Project pitch

RepoRangers

VU — VRIJE UNIVERSITEIT AMSTERDAM

Team

Name	Student number	Email
Ewa Kaleta	2745573	e.k.kaleta@student.vu.nl
Naomi Maronic	2740042	n.maronic@student.vu.nl
Vincent Kohm	2726735	v.n.kohm@student.vu.nl
Zohaib Zaheer	2735075	z.zaheer@student.vu.nl

Overview

GitHubMiner is a system that allows the user to clone and analyze a GitHub repository by using a command-line interface. The primary type of users we target are developers, programmers and overall Github users - mostly people familiar with programming as the design (CLI) is easier for them. The system allows access to public and private repositories (after authentication). At first, the user is prompted for a URL to the repo they want to analyze. After the authentication (if applicable) and check whether the URL is correct, the repo is cloned. The user can perform various actions to extract information about the repository (listed on the next slide). The user can quit/restart the system by using an appropriate command, which will result in deleting the currently analyzed repository. Additionally, it is also possible to generate a report with the information extracted by the system.

In short, the process goes as follows:

- The user provides the repo URL
- Repo is cloned, and the user can track the progress of the cloning.
- The user can extract various information about the repo by using appropriate commands.
- The user can quit (to close the app completely) or restart (to go back to the starting screen). Those commands will also trigger the action to delete the repo from the system.

Functional features

ID	Short name	Description	Champion
F1	Setup + interface	The user can add a GitHub repository to the system by providing the URL of the repo. The user should be able to track the progress of the cloning of the repository. After the setup is done the user should be able to perform different commands using a command-line interface. After quitting/restarting the system the repo will be deleted from the system and the user should be able to go back to the starting screen and start again with a new repo.	Ewa
F2	Commands	The user can mine different information from the github repo by issuing command-line instructions following this syntax: **command** + [**target**]* + [**arguments**]*, where the (*) indicates that the parameter is optional. The available commands are the following: ● **ranking + [commits, contributors]*** ○ commits arguments - **[churn, recent]*** ○ contributors arguments - **[commits, weekend, time, weekdays]*** ● **stats + [commits, contributors, files]*** ● **commits** ● **history** ● **help** ● **restart** ● **quit**	Naomi

Functional features

ID	Short name	Description	Champion
F2B	Report (BONUS)	• The user can generate a report of chosen metrics by typing the command **[report]**, the user is also able to choose what they want to include in the report. The information that can be included in the report are those provided by the commands [**ranking, stats, history, commits**]. The report will be generated as a new txt file.	Vincent
F3B	Authentication (BONUS)	• The user can add their private repositories to the system by logging into their GitHub account first. After a successful log-in a link to private repo can be provided, otherwise only public repo can be accessed.	Zohaib

Quality requirements

ID	Short name	Quality attribute	Description
QR1	Authentication	Confidentiality	The Program will not yield information of private repositories unless the user authenticates themselves and has been granted access
QR2	Availability	Availability	The System is available at all times, based on the premise of a stable Internet Connection.
QR3	Instantaneous results	Performance	After cloning the repository, displaying the metrics chosen by the user will not take more than 500 ms.
QR4	Independence of commands	Modularity, Modifiability	All commands are independent of each other and thus enable the addition and deletion of singular commands.
QR5	Notification	User error protection	In case a user enters an invalid URL, the system will notify them and ask for a correction.
QR6	Portability	Portability	The program runs on all major operating systems, namely linux, windows and ios.
QR7	Accuracy	Integrity	The program will output accurate and truthful information about the chosen metrics.

Time log

Our team *RepoRangers* is planning to have weekly meetings on Thursday 1330h to discuss our user stories. During this meeting we will assign different tasks to different group members. This approach is inspired by the *Scrum methodology*

Team number			61	
Member	**Activity**		**Week number**	**Hours**
Zohaib	Prelimirary feasability research		1	3
Ewa	Added functional requirements and prototype design of the system		1	3
Naomi	Define functional and quality features and checking the ISO standards and defining stakeholders		1	3
Vincent	Created a collaboration space for the team and added quality requirements and defined stakeholders		1	3
			TOTAL	12

Signed contract

SD Team Contract