Model Context Protocol

A protocol for seamless integration between LLM applications and external data sources

The Model Context Protocol (MCP) is an open protocol that enables seamless integration between LLM applications and external data sources and tools. Whether you're building an AI-powered IDE, enhancing a chat interface, or creating custom AI workflows, MCP provides a standardized way to connect LLMs with the context they need.

GitHub MCP Server

MCP Server for the GitHub API, enabling file operations, repository management, search functionality, and more.

Features

- Automatic Branch Creation: When creating/updating files or pushing changes, branches are automatically created if they don't exist
- Comprehensive Error Handling: Clear error messages for common issues
- Git History Preservation: Operations maintain proper Git history without force pushing
- Batch Operations: Support for both single-file and multi-file operations
- Advanced Search: Support for searching code, issues/PRs, and users

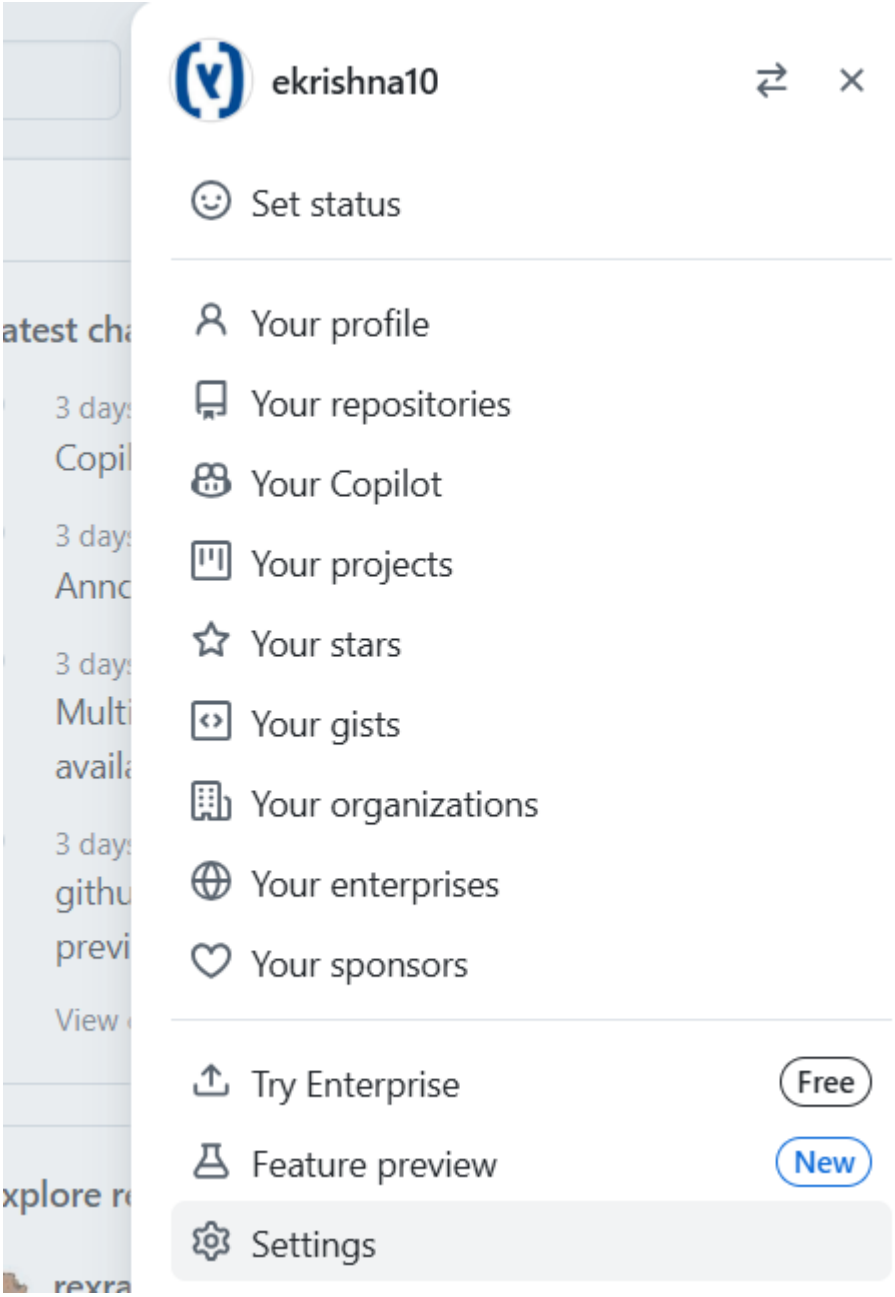
Source: all operations mentioned below are possible

