands.md:

```
# GitCommands.md
```

```
## Alias برای دریافت Pull Request ها
```

به صورت محلی از دستور زیر استفاده کنید برای دریافت یک

```
git pr-fetch <ID>
```

با شناسه PR 23 به عنوان مثال، برای دریافت

```
git pr-fetch 23
```

```
PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
$ git add GitCommands.md

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
$ git commit -m "Added GitCommands.md"
[feature/web-dashboard a146761] Added GitCommands.md
1 file changed, 9 insertions(+)
create mode 100644 GitCommands.md

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
$ git push origin feature/web-dashboard
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 24 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 516 bytes | 516.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/amirmohammadeftkhar/iot-platform-smart-buildings
384325f..a146761 feature/web-dashboard -> feature/web-dashboard
```

11. افزودن فایل پیکربندی ESLint به شاخه web-dashboard:

ایجاد فایل `:eslintrc.json`:

```
{
  "env": {
    "browser": true,
    "es6": true
  },
  "extends": "eslint:recommended",
  "rules": {
    "no-console": "off"
  }
}
```

مستندسازی راهنمای بازبینی کد در فایل `:CodeReviewGuidelines.md`:

راهنمای بازبینی کد

- پیام‌های کامیت باید توصیفی و مرتبط با تغییرات باشند.
- به شاخه اصلی ارسال شوند Pull Request تغییرات کد باید از طریق.
- قبل از ادغام، تست‌ها باید با موفقیت اجرا شوند.
- مطرح شود PR نظرات سازنده و پیشنهادات بهبود باید در.

ثبت تغییرات:

```
PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
$ git add .eslinttrc.json CodeReviewGuidelines.md

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
$ git commit -m "افزودن فایل‌های بی‌کربندی ESLint و راهنمای بازبینی کد"
[feature/web-dashb
oard 09aa90f] افزودن فایل‌های بی‌کربندی ESLint و راهنمای بازبینی کد
2 files changed, 16 insertions(+)
create mode 100644 .eslinttrc.json
create mode 100644 CodeReviewGuidelines.md

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
$ git push origin feature/web-dashb
oard
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 24 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 816 bytes | 816.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/amirmohammaddeftekhar/iot-platform-smart-buildings
a146761..09aa90f feature/web-dashb
oard -> feature/web-dashb
oard

PCMOD@DESKTOP-RFLF05F MINGW64 ~/OneDrive/Desktop/IOT/iot-platform-smart-buildings (feature/web-dashb
oard)
```

فاز سوم:

1. در مرحله ی اول یا فولدر مخصوص github می سازم و یک فایل کانفیگ ci/cd به آن اضافه می کنم. برای نوشتن این فایل از GPT کمک گرفتم. در این کانفیگ کد ما توسط استاندارد pep8 چک می شود.

```
~/uni/az-narm/1/iot-platform-smart-buildings master
> mkdir -p .github/workflows

~/uni/az-narm/1/iot-platform-smart-buildings master
> vim .github/workflows/ci-cd.yml

~/uni/az-narm/1/iot-platform-smart-buildings master ?1
> git add .github/workflows/ci-cd.yml

~/uni/az-narm/1/iot-platform-smart-buildings master +1
> git commit -m "ci: add CI/CD pipeline with static analysis, tests, and deployment"

[master 1a328d4] ci: add CI/CD pipeline with static analysis, tests, and deployment
1 file changed, 37 insertions(+)
create mode 100644 .github/workflows/ci-cd.yml

~/uni/az-narm/1/iot-platform-smart-buildings master ?1
> git push origin master
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 783 bytes | 783.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:amirmohammadeftexhar/iot-platform-smart-buildings.git
c0d8c49..1a328d4 master -> master

~/uni/az-narm/1/iot-platform-smart-buildings master
> 
```

2. سپس برای خودکار سازی ادغام یک job جدید به yamI file قبلی اضافه می کنم:

```
jobs:
  static-analysis:
    runs-on: ubuntu-latest
    steps:
      - name: Checkout code
        uses: actions/checkout@v4
      - name: Run Flake8 (Static Analysis)
        run: |
          pip install flake8
          flake8 . --count --show-source --statistics
  auto-merge:
    needs: [unit-tests]
    runs-on: ubuntu-latest
    steps:
      - name: Auto-merge PR
        uses: actions/github-script@v6
        with:
          script: |
            await github.rest.pulls.merge({
              owner: context.repo.owner,
              repo: context.repo.repo,
              pull_number: context.payload.pull_request.number,
              merge_method: 'squash'
            })
    env:
      GITHUB_TOKEN: ${ secrets.GITHUB_TOKEN }
  unit-tests:
```

3. برای بخش سوم نیز تصمیم گرفتیم تا از telegram bot برای اعلانات استفاده کنیم. در اولین قدم yamI رو بروزرسانی می کنیم:

```
notify-telegram:
  needs: [static-analysis, unit-tests, deploy-staging, auto-merge]
  if: failure() # از Jobs فقط در صورت شکست هر یکی از #
  runs-on: ubuntu-latest
  steps:
    - name: Notify Telegram
      uses: appleboy/telegram-action@v0.1.0
      with:
        to: ${ secrets.TELEGRAM_CHAT_ID }
        token: ${ secrets.TELEGRAM_BOT_TOKEN }
        message: |
          شکست خورد CI/CD خط اوله ✕
          - مخزن: ${ github.repository }
          - کامیت: ${ github.sha }
          - لاگ خط: ${ github.server_url }/${ github.repository }/actions/runs/${ github.run_id }
```


