Project Report

GitHub repository monitoring tool.
(https://github.com/abhandal/SOEN341-G4)

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Scope:

Description of the project:

The GitHub repository monitoring tool will help the teaching assistants to monitor and grade each group and students; by analyzing a repository and showing useful information in an easy-to-use and easy-to-understand way. In summary, this will show the contributions of each student and the progress of the project.

Features:
- Login with Github account
- Get an information from available repositories
- Show the information in a convenient way (text, charts …):
- Contributors (students)
  - a number of events: overall and per student
  - a percentage of events per student
- Events:
  - Commits
  - Pull requests
  - Issues
  - Comments
- Write a feedback from TA that will be stored in teams repositories

User Stories

CORE FUNCTIONS
1. <u>Log In</u>
   As a user, I want to log in using my GitHub account.
2. <u>Adding repositories</u>
   As a user, I want be able to add repositories on my page, so the data from it can be displayed.
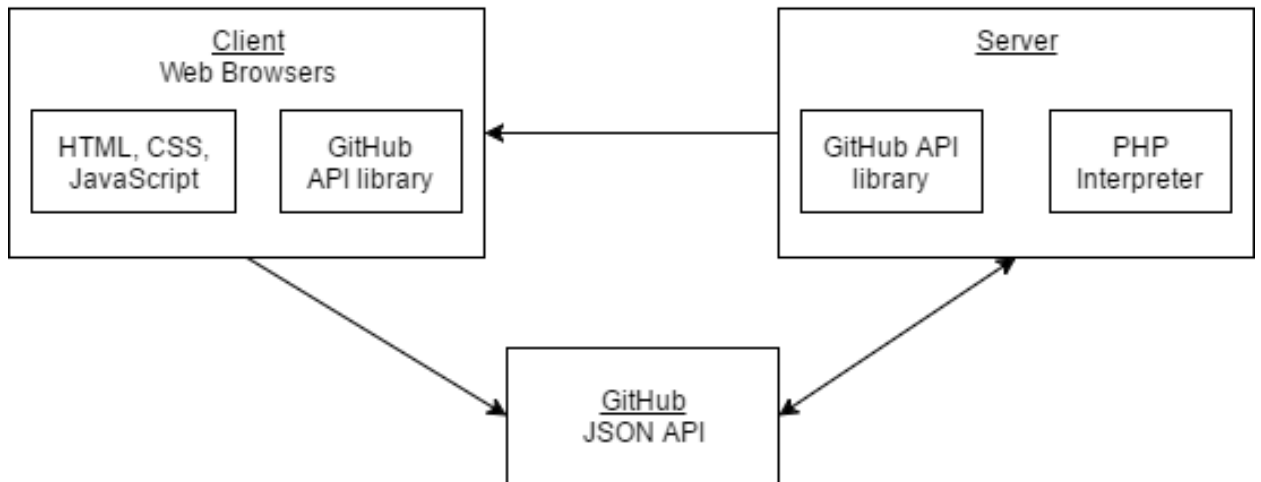3. <u>Selecting Repository</u>

As a user, I want to select a repository from a GitHub account.

4. <u>Generation Information</u>
   As a user, I would like to have a general information page about a repository.
5. <u>Comments</u>
   As a user, I want to add comments to each repository.
6. <u>Sorting the information of the user interface</u>
   As a user, I would like to sort the charts and the tables from the least commits to the most.
7. <u>Overall Report</u>
   As a user, I would like to have an overall report of all the collaborators' activities.
8. <u>Weekly Report</u>
   As a user, I would like to see a weekly report of all the collaborators' activities.
9. <u>Function of Activity Percentage</u>
   As a user, I would like to see the percentage of each collaborator's activity.
10. <u>Events Separation</u>
    As a user, I would like to see a separation of events to commits, issues, and comments.
11. <u>Burndown Chart</u>
    As a user, I would like to have access to the burndown chart of the team.
12. <u>Tabs</u>
    As a user, I want to see different tabs in order to have access to general information, reports, burndown charts, and comments.
13. <u>Implement a graphing tool</u>
    As a user, I would like to see the breakdown of events into tables and charts.
14. <u>Report Type</u>
    As a user, I want to choose how the required information will be displayed. In table forms or charts, or both combined.
15. <u>Data Selection</u>
    As a user, I want to be able to select the data shown to me.

EXTRA FUNCTIONS

16. <u>Periodical Email Summaries</u>
    As a user, I want the system to send me an email with an overall summary report on activities in repositories so that I can spend less time to get an overall information on a class process.
17. <u>Time Range</u>
    As a user, I want to select the time range for the activities for the team and each person: I can select a starting date and an ending date.
18. <u>Separation by sprints</u>
    As a user, I want to specify sprints as a time range to be able group information in charts by sprints.
19. <u>Grading space</u>
    As a user, I would like to publish grades for each sprint so that the team could see it.
20. <u>Repository Description</u>
    As a user, I want to be able create my own description to each repository in my list, that I could recognize repository in my own association.
21. <u>Managing repositories</u>
    As a user, I should be able to manage repositories on my page, that I could edit list of repositories.

Architecture blocks

Block Diagram GitHub Monitor

```
        Client                              Server
     Web Browsers                         

  ┌──────────┐ ┌──────────┐      ┌──────────┐ ┌──────────┐
  │ HTML, CSS,│ │  GitHub  │ ◄─── │ GitHub API│ │   PHP    │
  │JavaScript │ │API library│      │ library  │ │Interpreter│
  └──────────┘ └──────────┘      └──────────┘ └──────────┘

              ┌──────────┐
              │  GitHub  │
              │ JSON API │
              └──────────┘
```

Tools and technologies, used:

Server side:
- PHP Interpriter
- PHP GitHub API 2.0
- Amazon Web Services (AWS)

Client side:
- HTML, CSS
- JavaScript
- Chart.js
- JQuerry.js
- GitHub.bundle.min.js

Automation testing: Travis CI.

Challenges

Feedback

What should be in the doc (delete before submission)
TA meeting:
Final report: description, US, Architectural blocks and some feedback.

Document report for Sprint 5
on description
user stories
challenges
tools used
put together your final work

Course outline:
complete report integrating all sprints of the project,
demonstration of software, and quality of application