https://github.com/modelcontextprotocol/servers/tree/main/src/github

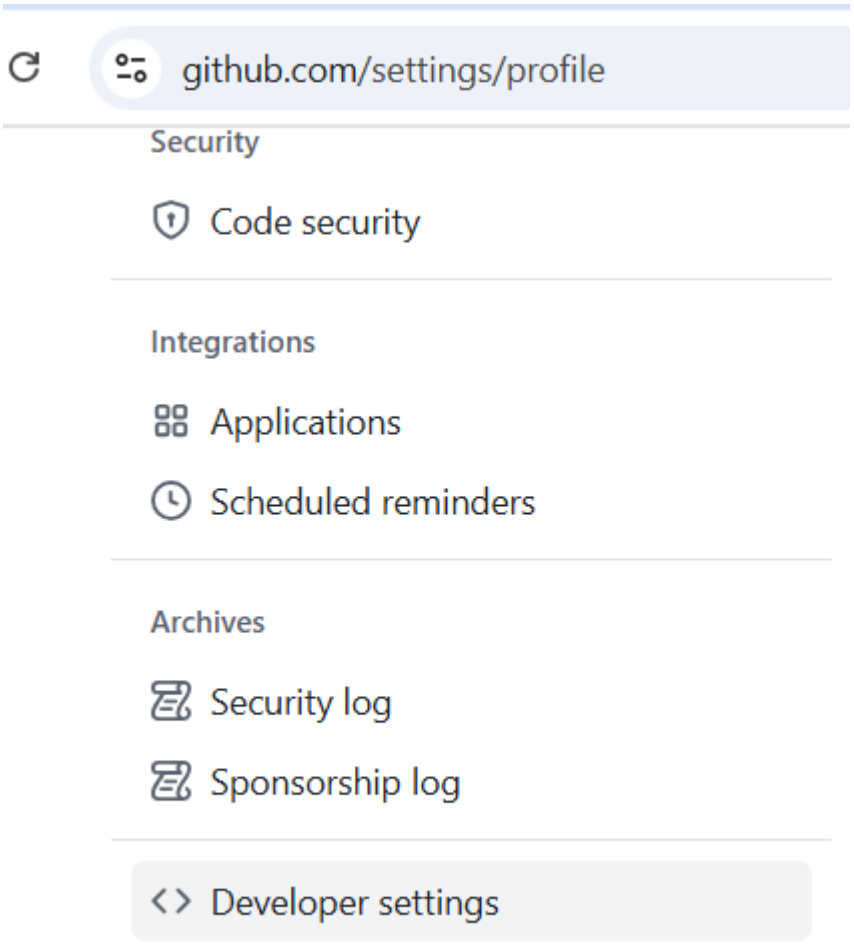
Personal Access Token is needed to connect to GitHub :

Steps to Generate a GitHub Personal Access Token:

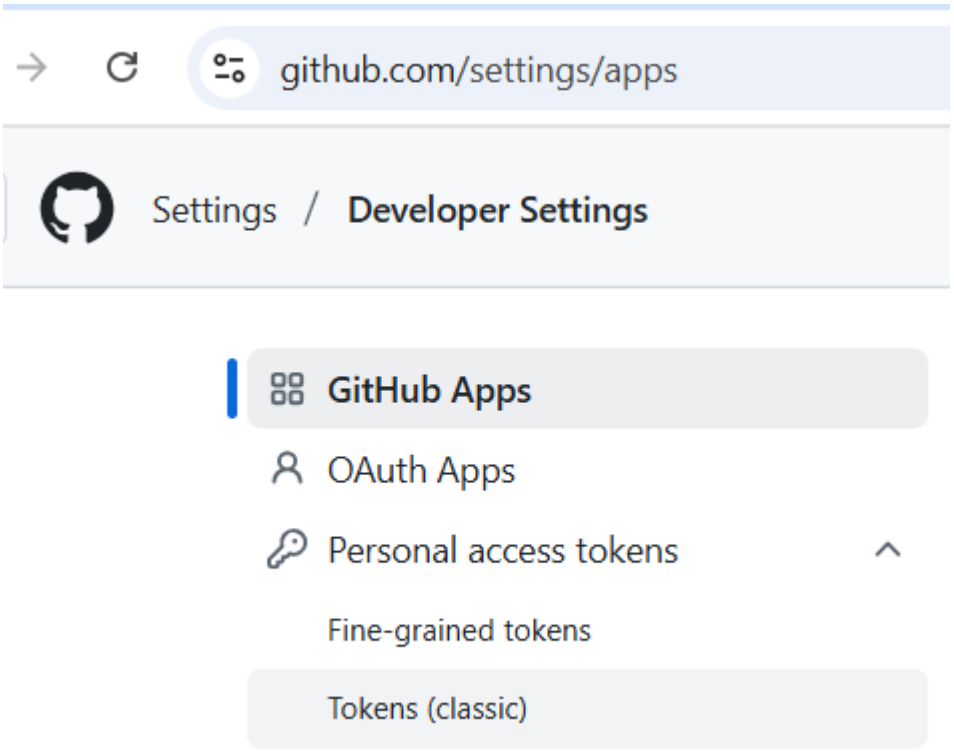
1. **Sign in to your GitHub account** .
2. **Go to your profile settings:** Click on your profile image in the upper right corner, then click "Settings".



