

GITHUB- INTRODUCTION



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What is GitHub?

GitHub is a cloud development platform that enables us to

- host and review code
- manage projects
- build software
- Handles version control

Key features



Issues



Discussions



Pull requests



Notifications



Labels



Actions



Forks



Projects

issues



The screenshot shows the GitHub Issues interface. At the top, there are tabs for 'Issues', 'Pull requests', 'Labels', and 'Milestones'. A search bar contains the text 'is:open is:issue' and a 'New Issue' button is on the right. Below the tabs, a summary bar indicates '104 Open' and '9,660 Closed' issues. A table of issues follows, with columns for 'Author', 'Labels', 'Milestones', 'Assignee', and 'Sort'. The issues listed are:

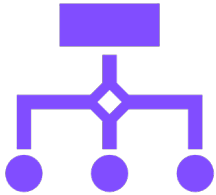
- .form-group-sm .form-group-lg shrink textarea** (confirmed, css) - #13989 opened 11 hours ago by limitstudios, v3.2.1, 4 comments.
- Tooltip unnecessarily breaks into multiple lines when positioned to the right** (confirmed, js) - #13987 opened 15 hours ago by hnrch02, v3.2.1, 0 comments.
- Tooltip Arrows in Modal example facing wrong way** (css) - #13981 opened a day ago by SDCore, 6 comments.
- Table improvement** (css) - #13978 opened a day ago by Tjoosten, 0 comments.
- docs/dist files** (docs) - #13977 opened 2 days ago by XhmikosR, v3.2.1, 7 comments.
- Potential solution to #4647** (js) - #13976 opened 2 days ago by julioarmandof, 4 comments.

Issues are where most of the communication between a project's consumers and development team occurs. An issue can be created to discuss a broad set of topics, including

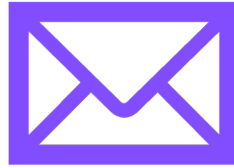
- Bug Reports
- Feature Requests
- Documentation clarification

Once an issue has been created, It can be assigned to owners, labels, projects, and milestones

Notifications



As a collaborative platform, GitHub offers **notifications** for virtually every event that takes place within a given workflow. These notifications can be finely tuned to meet your preferences



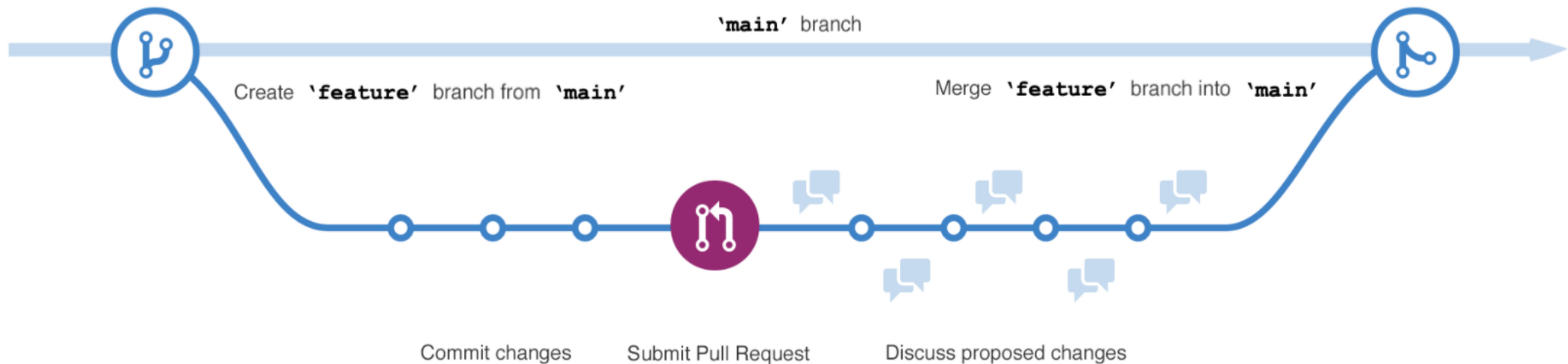
You can also decide whether you receive notifications via email, web & mobile, or both



To keep track of all of your notifications across different projects, use the [GitHub Notifications dashboard](#)

Branches

- Branches are the preferred way to create changes in the GitHub flow
- This model enables stability among critical branches, such as `main`, while allowing complete freedom for developers to commit any changes they need to meet their goals.
- Once the code from a branch is ready to become part of the `main` branch, it may be merged via pull request



 main ▾

 Commits on Nov 9, 2020

Update README.md



bkalyanacool committed on

azure vm creation



bkalyanacool committed on

Initial commit



bkalyanacool committed on

Commits

- A **commit** is a change to one or more files on a branch. Every time a commit is created, it is assigned a unique ID and tracked, along with the time and contributor.
- This provides a clear audit trail for anyone reviewing the history of a file or linked item, such as an issue or pull request.

