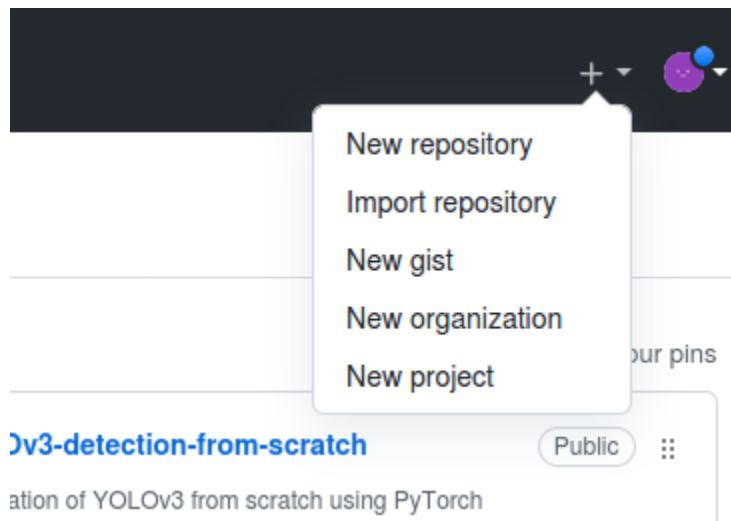


# GIT REMOTE


## Create a repository in Github and committing the code

Click on '+' sign on right top click on **New repository**.




Then give the repository name and click on **Create repository**


Owner \*      Repository name \*

 arunm8489 / calc-sample ✓

Great repository names are short and memorable. Need inspiration? How about [symmetrical-octo-tribble](#)?

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:**  
Skip this step if you're importing an existing repository.

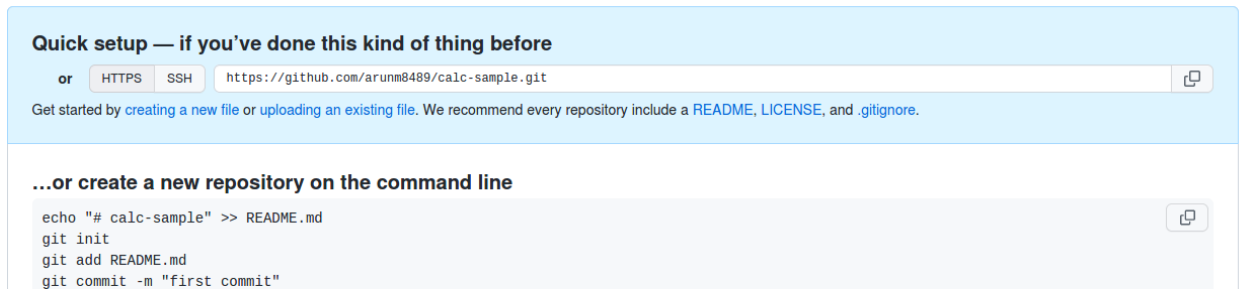
☐ **Add a README file**  
This is where you can write a long description for your project. [Learn more.](#)

☐ **Add .gitignore**  
Choose which files not to track from a list of templates. [Learn more.](#)

☐ **Choose a license**  
A license tells others what they can and can't do with your code. [Learn more.](#)

[Create repository](#)

Now copy the url appears. It is the url for our remote.



Go to your terminal.

**# git remote add “name of remote” “url of remote”**

**# git remote add origin <https://github.com/arunm8489/calc-sample.git>**

Note: Here we gave the name as origin. Actually you can give any name you need.