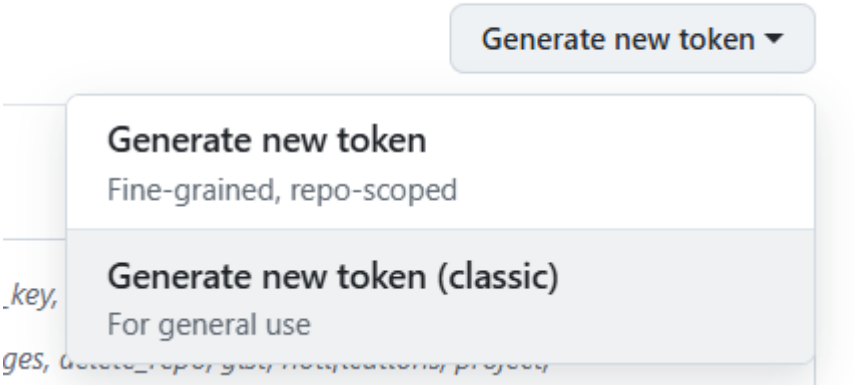
3. **Navigate to Developer settings:** In the left sidebar, click "Developer settings".



4. **Access Personal access tokens:** In the left sidebar, under "Personal access tokens", click "Tokens (classic)".



5. **Generate a new token:** Click "Generate new token".



6. **Provide a token description:** Enter a descriptive name for your token to help you remember its purpose.
7. **Set token expiration (optional):** Choose an expiration time for the token (e.g., 30 days, 60 days, 90 days, or no expiration). Note: It's recommended to set an expiration for security reasons.
8. **Select scopes/permissions:** Choose the scopes or permissions you want to grant this token. For example, select "repo" if you need the token for repository operations.

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

mcpgithub

What's this token for?

Expiration

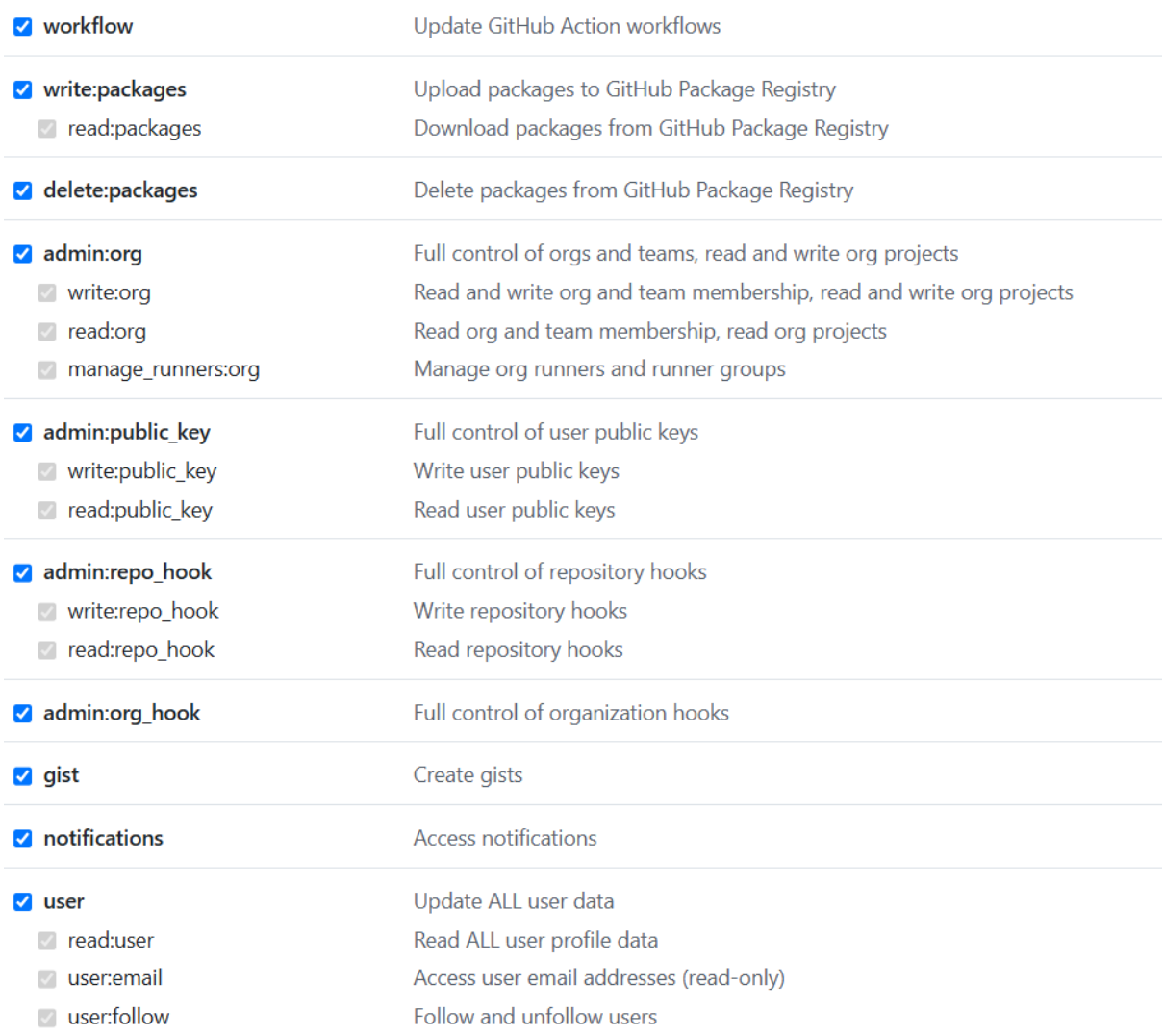
30 days (May 07, 2025)

