



Module – 3 Git and GitHub

Core concept of source code management

Git

is a distributed version control system that allows developers to manage and track changes in source code.

It provides a set of commands and features for creating repositories, making changes to files, creating branches, merging changes, and collaborating with other developers.

Core concept of source code management

GitHub

serves as a remote repository for Git repositories, allowing developers to push their changes to a central location and collaborate with others.

It provides features like pull requests, which allow developers to propose changes to a repository and review and discuss those changes with team members.

GitHub also offers integration with various development tools, such as continuous integration and deployment services,

making it a popular choice for hosting and managing Git repositories in a collaborative software development workflow

Core concept of Version control system

Version control system (VCS)

is to manage changes to files and track different versions of those files over time.

VCS allows multiple developers to work on the same code, keep track of changes, collaborate, and revert to previous versions of files when needed

Repository | Commit | Branch | Merge | Conflict resolution | History and versioning | Collaboration

Core concept repository

Storage | Version history | Metadata | Branches | Branches | Collaboration | Access control
Hosting

Repositories are a critical component of modern software development workflows, allowing developers to manage changes, collaborate with team members, and maintain a history of a project's development.

Different VCS tools may have their own specific implementations of repositories, but the core concept remains consistent across most version control systems.

Difference between local and remote repository

The main difference between a local repository and a remote repository is the location

Local Repository

Location | Access | Collaboration

Remote repository

Location | Access | Collaboration

Difference between local and remote repository

A local repository and a remote repository is their location and accessibility.

Local repositories are stored on the local machine and are accessible only locally, while remote repositories are stored on a remote server and are accessible over a network allowing for collaboration among team members from different locations.

How to install, configure git on local machine

Create Directory for Git work space command mkdir "gitworkspace"

Run the following command to install Git using CentOS:

Step 1: Install Git

```
sudo yum install git
```

Step 2: Configure Git

```
git config --global user.name "Your Name"
```

```
git config --global user.email "your.email@example.com"
```

Step 3: Create a Git repository

```
git init
```


How to install, configure git on local machine

Step 4: Add and commit files

```
git add .
```

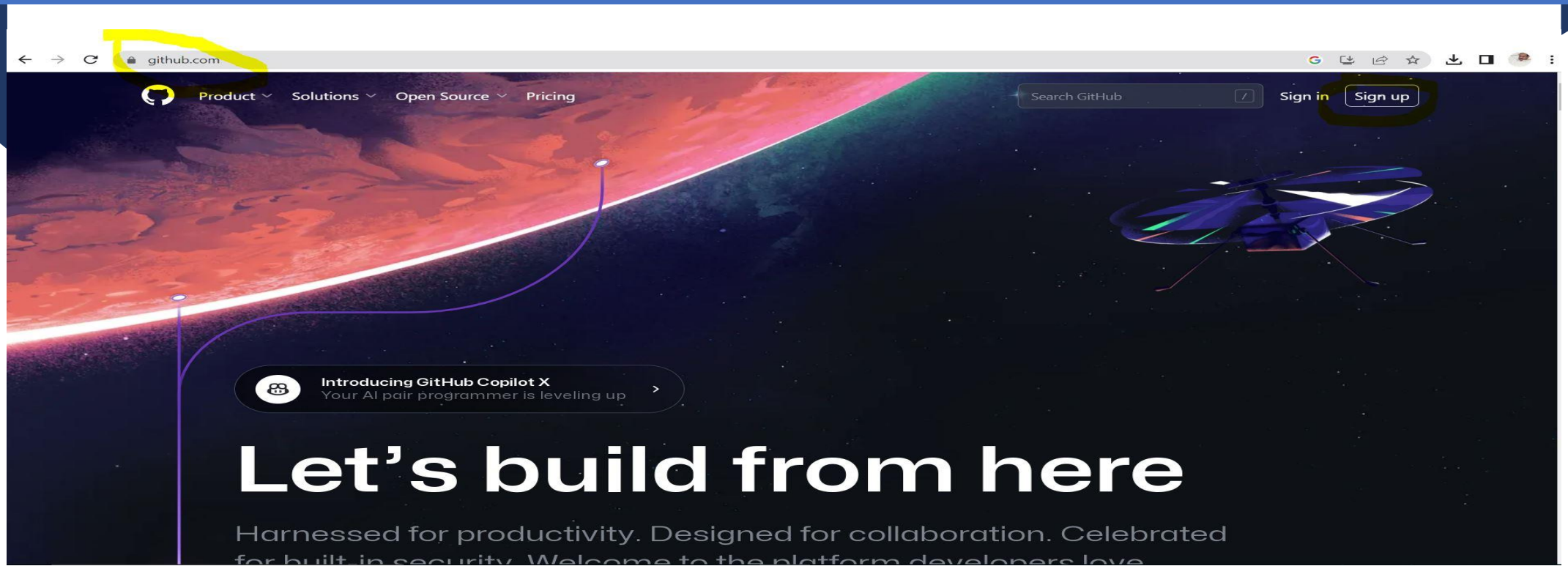
```
git commit -m "Your commit message here"
```