Now to see the remote name and url,

**# git remote -v**

```
origin https://github.com/arunm8489/calc-sample.git (fetch)
origin https://github.com/arunm8489/calc-sample.git (push)
```

We have already done coding in our local system, now if we want to push the master

**#git push origin master**

```
Username for 'https://github.com': arunm8489
error: cannot run git-gui--askpass: No such file or directory
Password for 'https://arunm8489@github.com':
Counting objects: 15, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (10/10), done.
Writing objects: 100% (15/15), 1.22 KiB | 0 bytes/s, done.
Total 15 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), done.
To https://github.com/arunm8489/calc-sample.git
* [new branch]      master -> master
```

*Note: Github no longer supports direct passwords. So we need to generate personal access token from github. For that follow:*

<https://stackoverflow.com/questions/68775869/support-for-password-authentication-was-remove-d-please-use-a-personal-access-to>

Now on repository, we can see our pushed code from master

ArunM added mult feature		2f79d9a 3 days ago 5 commits
calc.py	added mult feature	3 days ago
power.py	added sqaure of anumber feature from new_feature branch	3 days ago

To see commits click on commits

master

Commits on Nov 3, 2021

- added mult feature  
ArunM committed 3 days ago [2f79d9a](#) <>
- added sqaure of anumber feature from new\_feature branch  
ArunM committed 3 days ago [c0ffc06](#) <>
- added div feature  
ArunM committed 3 days ago [693d648](#) <>
- added subtract feature  
ArunM committed 3 days ago [347a829](#) <>
- added add feature  
ArunM committed 3 days ago [7076032](#) <>

[Newer](#) [Older](#)

Similarly try pushing new\_feature branch

#git push origin new\_feature

```
Username for 'https://github.com': arunm8489
error: cannot run git-gui--askpass: No such file or directory
Password for 'https://arunm8489@github.com':
Total 0 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'new_feature' on GitHub by visiting:
remote:   https://github.com/arunm8489/calc-sample/pull/new/new_feature
remote:
To https://github.com/arunm8489/calc-sample.git
* [new branch]      new_feature -> new_feature
```

On github

new\_feature 2 branches 0 tags

Go to file Add file Code

This branch is up to date with master. [Contribute](#)

ArunM added mult feature		2f79d9a 3 days ago 5 commits
calc.py	added mult feature	3 days ago
power.py	added sqaure of anumber feature from new_feature branch	3 days ago

Help people interested in this repository understand your project by adding a README. [Add a README](#)

Suppose another person want to work on this project. So he can clone this project remotely

# git clone <https://github.com/arunm8489/calc-sample.git>

```
Cloning into 'calc-sample'...
remote: Enumerating objects: 15, done.
remote: Counting objects: 100% (15/15), done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 15 (delta 2), reused 15 (delta 2), pack-reused 0
Unpacking objects: 100% (15/15), done.
Checking connectivity... done.
```

We can see our project appears as a directory

#cd calc-sample

Inside this folder also all logs regarding earlier commits will be available

---

## Working as a Team

We use **Git Feature Branch Workflow** for our project (which is the commonly used workflow)

Scenario:

Suppose you are the team leader maintaining the git. We are building a calculator. Suppose there are 2 people in your team. Person A and Person B.

Let you stated the project with calc.py file. You assigned the following tasks

- You asked Developer A to create a python function to create sum of squares of two numbers.He has to create a function to find square of a number under power.py and call it from calc.py.
- You asked Developer B to create a python function to create sum of cube of two numbers.He has to create a function to find cube of a number under power.py and call it from calc.py.
- Finally you have to check the code.

