Design

PyGithub is a Python (2 and 3) library to use the [Github API v3](http://developer.github.com/v3). With it, you can manage your [Github](http://github.com/) resources (repositories, user profiles, organizations, etc.) from Python scripts. So in Python version, I use PyGithub to implement my program.

First create a Github instance: g = Github(base\_url="https://api.github.com")

Set a do-while loop. The loop condition is flag equal to y. The program will ask user to input a value for flag. When the input is y, the program is executed repeatedly. When the input is any other key, the program will exit.

According to the GitHub official website, username may only contain alphanumeric characters or single hyphens. Therefore, verify that whether the input username is a valid username. If not, print the prompt message "Username is illegal. Please enter again:" and re-read the username.

Enter a legal username. If the username does not exist, it will throw UnknownObjectException. Catch the exception and print message "Username does not exist! Please check your username." Record the exception details in the log file.

Enter a legal username. If the network connection fails, it will throw ConnectionError. Catch the exception and print prompt message "Please check your network connection." Record the exception details in the log file.

Enter a legal username. If the API rate limit exceeded, the RateLimitExceededException will be thrown. Catch the exception and print prompt message "API rate limit exceeded." Record the exception details in the log file.

Enter a legal username. If the username exists, use g.get\_user(username).get\_repos().totalCount to get the number of the public repositories of the username.

After getting the number of public repository, loop traversal each public repository obtained by g.get\_user(username).get\_repos() and print the repositories’ name. This method will return all the repositories of the username by default in alphabetical order.

After each run, output the prompt message "Do you want to query another username? y: Yes or any key: No". Then read the input and save it to the flag variable. If the input is y, continue to run the program again. If the input is any other keys, terminate the running program.

Reference connection:

https://pygithub.readthedocs.io/en/latest/introduction.html