The token will expire on the selected date

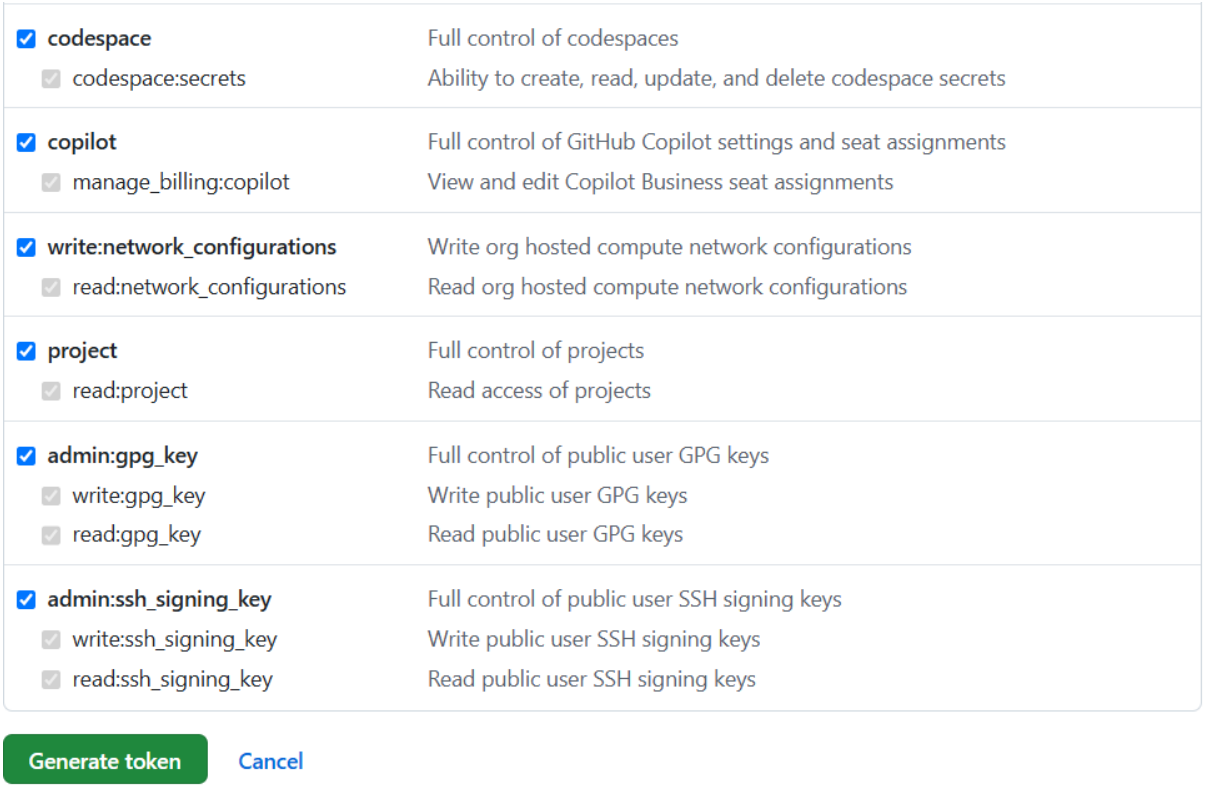
Select scopes

Scopes define the access for personal tokens. Read more about OAuth scopes.