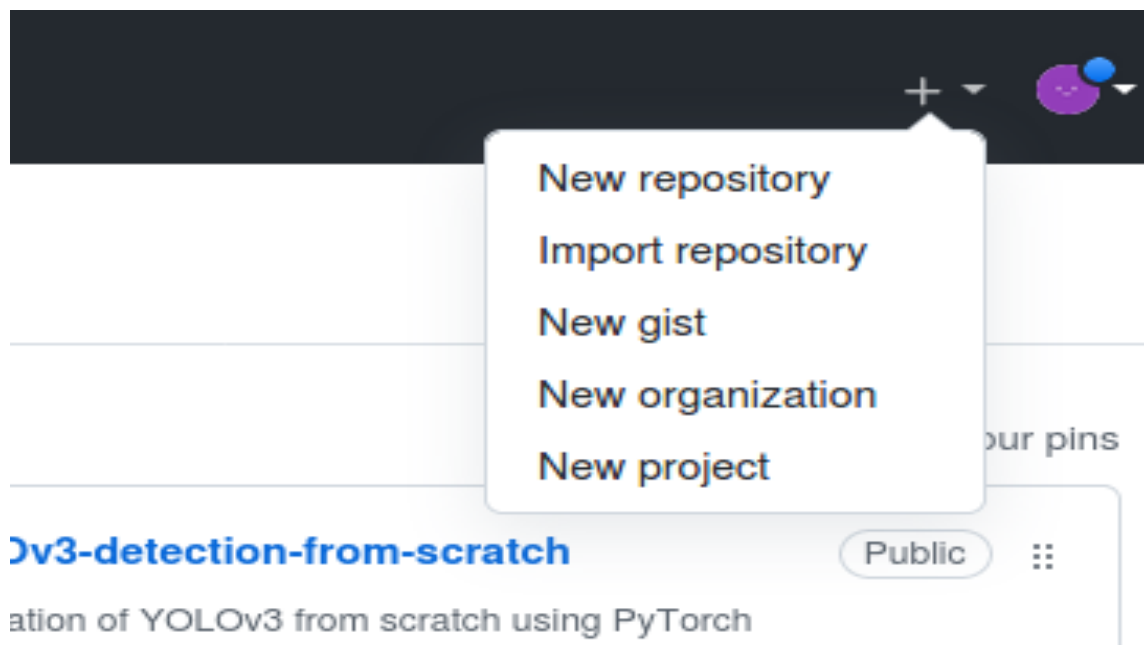
**Admin git -> arunm8489**

**Developer A -> arungeek94**

**Developer B -> messitechy**

## Stage 1:

Let Admin create a repository with a main branch and let him commit the initial code.  
Let the repo looks as follows after that.



**Quick setup — if you've done this kind of thing before**

or HTTPS SSH

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

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

```
echo "# calculator" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/arunm8489/calculator.git
git push -u origin main
```

**...or push an existina repository from the command line**

Now copy the url and add as remote with a name. Let us give origin as name itself

```
# git remote add origin https://github.com/arunm8489/calculator.git
# git remote -v
```

```
origin https://github.com/arunm8489/calculator.git (fetch)
origin https://github.com/arunm8489/calculator.git (push)
```

Now clone our empty repository

```
Cloning into 'calculator'...
error: cannot run git-gui--askpass: No such file or directory
Username for 'https://github.com': arunm8489
error: cannot run git-gui--askpass: No such file or directory
Password for 'https://arunm8489@github.com':
warning: You appear to have cloned an empty repository.
Checking connectivity... done.
```

Commit our code

Let us create a add function inside calc.py

```
# cd calculator
# vim calc.py
```

```
def add(a,b):
    return a+b
```

Now move it to staging and then commit it

```
# git add calc.py
# git commit -m "initial commit - add function"
# git log --decorate
```

```
Author: ArunM <arunm@gmail.com>
Date:   Sun Nov 7 21:12:49 2021 +0530

    initial commit - add function
```

Now we have to push to the main branch of calculator repository.

master
1 branch
0 tags

Go to file
Add file
Code

**ArunM** initial commit - add function
 a941ab2 5 minutes ago
1 commit

calc.py
initial commit - add function
5 minutes ago

Now He has to add both developer A and developer B as contributors

Go to **Settings > Manage access > Add people**

<> Code
Issues
Pull requests
Actions
Projects
Security
Insights
**Settings**

Options  
Manage access  
Security & analysis  
Branches  
Webhooks  
Notifications  
Integrations  
Deploy keys  
Actions

## Settings

**Repository name**  

Rename

☐ **Template repository**  
Template repositories let users generate new repositories with the same directory structure and files. [Learn more.](#)

**Social preview**  

You can upload a social image, but it will not be visible publicly while arunm8489/calculator is private.

