Assignment 9: Individual Requirements Analysis

Noah Frew

Introduction

This document is intended to present an analysis of the requirements needed to create an application that can be used to measure and present the health and sustainability of open source programs. This will help technology companies and IT organizations assess which open source programs are worth investing time and resources in.

Software Product Overview

This program should give the user the ability to pull data from repositories and present them in an easy-to-read and straight-forward way while also displaying the necessary metrics. The important metrics to be considered but not limited to should be top committers, new contributors over time, number of forks, open issues, and issue respond time.

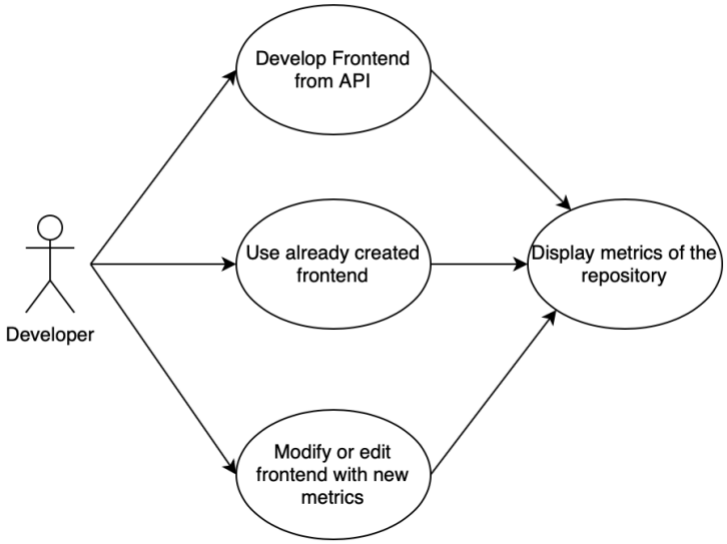
System Use

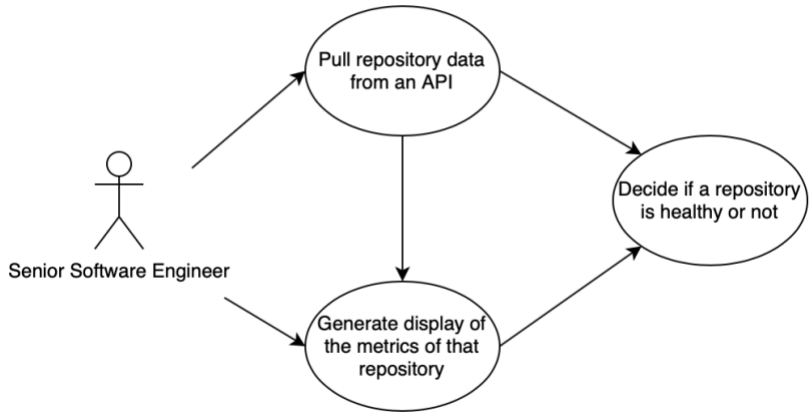
Actor Surveys

Frontend Developers
The user tasked with creating a frontend display for the metrics at hand whether that be with graphs, charts, diagrams, etc. using the respective API from whatever repository they plan to display.

Data Analyst Teams
These actors use the system to assess if an open source project is healthy and worth investing in using the provided display of metrics collected through the system. They can make decisions based off of their findings from these metrics after installing the system and using it.

System Requirements





Requirements

- Framework for frontend
- Framework for API
- Database Platform
- Access to GitHub
- IDE with web development support

Functional Specifications

- Ability to pull data into database for generating data metrics from repository
- System is able to be put on a local machine or server
- Ability to display metrics through a consistent frontend

Design Constraints

Some constraints to consider are the web application should be designed to work on mobile and a computer, multiple presentations of ways to look at the data should be implemented such as different types of graphs and charts, colors and design should be specifically designed to be more accessible for those visually impaired, the backend should be able to run on any operating system, the web application should also be available on all browsers, and the design should be consistent when going from page to page.

Purchased Components

An instance of some sort is required to run the webpage off of (example AWS ec2).

Interfaces

A web application interface is needed to host frontend information and display metrics.