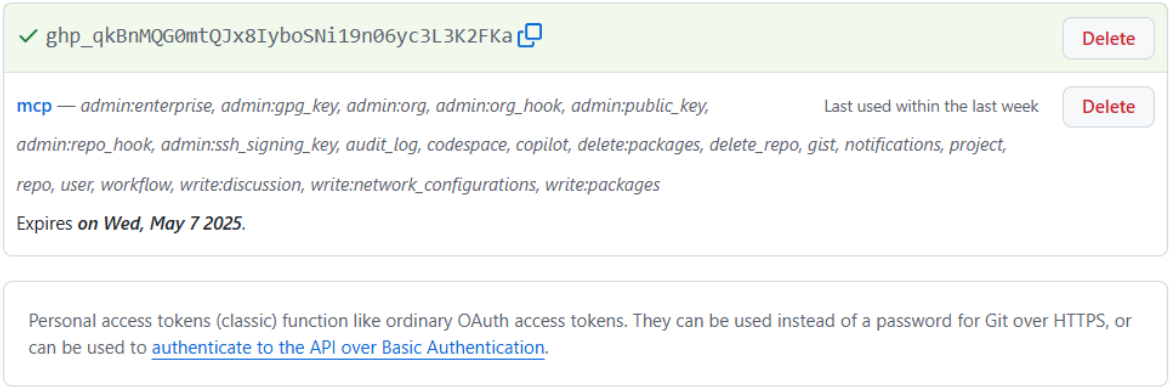
repo	Full control of private repositories
repo:status	Access commit status
repo_deployment	Access deployment status
public_repo	Access public repositories
repo:invite	Access repository invitations
security_events	Read and write security events



9. **Generate the token:** Click "Generate token".



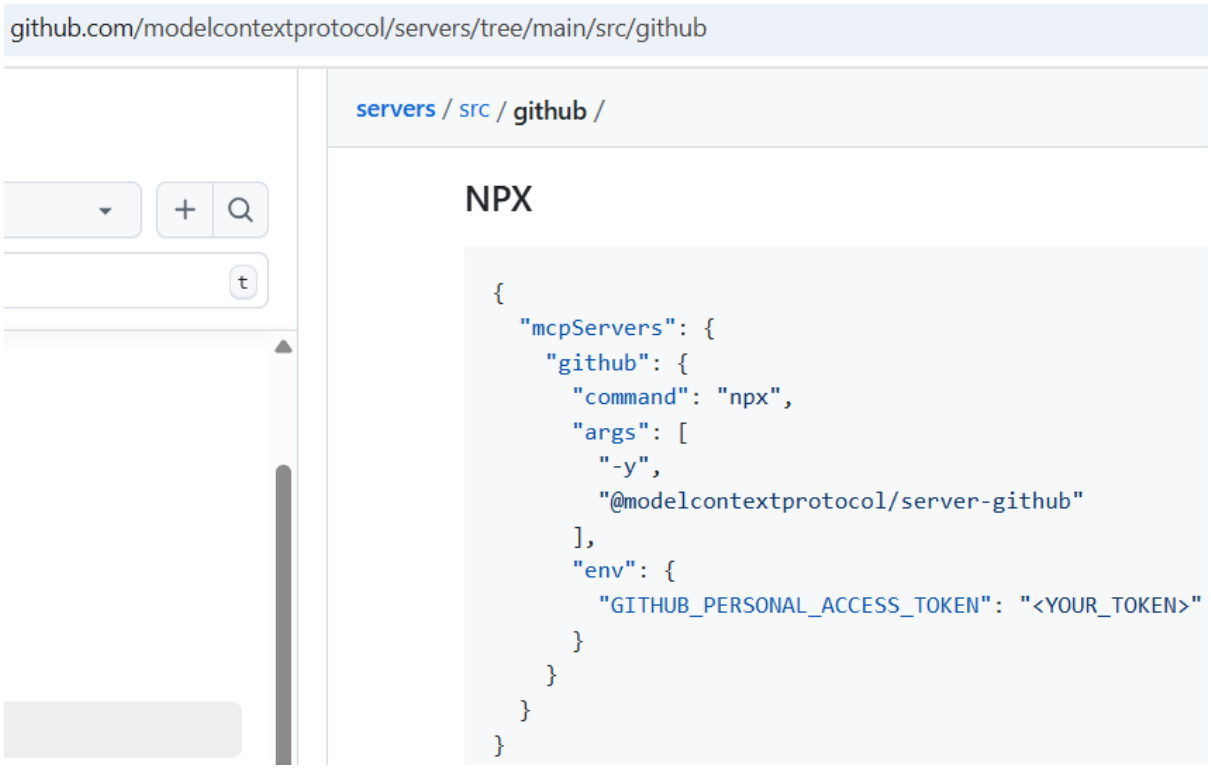
10. **Securely store the token:** Copy and store the generated token in a secure location, as you will not be able to view it again.



Make sure you not down the token .