Upload an image to customize your repository's social media preview.  
Images should be at least 640x320px (1280x640px for best display).  
[Download template](#)

Options  
Manage access  
Security & analysis  
Branches  
Webhooks  
Notifications  
Integrations  
Deploy keys  
Actions  
Secrets  
Pages

## Who has access

**PRIVATE REPOSITORY**

Only those with access to this repository can view it.

[Manage](#)

**DIRECT ACCESS**

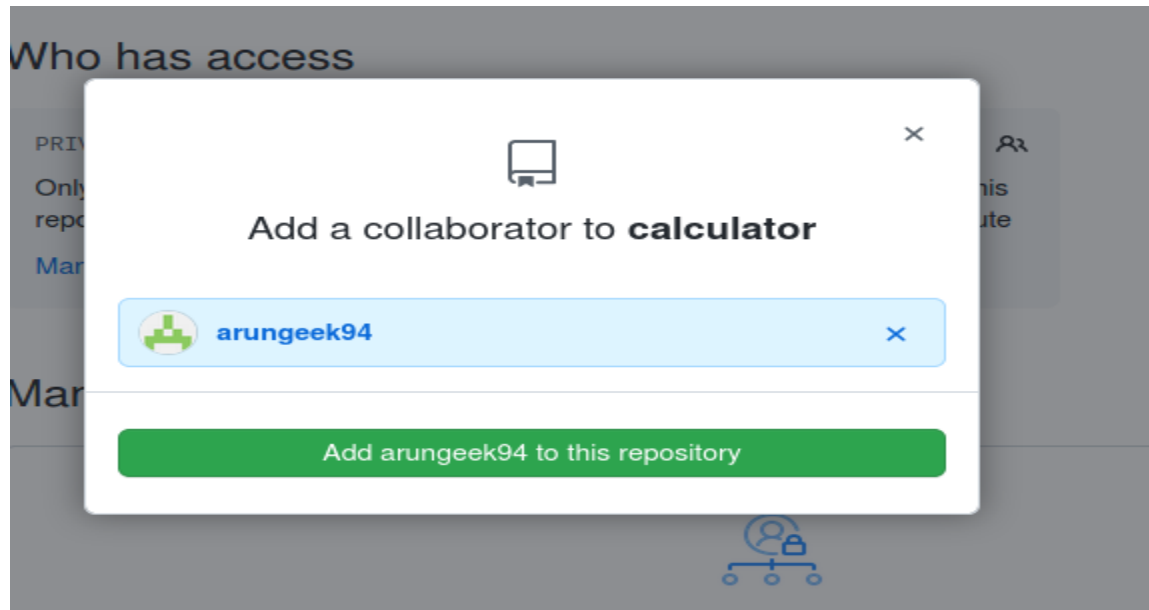
0 collaborators have access to this repository. Only you can contribute to this repository.