Pull Requests

- A **pull request** is the mechanism used to signal that the commits from one branch are ready to be merged into another branch.
- one or more reviewers to verify the code and approve the merge and once merge is approved the code will be merged with the base branch.

Create 0000-01-02-Contoso.md #3

 Merged

Contoso merged 2 commits into `master` from `my-slide` 2 days ago

 Conversation 4

 Commits 2

 Checks 0

 Files changed 1



Contoso commented 2 days ago • edited ▾

Owner



Adding a much-needed file.

Labels

- Provide a way to categorize and organize **issues** and **pull requests** in a repository
- As you create a GitHub repository several labels will automatically be added for you and new ones can also be created

Examples of Labels include:

- bug
- documentation
- duplicate
- help wanted
- enhancement
- question

Apply labels to this issue

 bug
Something isn't working




 documentation
Improvements or additions to documentation

 duplicate
This issue or pull request already exists

 enhancement
New feature or request

 good first issue
Good for newcomers

 help wanted
Extra attention is needed

 invalid
This doesn't seem right

 question
Further information is requested

Actions

- GitHub actions provide task automation and workflow functionality in a repository
- Actions can be used to streamline processes in your software development lifecycle and implement continuous integration and continuous deployment (CI/CD).

Workflows: Automated processes added to your repository.

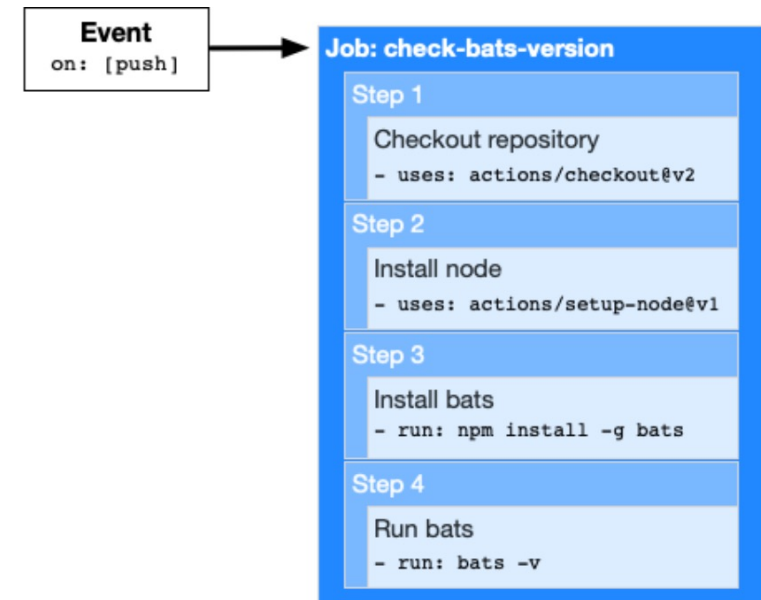
Events: An activity that triggers a workflow.

Jobs: A set of steps that execute on a runner.

Steps: A task that can run one or more commands (actions).

Actions: Standalone commands that can be combined into steps. Multiple steps can be combined to create a job.

Runners: Server that has the GitHub Actions runner application installed.



Cloning and forking

- Cloning a repository will make a copy of the repository and its history on your local machine
- **Forking** a repository makes a copy of the repository in your GitHub account. The parent repository is referred to as the **upstream** while your forked copy is referred to as the **origin**

Organizations

- Organizations are shared accounts where businesses and open-source projects can collaborate across many projects at once, with sophisticated security and administrative features
- You can use organizations to collaborate with an unlimited number of people across many projects at once, while managing access to your data and customizing settings

Repository Roles

- Read:** Recommended for non-code contributors who want to view or discuss your project
- Triage:** Recommended for contributors who need to proactively manage issues and pull requests without write access
- Write:** Recommended for contributors who actively push to your project
- Maintain:** Recommended for project managers who need to manage the repository without access to sensitive or destructive actions
- Admin:** Recommended for people who need full access to the project, including sensitive and destructive actions like managing security or deleting a repository

Choose role

Read

Can read and clone this repository. Can also open and comment on issues and pull requests.

Triage

Can read and clone this repository. Can also manage issues and pull requests.

Write

Can read, clone, and push to this repository. Can also manage issues and pull requests.

Maintain

Can read, clone, and push to this repository. They can also manage issues, pull requests, and some repository settings.

✓ Admin

Can read, clone, and push to this repository. Can also manage issues, pull requests, and repository settings, including adding collaborators.