4. در مرحله ی بعد credential ها رو بروزرسانی می کنم

Actions secrets / New secret

Name *

Secret *

```
TELEGRAM_BOT_TOKEN: 7892442987:AAHfg4wkB51-1-9qe4urtGFskhNPGk9eE
TELEGRAM_CHAT_ID: 7892442987
```

Add secret

فاز چهارم:

1. ایجاد فایل ReleaseProcess.md

فرآیند مدیریت انتشار

1. **نگ گذاری نسخه**

پس از اتمام توسعه و تست‌های نهایی، از دستور زیر استفاده کنید -

```
git tag -a v1.0.0 -m "نسخه پایدار 1.0.0"
git push origin v1.0.0
```

2. **یادداشت‌های انتشار**

در هر انتشار، یادداشت‌های مربوط به تغییرات (بزرگی‌های جدید، رفع باگ‌ها و بهبودها) نوشته می‌شود.

3. **استقرار**

پس از تأیید نهایی، نسخه به محیط تولید منتشر می‌شود.

2. ثبت تغییرات:

```
PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git checkout master
Already on 'master'
Your branch is up to date with 'origin/master'.

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git add ReleaseProcess.md

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git commit -m "افزودن مستندات فرآیند انتشار"
[master 2546e1e] افزودن مستندات فرآیند انتشار
1 file changed, 12 insertions(+)
create mode 100644 ReleaseProcess.md

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git push origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/amirmohammedftekhar/iot-
platform-smart-buildings'

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git push origin master
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 24 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 708 bytes | 708.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/amirmohammedftekhar/iot-platform-smart-buildings
8b16b42..2546e1e master -> master
```

3. ایجاد فایل DisasterRecoveryPlan.md:

```
# برنامه بازیابی از فاجعه

1. بازگشت به نسخه قبلی:
- برای بازگشت به یک نسخه پایدار استفاده کنید Git در صورت بروز مشکل، از تگ‌های ...
  git checkout <تگ نسخه قبلی>
  ...

2. اجرای اسکریپت‌های بازگشت:
- اسکریپت‌های مخصوص بازگشت به نسخه‌های قبلی در صورت شکست انتشار وجود دارد.

3. مانیتورینگ و گزارش خطا:
- تمامی خطاها به تیم فنی گزارش داده می‌شود و لاگ‌ها جهت عیب‌یابی ثبت می‌گردند.
```

4. ثبت تغییرات:

```
PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git add DisasterRecoveryPlan.md

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git commit -m "افزودن مستندات برنامه بازیابی از فاجعه"
[master 1dfb7b7] افزودن مستندات برنامه بازیابی از فاجعه
1 file changed, 11 insertions(+)
create mode 100644 DisasterRecoveryPlan.md

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git push origin master
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 24 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 761 bytes | 761.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/amirmohammedftekhari/iot-platform-smart-buildings
2546e1e..1dfb7b7 master -> master
```

5. ایجاد شاخه تست برای شبیه‌سازی خطای عمدی:

```
PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (master)
$ git checkout -b simulation/error-test
Switched to a new branch 'simulation/error-test'
```

6. ایجاد تغییر عمدی (مثلاً افزودن خطای نحوی یا اشتباه در کد):

```
print("This is an error")|
```

7. ثبت تغییرات در شاخه تست:

```
PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (simulation/error-test)
$ git add sensor_simulation.py

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (simulation/error-test)
$ git commit -m "اضافه کردن خطای عمدی برای تست بازیابی از فاجعه"
[simulation/error-test 5e5cea1] اضافه کردن خطای عمدی برای تست بازیابی از فاجعه
1 file changed, 1 insertion(+)
create mode 100644 sensor_simulation.py

PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (simulation/error-test)
$ git push origin simulation/error-test
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 24 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 385 bytes | 385.00 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 'simulation/error-test' on GitHub by visiting:
remote:   https://github.com/amirmohammedftekhar/iot-platform-smart-buildings/pull/new/
simulation/error-test
remote:
To https://github.com/amirmohammedftekhar/iot-platform-smart-buildings
 * [new branch]      simulation/error-test -> simulation/error-test
```

8. پس از شبیه‌سازی و بررسی، بازگشت به نسخه پایدار:

```
PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (simulation/error-test)
$ git revert 5e5cea19f7bf8ce3398ed0642d401973128d90c1
[simulation/error-test 2c938d2] Revert "اضافه کردن خطای عمدی برای تست بازیابی از فاجعه"
1 file changed, 1 deletion(-)
delete mode 100644 sensor_simulation.py
```

Revert "افزوده کردن خطاب محمد برای تست بازبند از فاجعه"

This reverts commit [5e5cea19f7bf8ce3398ed0642d401973128d90c1](#).

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
```

```
#
# On branch simulation/error-test
# Changes to be committed:
#       deleted:    sensor_simulation.py
```

~ ~ ~ ~ ~

```
.git/COMMIT_EDITMSG [unix] (15:01 18/03/2025) 1,1 All
"/f/iot-platform-smart-buildings/.git/COMMIT_EDITMSG" [unix] 11L, 3938
```

```
PCMOD@DESKTOP-RFLF05F MINGW64 /f/iot-platform-smart-buildings (simulation/error-test)
$ git push origin simulation/error-test
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 24 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 325 bytes | 325.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/amirmohammadeftekhar/iot-platform-smart-buildings
  5e5ceal..2c938d2 simulation/error-test -> simulation/error-test
```

لینک ریپو: <https://github.com/amirmohammadeftkhar/iot-platform-smart-buildings>