## Manage access

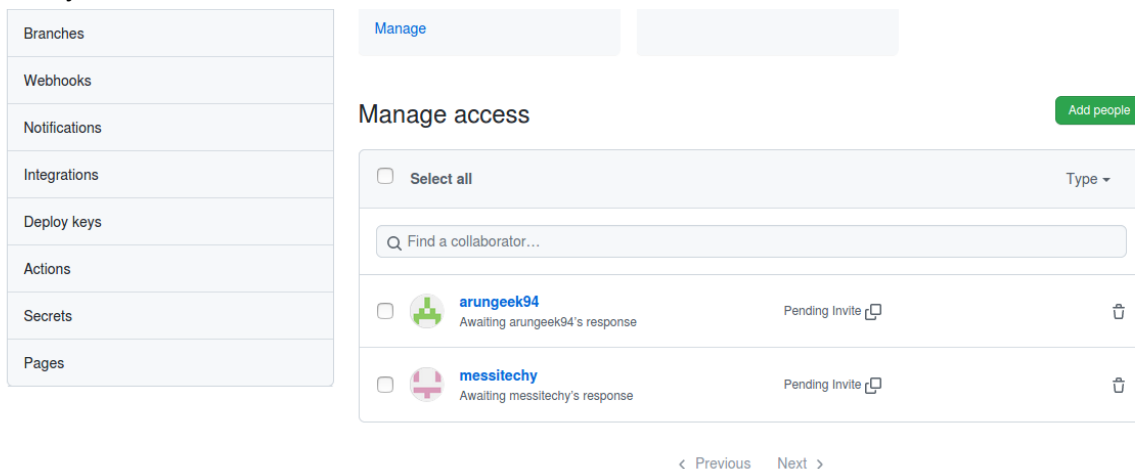
**You haven't invited any collaborators yet**

Add people

Type the name of collaborator and click on Add.



Similarly add both collaborators



Refer following url if you have any doubts:

<https://docs.github.com/en/account-and-profile/setting-up-and-managing-your-github-user-account/managing-access-to-your-personal-repositories/inviting-collaborators-to-a-personal-repository>

**Note:** A mail will be sent to the registered email id of both the developers. Initially both developers need to accept the invitation once it is send my admin.



## Stage 2:

Let developer A start working at 10:15 A.M. His task is to implement a sum of square function.

Initially he has to clone the repository

```
# git clone https://github.com/arungeek94/calculator.git
```

```
Cloning into 'calculator'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
Checking connectivity... done.
```

Now create a branch and start working on the new feature in that branch

```
# git branch square_feature
# git checkout square_feature
# git log --all --decorate
```

```
commit a941ab220f522cee93f0c1e00d2569d9fce142cb (HEAD -> square_feature, origin/master, origin/HEAD, master)
Author: ArunM <arunm@gmail.com>
Date: Sun Nov 7 21:12:49 2021 +0530

    initial commit - add function
```

Note: By default remote name is origin

```
# vim power.py
```

```
def square(x):
    return x**2
```

```
#vim calc.py
```

We modified file as:

```

from power import square

def add(a,b):
    return a+b

def sum_square(a,b):
    return square(a) + square(b)

```

Now commit both files

```

# git add .
# git commit -m "implemented sum of square feature"

```

```

# git log --all --decorate

```

```

commit 836d0cff8e97ca279e26d79931c546e14bb696e5 (HEAD -> square_feature)
Author: arungeek94 <mail2arun34@gmail.com>
Date: Mon Nov 8 13:59:51 2021 +0530

    implemented sum of square feature

commit a941ab220f522cee93f0c1e00d2569d9fce142cb (origin/master, origin/HEAD, master)
Author: ArunM <arunm@gmail.com>
Date: Sun Nov 7 21:12:49 2021 +0530

    initial commit - add function

```

Now before we push code to remote server, we have to make sure our master branch is up to date. For that again pull code to master to get latest code. This is done because maybe after we clone code earlier, some developer might have made some code changes

```

# git checkout master
# git pull origin master

```

```

remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
From https://github.com/arungeek94/calculator
 * branch            master      -> FETCH_HEAD
   a941ab2..0d062c1  master      -> origin/master
Updating a941ab2..0d062c1
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

```

Now merge the code with our square branch

```
# git checkout square_feature
```

```
# git merge master
```

