CS2BC1 Assignment 2 2019-20

1. Think of a computerized information system that you use regularly. This could be a library system, an ATM that you use to get cash, a website that you visit frequently, a smart phone app or any other information system with which you are familiar.

GitHub Website

Write down which elements of the interface support the following 5 user tasks:

i) Read and Interpret information

Once logged in, users can see the landing page displaying your repositories, the activity of the people you follow, some recommended repositories by GitHub and some other tags. Also, on this page, users could create new repositories and search other users' public repositories.

ii) Issue commands to the system

There are lots of buttons used to issue commands to the system. One of the most commonly used commands on the GitHub website is creating a new repository.

iii) Enter words and numbers into the system (data entry)

When a user wants to find his or her one specific repository with a name, he or she may enter the name into the system. Another typical case is that when users search something, they can enter relevant entries about repositories, codes, commits or some other information.

iv) Read and interpret the results

After data entry as mentioned above, users can see their specific repository if they press the button of finding repository. And similarly, they can see related repository, users or commits if they search something.

v) Respond to and correct errors.

Users set status busy and then the website will show their status to their followers. And after users entering a new repository name to create a new repository, a new repository can be created. But what if the user enters a name that already existed on the user's account, an error will be reported, and the new repository will be not allowed to be created.

2. Evaluate each of these 5 interface elements in terms of learnability, visibility, efficiency, and error prevention.

i) Read and Interpret information

Learnability. On the home page of GitHub, there are a lot of hints. For example, ‘get stated?’, ‘tip’, or ‘working with a team?’, which would be favorable for users.

Visibility. There are some small visible structures such as icons, symbols, buttons and scroll bars.

Efficiency. Users can use shortcuts such as enter. Also, users can improve efficiency preview by cloning others’ repo.

Error prevention. Error messages on GitHub can not only explain what’s wrong but also tell the user specifically what to do about it.

ii) Issue commands to the system

Learnability. For the interface of issuing commands to the system, it’s easy to learn for users.

Visibility. Also, there are some small visible structures such as icons, symbols, buttons and scroll bars, for the interface of issuing commands to the system.

Efficiency. Users can use shortcuts such as enter. What’s more, users can search according to search history.

Error prevention. Error messages on GitHub can not only explain what’s wrong but also tell the user specifically what to do about it.

iii) Enter words and numbers into the system (data entry)

Learnability. For the interface of data entry, it’s easy to learn for users.

Visibility. There are some small visible structures for the interface of data entry, such as icons, symbols, buttons and scroll bars.

Efficiency. Users can use many shortcuts and see data entry history.

Error prevention. Error messages on GitHub can not only explain what’s wrong but also tell the user specifically what to do about it.

iv) Read and interpret the results

learnability It’s easy to learn for users because the results show in a way of menus and forms.

Visibility Some small visible structures are used for the interface of results, such as icons, symbols, buttons and scroll bars.

Efficiency. Users can use many shortcuts and change the size of the result.

Error prevention. Error messages on GitHub can not only explain what’s wrong but also tell the user specifically what to do about it.

v) Respond to and correct errors.

Learnability. Users can learn from the respond and error hints easily.

