

Project Pitch

Rock 'n Stone

Team

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Overview: The Github Miner

- Command Line Interface
- Input a link to a github repo
- Locally clone this github repo, if impossible return error.
- Run git log and instantiate a data structure holding this log.
- Gives users an overview of commands they can select
 - The statistics command gives users an overview of the various statistics they can view
 - Upon selecting a statistic, the application displays the information and (optionally) a way to sort the results
- Target users: Developers looking to investigate if a library is under active development
- Customisations from track:
 - Sorting features
 - Branch selector

Functional features

ID	Short name	Description	Champion
F1	Cloning	The user is prompted for the URL of the GitHub repository. The repository is then cloned locally, providing progress updates to the user. Upon completion, the user can see some information on the interface about the cloned repository. Once the repository is cloned, the application internally runs the `git log` command and parses the text, storing the data for later usage by the statistics.	Joachim
F2	Commands	The player can perform the following terminal commands: <ul style="list-style-type: none">- Statistic (F3)- Remove (F4)- Switch branch (F5)	Marko
F3	Statistic	The user can select a statistic to view. The statistic may optionally require user input, e.g. a "Most frequent committer of file readme.md" statistic requiring an input containing the name of the file. After selection, the application displays the information from the statistic, and an "OK" button to go back to the command overview.	Zain
F4	Removal	The user can remove the cloned repository and clear the cached git log data. After doing so, will send the user back to F1 (Cloning).	Ammar
F5	Switch branch	By default, the statistics are calculated for the default branch. Using this command, users can optionally switch to a different branch.	Ammar

Statistic calculating features

ID	Name	Arguments	Sorting options	Description	Champion
1	Most active contributors	None	# of commits, # of LOC changed	Displays a sorted ranking of contributors	Joachim
2	Most active branches	None	# of commits, # of LOC changed	Displays a sorted ranking of branches	Joachim
3	Most active weekdays	None	# of commits, # of LOC changed	Displays a sorted ranking of weekdays	Ammar
4	Most active files	Username	# of commits, # of LOC changed	Displays a sorted ranking of files modified by that contributor	Marko
5	File owners	Filename	None	Displays a ranking of contributors, sorted by amount of LOC changed in the specified file	Zain
6	(Bonus) Role assignments	None	None	Gives gimmicky roles to the contributors like “night-owl” for contributor who committed most at night or “quality controller” for the contributor with the smallest commits. (not all contributors get a role if none are left)	TBD

Quality requirements

ID	Short name	Quality attribute	Description
QR1	Commands sanity checks	Reliability	When the user issues a command, the syntax of the command shall always be validated against the format specified in F2.
QR2	Fault recovery	Reliability	If the calculation of a statistic fails, the program should continue running.
QR2	Extensible deck	Maintainability	Statistics must be easy to add without having to change much of the code anywhere else.
QR3	Swift results	Performance	After inputting the command, the results must be available within a reasonable amount of time (relative to the size of the GitHub repository). However, indication of program running must be continuous, with at most 3 seconds passing without screen change to indicate that the program is still running.
QR4	Gradable executables	Portability & Compatibility	Linus must be able to run a functional build on any desktop operating system (macOS, Windows, Linux) (provided he has access to internet) for grading purposes.
QR5	Warning lines	Security	Cloning a repo is not without risk as is downloading anything, a warning must be displayed

Time log

Link to time log sheet:

<https://docs.google.com/spreadsheets/d/1eIHycs2gljRIZh0U-i5gef7cc0MEg-dnicOxgldsOs4/edit#gid=0>

Signed contract

Link to team contract:

https://docs.google.com/document/d/1OEtQ4DqmPR_q7asnHpdcscNMxFSFFdnvz8iRVpavDy4/view