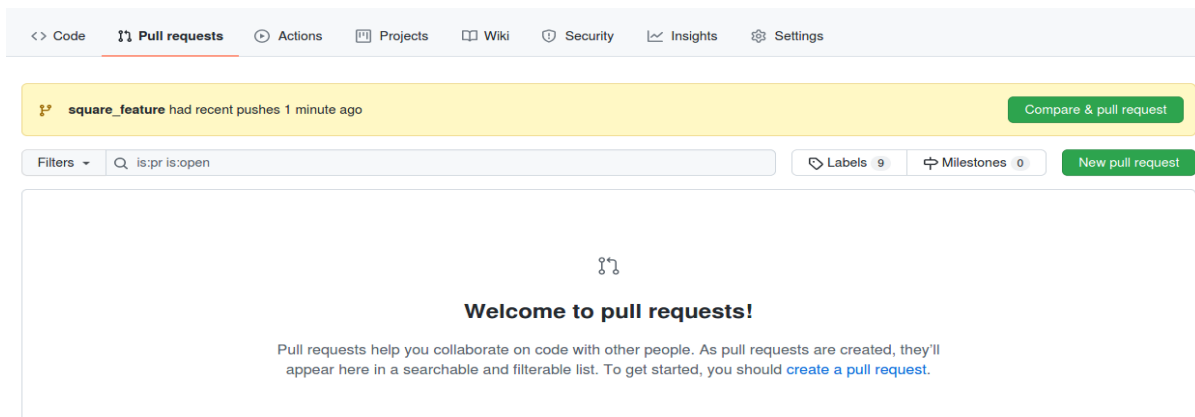
Now finally push the code to master (Assume developer A pushed it at 11:00am)

```
# git push origin square_feature
```


```
error: cannot run git-gui--askpass: No such file or directory
Username for 'https://github.com': arungeek94
error: cannot run git-gui--askpass: No such file or directory
Password for 'https://arungeek94@github.com':
Counting objects: 12, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (8/8), done.
Writing objects: 100% (12/12), 1.57 KiB | 0 bytes/s, done.
Total 12 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'square_feature' on GitHub by visiting:
remote:   https://github.com/arungeek94/calculator/pull/new/square_feature
remote:
To https://github.com/arungeek94/calculator.git
* [new branch]      square_feature -> square_feature
```

Now we have pushed the feature . Now we have to create a pull request


Click on **Pull requests-> Compare and pull request -> Create pull request**



<> Code **Pull requests** Actions Projects Wiki Security Insights Settings

 **square\_feature** had recent pushes 1 minute ago [Compare & pull request](#)

Filters  [Labels 9](#) [Milestones 0](#) [New pull request](#)



**Welcome to pull requests!**

Pull requests help you collaborate on code with other people. As pull requests are created, they'll appear here in a searchable and filterable list. To get started, you should [create a pull request](#).

base repository: arunm8489/calculator base: master ← head repository: arungeek94/calculator compare: square\_feature

✓ **Able to merge.** These branches can be automatically merged.

### Square feature

Write

Preview

H B I < >

implemented sum square feature

Attach files by dragging & dropping, selecting or pasting them.

☒ Allow edits by maintainers
 

Create pull request

Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

**Reviewers**  
No reviews

**Assignees**  
No one—assign yourself

**Labels**  
None yet

**Projects**  
None yet

**Milestone**  
No milestone

**Linked issues**

Conversation 0 Commits 3 Checks 0 Files changed 3 +7 -1

arungeek94 commented now

implemented sum square feature

arungeek94 and others added 3 commits 38 minutes ago

- implemented sum of square feature 836d0cf
- Create README.md 9d962c1 Verified
- Merge branch 'master' into square\_feature 93782c8

Add more commits by pushing to the **square\_feature** branch on **arungeek94/calculator**.

✓ **This branch has no conflicts with the base branch**

Merging can be performed automatically.

**Reviewers**  
No reviews  
Still in progress? Convert to draft

**Assignees**  
No one—assign yourself

**Labels**  
None yet

**Projects**  
None yet

**Milestone**  
No milestone

Now its work of admin to merge it.

## Stage 3

Let Developer B start working at 10.30 AM even before Developer A pushed his feature. The code change made by him is as follows:

power.py

```
def cube(x):  
    return x**3
```

calc.py

```
from power import cube  
  
def add(a,b):  
    return a+b  
  
def sum_cube(a,b):  
    return cube(a) + cube(b)
```

After implementation developer B pushed code at 11:15AM and generated pull request.