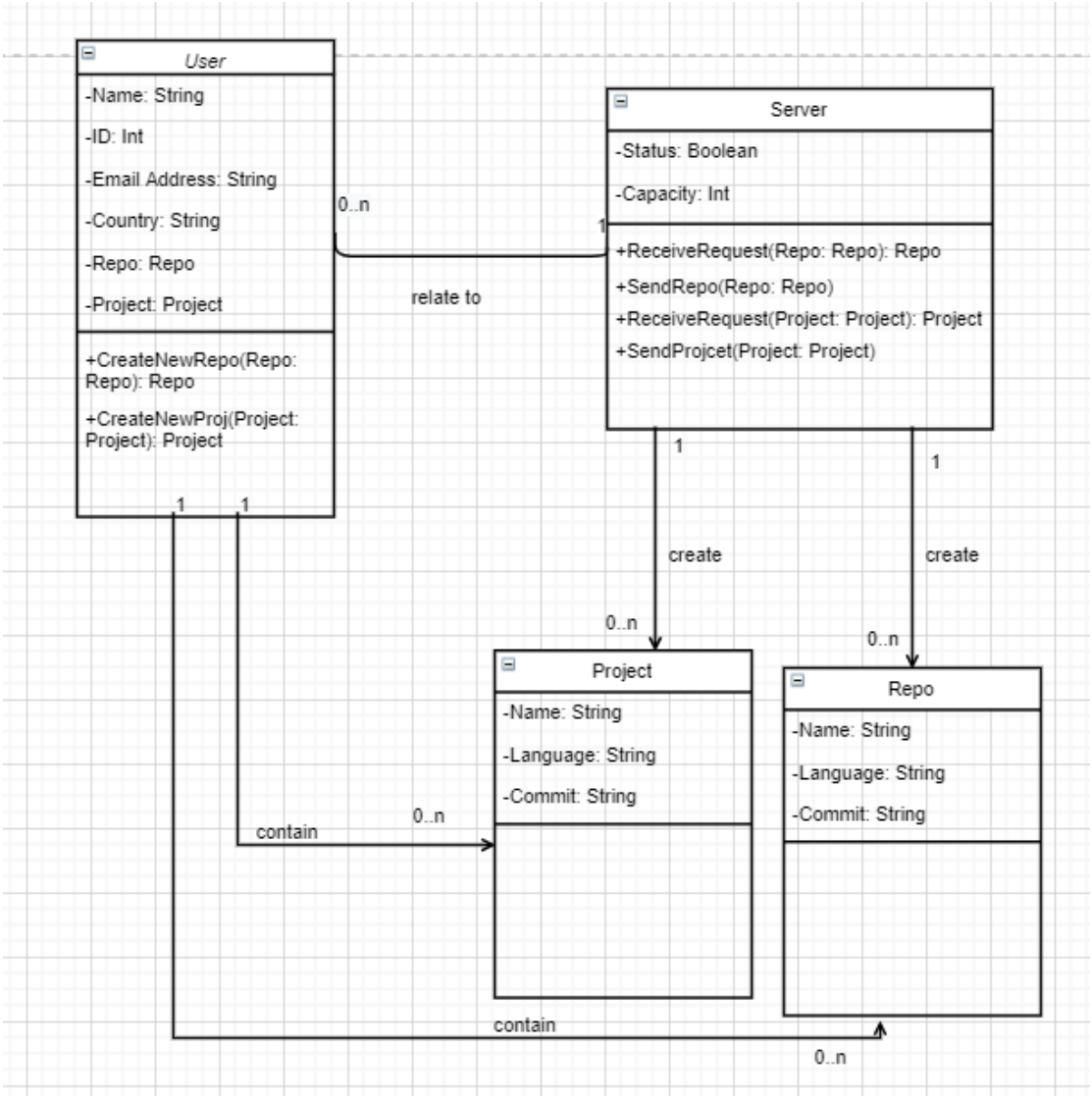
Visibility Some small visible structures, such as icons, symbols, buttons and scroll bars, are used for the interface of responding and error hints.

Efficiency. Users can change the size of the text.

Error prevention. Error messages on GitHub can not only explain what's wrong but also tell the user specifically what to do about it. Also, users can back up on some pages.

3. Underlying these 5 interface elements is an interface model that the system designers are using to communicate with you, the users. Draw a UML class diagram that represents your understanding of the interface model that they are using (hint: this should be similar to your internal user model of the system if they are doing their job well and you have no insider knowledge of the system).

4. Refine you class diagram to offer a design level definition of the operations on the classes that might be called from the UI code.