Token : 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

Replace the token in NPX of github:



Goto > claude desktop > File > Settings > Developer > Edit Config>

"C:\Users\ekris\AppData\Roaming\Claude\claude_desktop_config.json"

And paste the below content to the config.json file

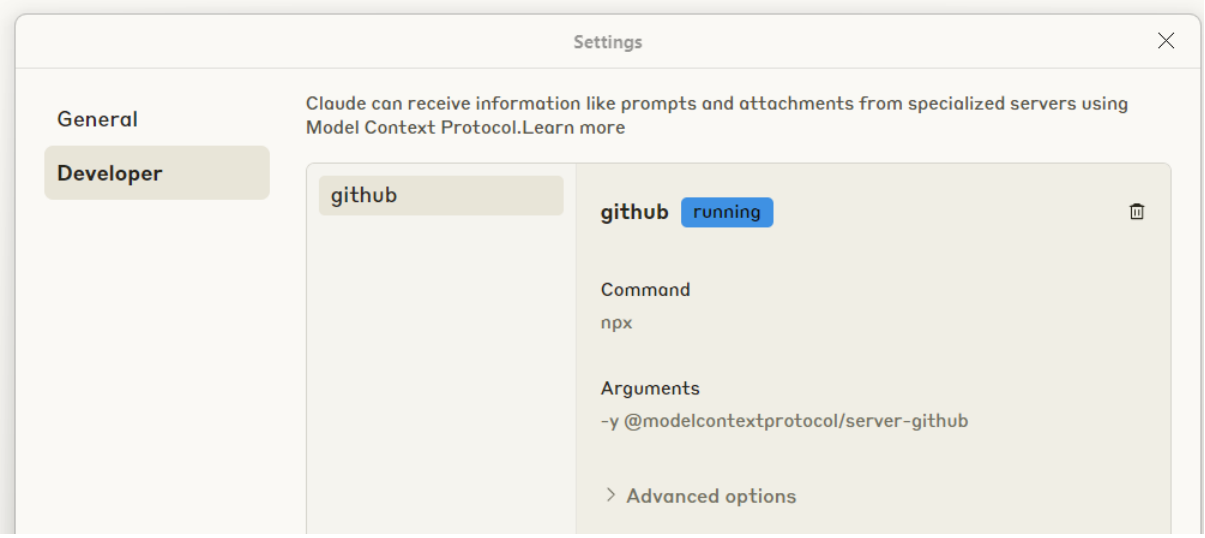
```
{
  "mcpServers": {
    "github": {
      "command": "npx",
      "args": [
        "-y",
        "@modelcontextprotocol/server-github"
      ],
      "env": {
        "GITHUB_PERSONAL_ACCESS_TOKEN": "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"
      }
    }
  }
}
```

claude_desktop_config.json ●

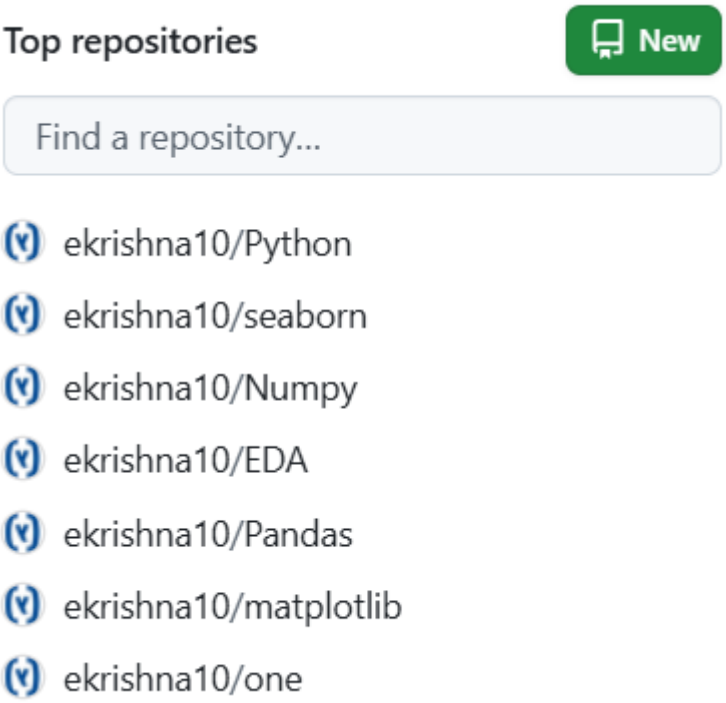
C: > Users > ekris > AppData > Roaming > Claude > {} claude_desktop_config.json > ...

```
{
  "mcpServers": {
    "github": {
      "command": "npx",
      "args": [
        "-y",
        "@modelcontextprotocol/server-github"
      ],
      "env": {
        "GITHUB_PERSONAL_ACCESS_TOKEN": "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"
      }
    }
  }
}
```