Step 5: Set up remote repository

```
git remote add origin <gitHub URL>
```

```
git push -u origin master
```

How to setup remote repository on GitHub



How to setup remote repository on GitHub

The screenshot displays the GitHub web interface for a user named 'tassdaq'. The top navigation bar includes the GitHub logo, a search bar, and links to Pull requests, Issues, Codespaces, Marketplace, and Explore. The user's profile section on the left shows 'Top Repositories' with a 'New' button and a search bar, and 'Recent activity' with a message about activity links. The main feed shows a repository 'opensearch-project/security-dashboards-plugin' with a 'Star' button. A dropdown menu is open on the right, showing options like 'Your profile', 'Your repositories', 'Your organizations', 'Your projects', 'Your stars', 'Your gists', 'Your sponsors', 'Upgrade', 'Try Enterprise', 'Feature preview', 'Help', 'Settings', and 'Sign out'.

Search or jump to...

Pull requests Issues Codespaces Marketplace Explore

Signed in as tassdaq

Set status

Top Repositories

New

Find a repository...

tassdaq/Dockerfile

tassdaq/html-code

Recent activity

When you take actions across GitHub, we'll provide links to that activity here.

Following For you (Beta)

W. wazuh forked wazuh/wazuh-security-dashboards-plugin from opensearch-project/security-dashboards-plugin · 2 months ago

opensearch-project/security-dashboards-plugin

Manage your internal users, roles, access control, and audit logs from OpenSearch Dashboards

TypeScript 49 15 issues need help Updated Apr 13

Star

Latest changes

10 hours ago Automatic rebases of... stop after 30 days of...

12 hours ago Repository topics and... level Dependabot, se...

14 hours ago Dependabot now sup... and changelogs for D...

Yesterday Secret scanning now... historically in issues...

View changelog →

ProTip! The feed shows you events from people you follow and repositories you watch or star.

Subscribe to your news feed

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Blog About Shop Contact GitHub Pricing

API Training Status Security

Terms Privacy Docs

Upgrade Try Enterprise Feature preview Help Settings Sign out

How to setup remote repository on GitHub



Tassdaq Hussain
tassdaq

Cloud Architect | DevOps Engineer

Edit profile

0 followers · 4 following

Hysec
Karachi, Sindh Pakistan.
11:43 (UTC +05:00)
www.hysec.com.pk
@tassdaq
in/tassdaq
hysecfb

Overview Repositories 2 Projects Packages Stars 1

Find a repository...

Type

Language

Sort

New

html-code Public

Updated last week

Star

Dockerfile Public

Dockerfile Updated 2 weeks ago

Star



How to setup remote repository on GitHub

Git:

Git is a distributed version control system (DVCS) that allows developers to manage changes to their codebase.

It provides a way to track changes, collaborate with others, and maintain different versions of a project.

Git operates locally on a developer's computer and does not require an internet connection to function.

It allows developers to commit changes, create branches, merge code, and revert changes as needed.

How to setup remote repository on GitHub

GitHub:

GitHub is a web-based hosting service that provides a platform for hosting Git repositories. It offers additional features on top of Git, such as a web-based graphical user interface (GUI) for managing repositories, issue tracking, pull requests, code reviews, and team collaboration tools. GitHub allows developers to store their Git repositories in the cloud, making it easy to share and collaborate on code with others. It also provides a social coding platform where developers can showcase their work, contribute to open-source projects, and collaborate with other developers.