5. For each of the elements of the interface that you have listed in task 1, write down one idea about how they can be improved. Include any sketches or mock-ups of the improved interfaces in a second appendix to your report.

i) Read and Interpret information

No matter how simple, it will display a learning curve. So, I want to use progressive revelation to flatten the learning curve. For the interface of reading and interpreting information, I think hiding activity of users you followed may work. Because the activity of other users is an advanced feature.

ii) Issue commands to the system

I'd like to improve this interface by improving the efficiency. More specifically, it may work to increase the size of button.

iii) Enter words and numbers into the system (data entry)

For this interface, I would add a function, speech recognition input. Using voice, instead of keyboard input, efficiency can be improved.

iv) Read and interpret the results

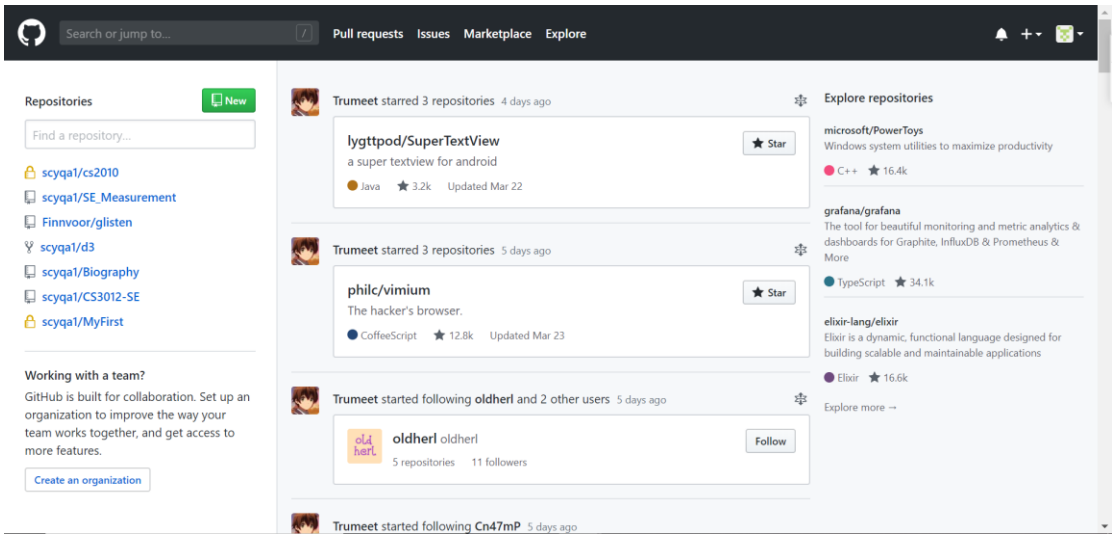
For the interface of interpreting results, I want to add a button which can change the results padding, for example, tables. So that different users can select different results padding according to their preferences.

v) Respond to and correct errors.

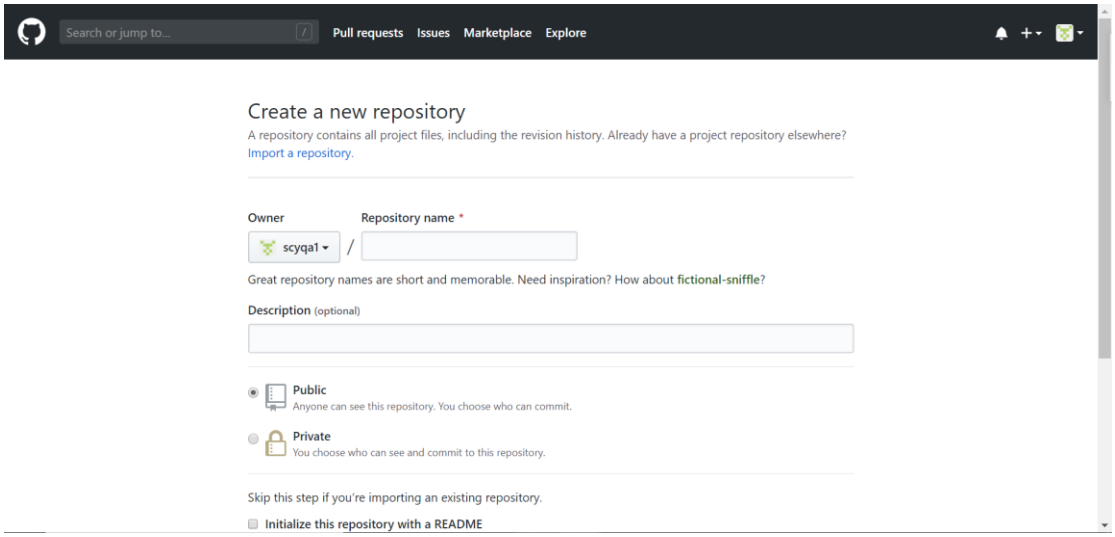
I' like to add more details about the error and show more information in advance before users makes error.