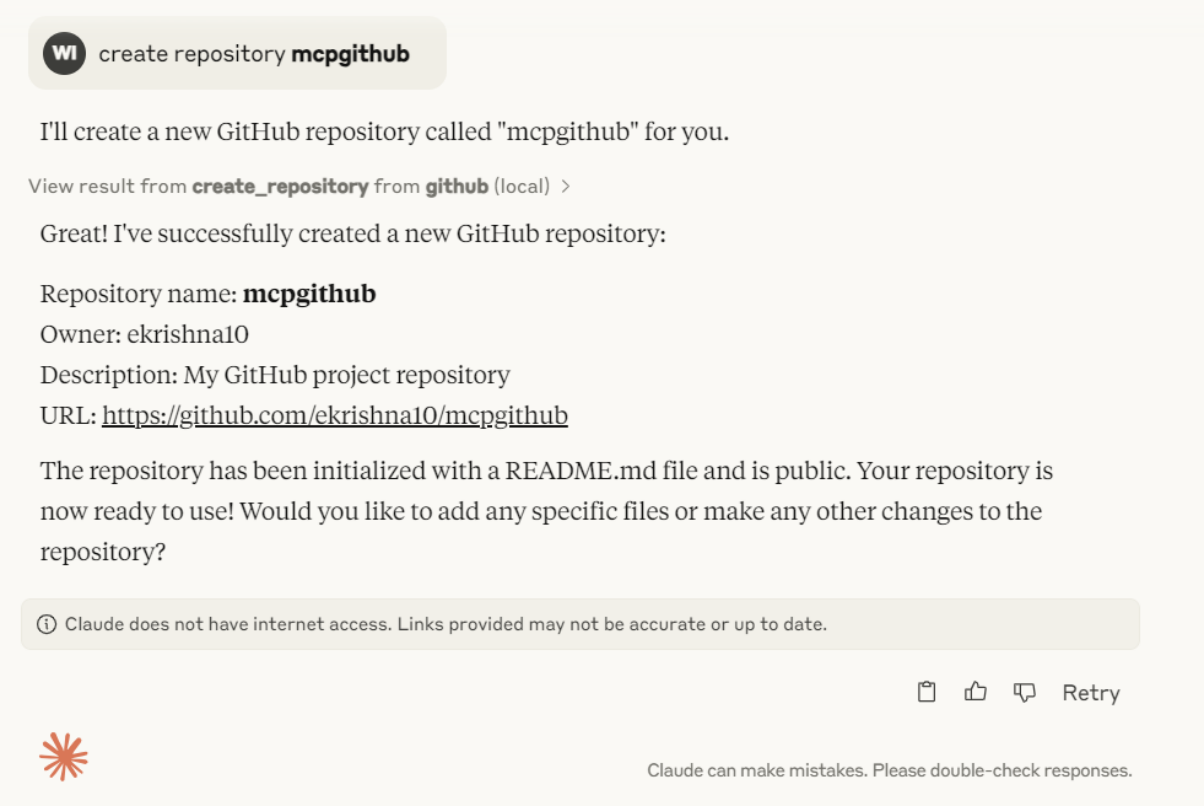
Restart the claude desktop and check the settings



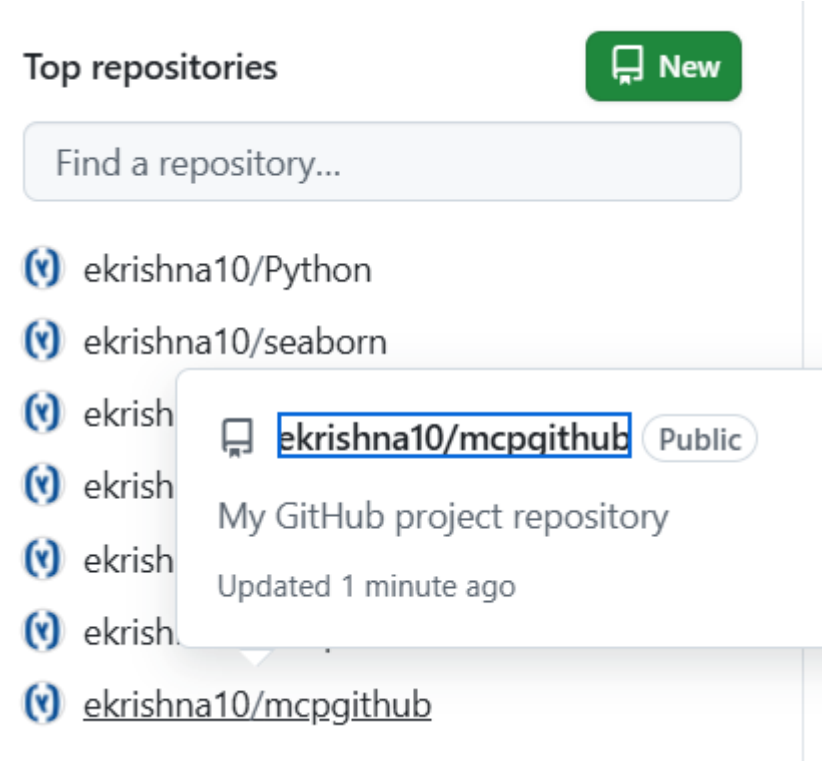
GitHub account repositories :