How to pull/commit code from GitHub and Create environment for developers

Code, planning, and automation

- Repositories
- Codespaces
- Packages
- Copilot
- Pages
- Saved replies

Security

- Code security and analysis

Integrations

- Applications
- Scheduled reminders

Archives

- Security log
- Sponsorship log
- <> **Developer settings**

Don't specify

URL

www.hysec.com.pk

Social accounts

- https://twitter.com/tassdaq
- https://www.linkedin.com/in/tassdaq/
- https://www.facebook.com/hysecfb/
- https://www.youtube.com/channel/UC_i-XJwezuyEu-OcfLAOQUw

Company

Hysec

You can @mention your company's GitHub organization to link it.

Location

Karachi, Sindh Pakistan.

☒ Display current local time
Other users will see the time difference from their local time.

Time zone

(GMT+05:00) Karachi

All of the fields on this page are optional and can be deleted at any time, and by filling them out, you're giving us consent to share this data wherever your user profile appears. Please see our [privacy statement](#) to learn more about how we use this information.

Update profile

Signed in as **tassdaq**

Go to your profile

Set status

- Your profile
- Your repositories
- Your organizations
- Your projects
- Your stars
- Your gists
- Your sponsors

Upgrade

Try Enterprise

Feature preview

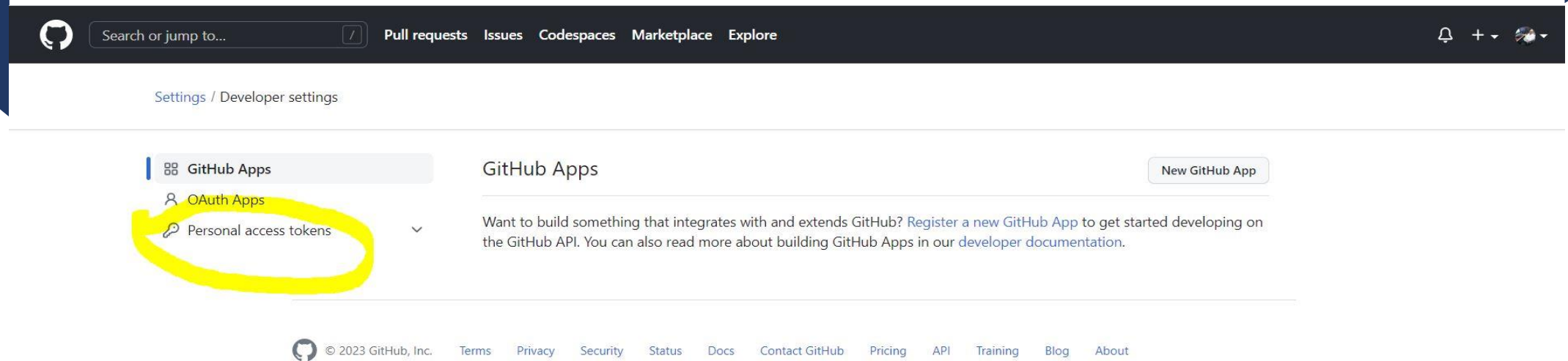
Help