## Stage 4

Let admin merge the code at 1:00pm.

GitHub repository view for **arunm8489 / calculator** (Public). The interface shows the repository's main page with a navigation bar at the top containing links for Code, Issues, Pull requests (2), Actions, Projects, Wiki, Security, Insights, and Settings. Below the navigation bar, there are buttons for 'Go to file', 'Add file', and 'Code'. The repository's commit history is displayed, showing a commit by arunm8489 titled 'Create README.md' 1 hour ago, and another commit titled 'initial commit - add function' 18 hours ago. The README.md file is visible, showing the title 'calculator'. On the right side, there are sections for 'About', 'Releases', 'Packages', and 'Languages'.

On top we can see 2 pull requests. Admin need to decide what part of code to keep.

GitHub pull requests page for the repository. The page features a header with the title 'Label issues and pull requests for new contributors' and a 'Dismiss' button. Below the header, there is a search bar with the filter 'is:pr is:open'. The main content area displays a list of pull requests. The first pull request is titled 'implemented sum cube feature' and was opened 4 minutes ago by messitechy. The second pull request is titled 'Square feature' and was opened 15 minutes ago by arungeek94. The page also includes a 'ProTip!' section at the bottom, which states: 'Adding no:label will show everything without a label.'

Click on each pull request verify the code and **confirm merge**.

**While click on sum cube feature, we can see some conflicts. Let us solve them.**

## implemented sum cube feature #3

**messitechy** wants to merge 1 commit into `arunm8489:master` from `messitechy:cube_feature`

Conversation 0 Commits 1 Checks 0 Files changed 2

**messitechy** commented 8 minutes ago Collaborator

implemented sum cube feature

implemented sum cube feature 730e72b

Add more commits by pushing to the `cube_feature` branch on `messitechy/calculator`.

**This branch has conflicts that must be resolved**  
Use the [web editor](#) or the [command line](#) to resolve conflicts. Resolve conflicts

**Conflicting files**  
`calc.py`  
`power.py`

Merge pull request or [view command line instructions](#).

## implemented sum cube feature #3

Resolving conflicts between `messitechy:cube_feature` and `arunm8489:master` and committing changes → `messitechy:cube_feature`

2 conflicting files

`calc.py`  
`calc.py`

`power.py`  
`power.py`

`calc.py` 2 conflicts Prev ^ Next v Mark as resolved

```
1
2 <<<<<< cube_feature
3   from power import cube
4   =====
5   from power import square
6   >>>>>> master
7
8   def add(a,b):|
9       return a+b
10
11 <<<<<< cube_feature
12   def sum_cube(a,b):
13       return cube(a) + cube(b)
14
15   =====
16   def sum_square(a,b):
17       return square(a) + square(b)
18   >>>>>> master
19
20
```

We need to just keep the code we needed.

## implemented sum cube feature #3

Resolving conflicts between [mess1techy:cube\\_feature](#) and [arunm8489:master](#) and committing changes → [mess1techy:cube\\_feature](#)

Commit merge

2 conflicting files	power.py	✓ Resolved
<div>calc.py calc.py</div>	<div>1 2 3   def cube(x): 4       return x**3 5 6   def square(x): 7       return x**2 8 9</div>	<div>✓</div>
<div>power.py power.py</div>		

Then click on commit merge. Now our final code is ready

🔗 master ▾


🔗 1 branch

🏷 0 tags




Go to file

Add file ▾

Code ▾

 **arunm8489** Merge pull request [#2](#) from arungeek94/square\_feature ...

011ed1b 6 minutes ago ⌚ 6 commits

 README.md	Create README.md	1 hour ago
 calc.py	implemented sum of square feature	1 hour ago
 power.py	implemented sum of square feature	1 hour ago

README.md