Create new repository called as mcpgithub

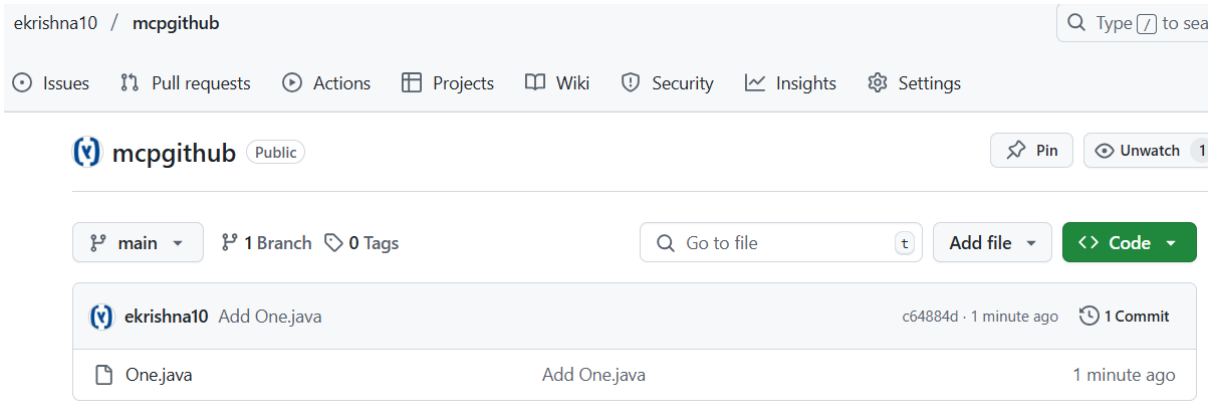


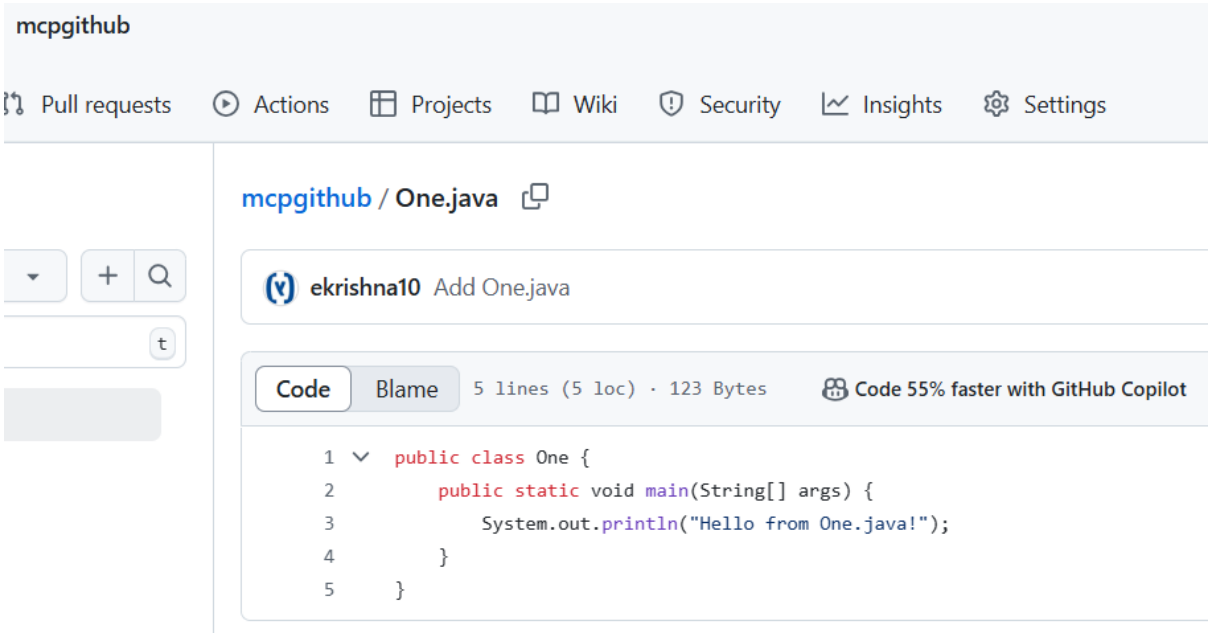
Goto github and check now for repository:



mcpgithub repository is created successfully

Goto to repository and check for One.java


ekrishna10 / mcpgithub
Type / to sea
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
mcpgithub
Public
Pin
Unwatch 1
main
1 Branch
0 Tags
Go to file
t
Add file
Code
ekrishna10 Add One.java
c64884d · 1 minute ago
1 Commit
One.java
Add One.java
1 minute ago


mcpgithub
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
mcpgithub / One.java
ekrishna10 Add One.java
Code
Blame
5 lines (5 loc) · 123 Bytes
Code 55% faster with GitHub Copilot
1 public class One {
2 public static void main(String[] args) {
3 System.out.println("Hello from One.java!");
4 }
5 }