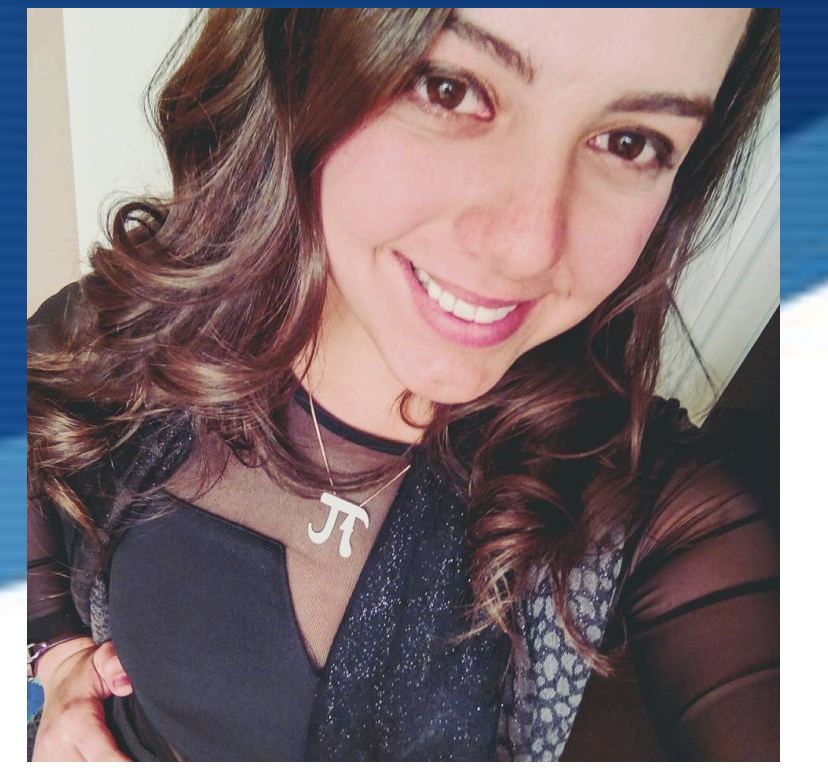




GitHub is Down, but We are Not

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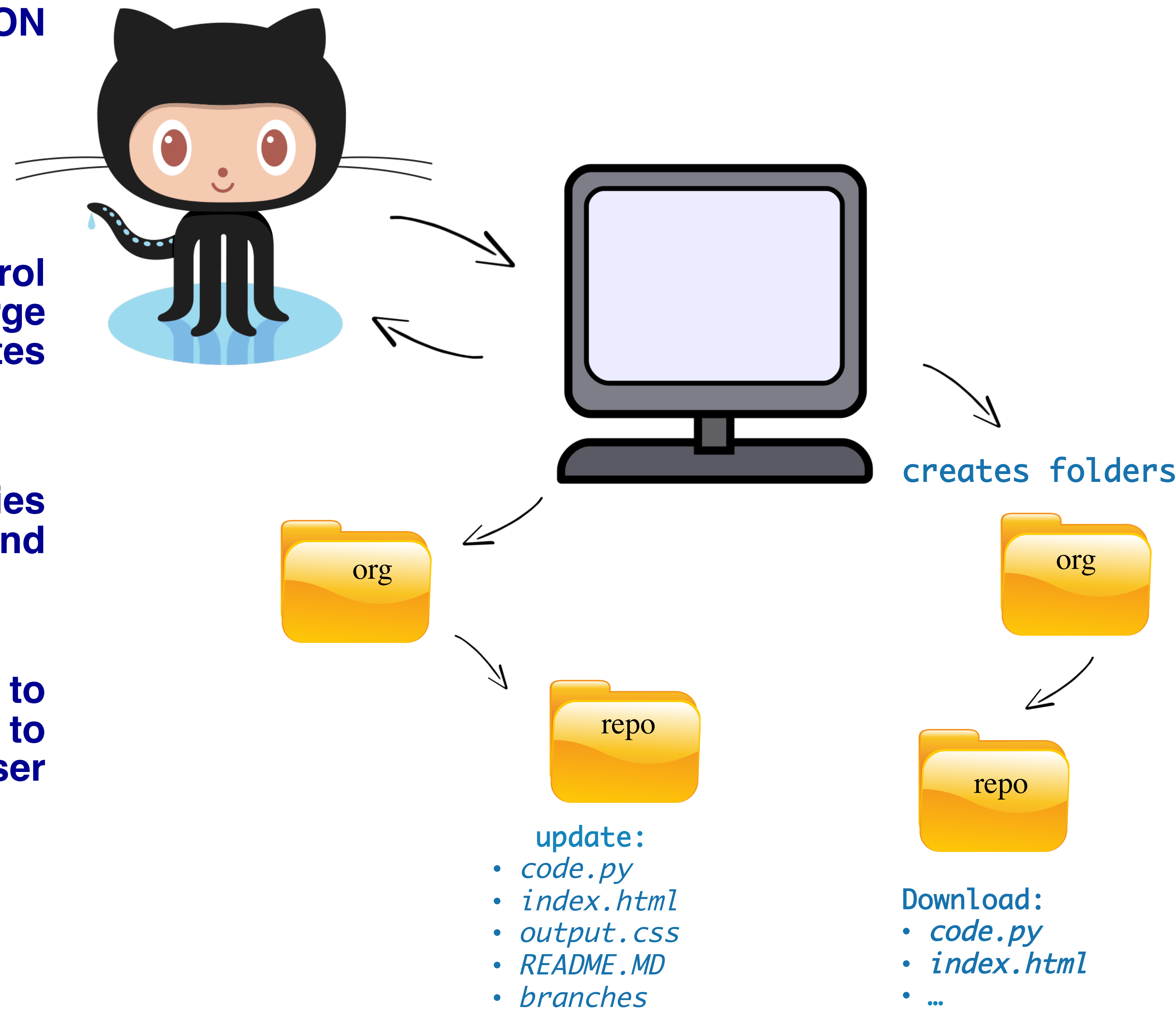


Description:

```
githubManager.py [-f] file.txt [-u] username [-t] OAuth_token.txt
```

Input: [-f] : file path to Github organization name list
[-u] : Github username
[-t] : path to Authentication token file

1. Authenticate user with token or it prompts a login
2. Verify if the project has been cloned previously on the computer to avoid mirroring
3. Clone or Fetch all the repositories and branches



Introduction

Usually in a large collaboratively developed application, the data is stored in several servers around the world instead of the developer's device. Therefore, the information is only available when there is access to the internet. Every time changes are made in the organizations/repositories, these have to be cloned or updated manually.

To ensure availability and current updates, this project focuses on developing a script to backup and update all the Git repositories and its branches that are hosted on Github. The script uses the PyGithub library to help with manipulation of JSON files received from the Github API .

Tools

Git: an open source distributed version control system designed to handle small to very large projects with speed and efficiency. It facilitates collaboration among any number of developers.

GitHub: a website that hosts git repositories and offers all the distributed revision control and source.

PyGitHub: It is a Python 2 and 3 library to access the GitHub API v3. This library allows you to manage github resources such as repositories, user profile, and organizations.

Conclusion:

The script is responsible for backing up the organizations, repositories and branches without duplicating data. Since Github is available most of the time, the developer can also use a scheduler to run the Github Manager script to daily update all the changes.

This would prevent the user from having to manually track, for example, what new branches were created on the repository.

By developing this project, I have learned and improved the following skills:

1. Python
2. Git commands
3. Github API structure
4. PyGithub Library

Project Location:

<https://github.com/ScriptumCodex/GitHubManager>



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