Appendix

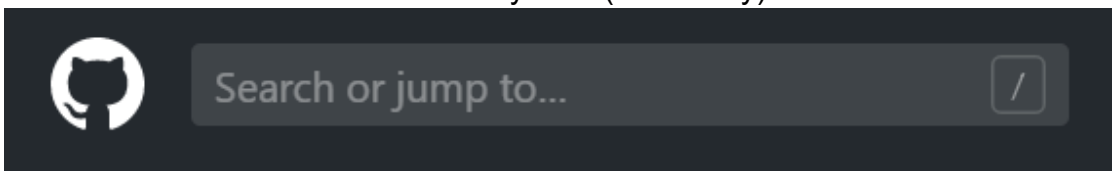
Read and Interpret information



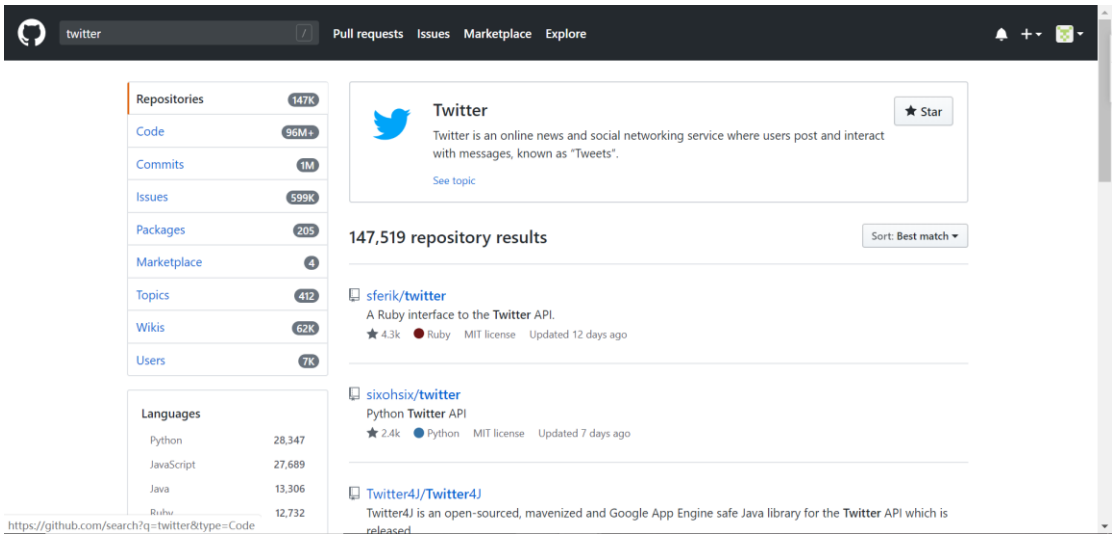
Issue commands to the system



Enter words and numbers into the system (data entry)



Read and interpret the results



respond to and correct errors