Settings

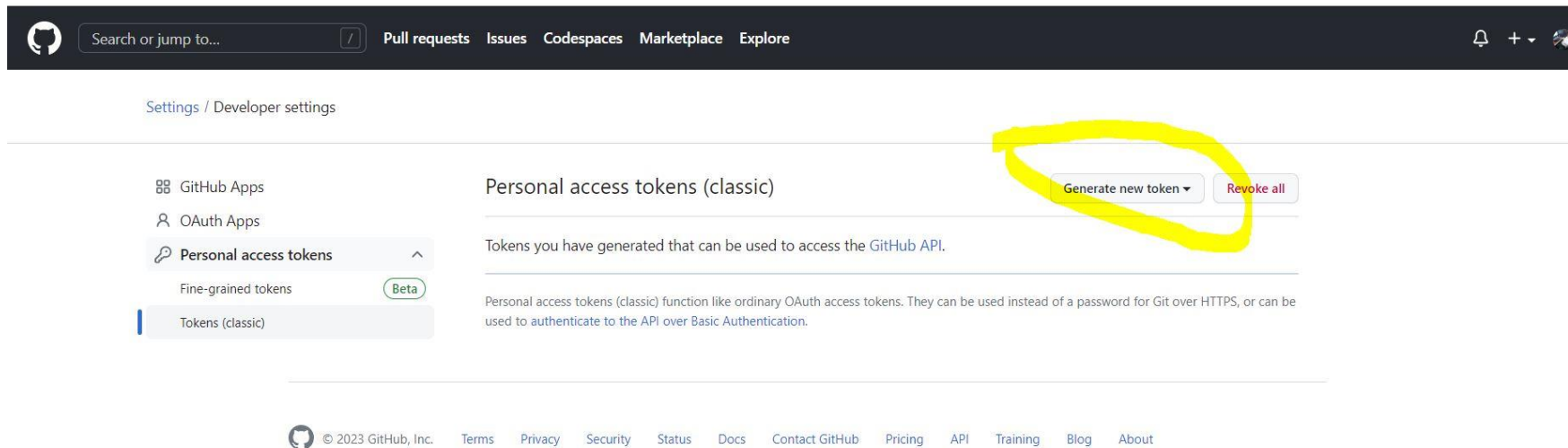
Sign out



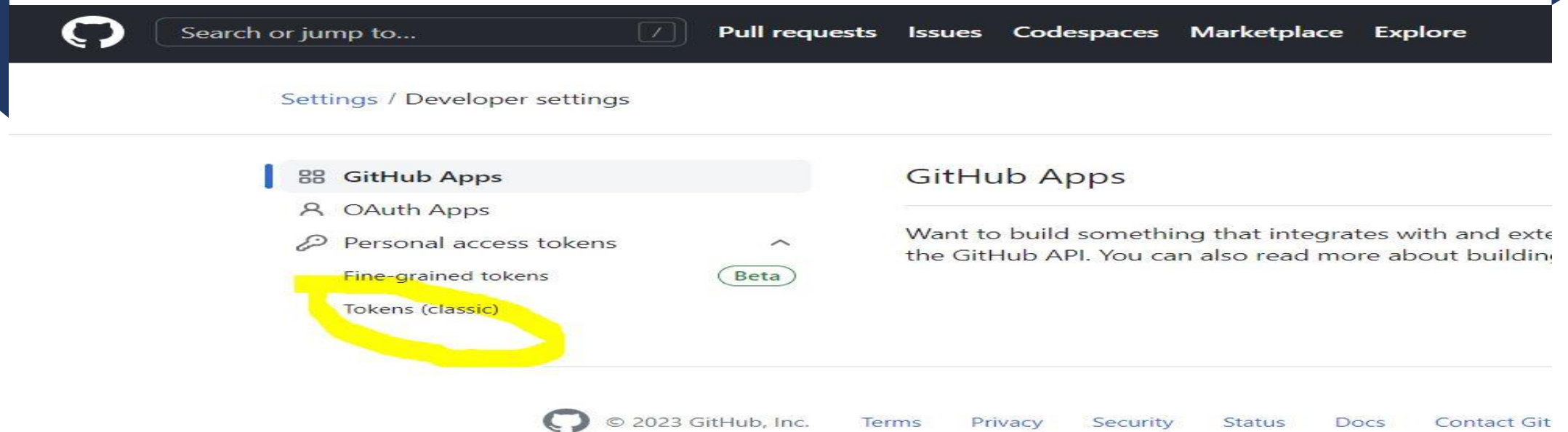
How to pull/commit code from GitHub and Create environment for developers



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How to pull/commit code from GitHub and Create environment for developers



How to pull/commit code from GitHub and Create environment for developers

Settings / Developer settings

GitHub Apps

OAuth Apps

Personal access tokens

Fine-grained tokens

Beta

Tokens (classic)

New personal access token (classic)

Personal access tokens (classic) function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to [authenticate to the API over Basic Authentication](#).

Note

access

What's this token for?

Expiration *

30 days

The token will expire on Sun, May 14 2023

Select scopes

Scopes define the access for personal tokens. [Read more about OAuth scopes](#).

☒ repo

Full control of private repositories

☒ repo:status

Access commit status

☒ repo_deployment

Access deployment status

☒ public_repo

Access public repositories

☒ repo:invite

Access repository invitations

☒ security_events

Read and write security events

☐ workflow

Update GitHub Action workflows

☐ write:packages

Upload packages to GitHub Package Registry

☐ read:packages

Download packages from GitHub Package Registry



THANK YOU