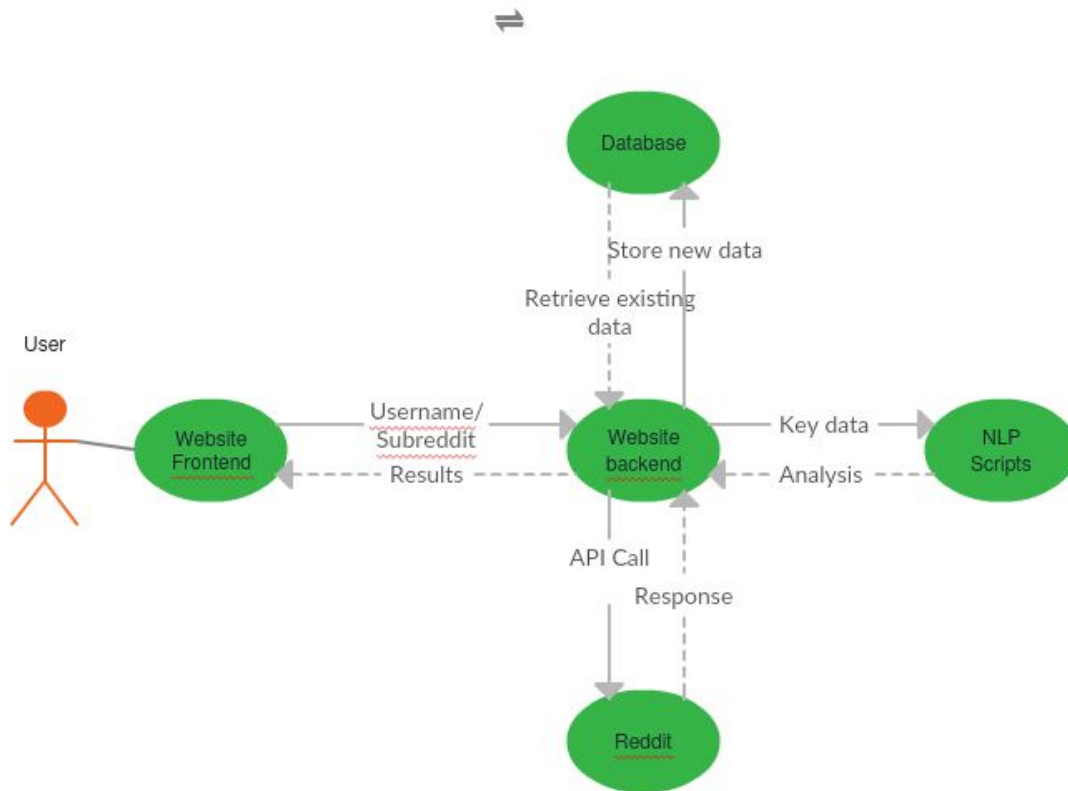


Reddit Reaper - Use Case Discussion



Combination UML Diagram

Reddit Reaper has two core functionalities, both of which operate on the same basic model. A user interacts with Reddit Reaper by loading the website, where they are given the option to submit either a subreddit or a username for analysis. Reddit Reaper then makes an API call if data is needed, then analyzes that data using NLP scripts, statistics, and mathematics, then stores the data. Finally, the output is presented to the user on the website. If the data required was already stored, from either a previous identical request or a database population effort, then the website backend simply retrieves it from the database and presents it to the user. While the user may have any number of reasons for requesting the specific analysis that they do, delivering that analysis is the one and only function of this project.

While users may in fact be interested in only certain pieces of analysis, the time it would take to select specific desired outputs could easily eclipse the extra processing time as well as needlessly complicate matters. Moreover, the goal of Reddit Reaper is to provide unexpected insight, which will only be more difficult if users limit the information provided to them. Thus, the program has only two straightforward uses.

Basic Use Case 1:

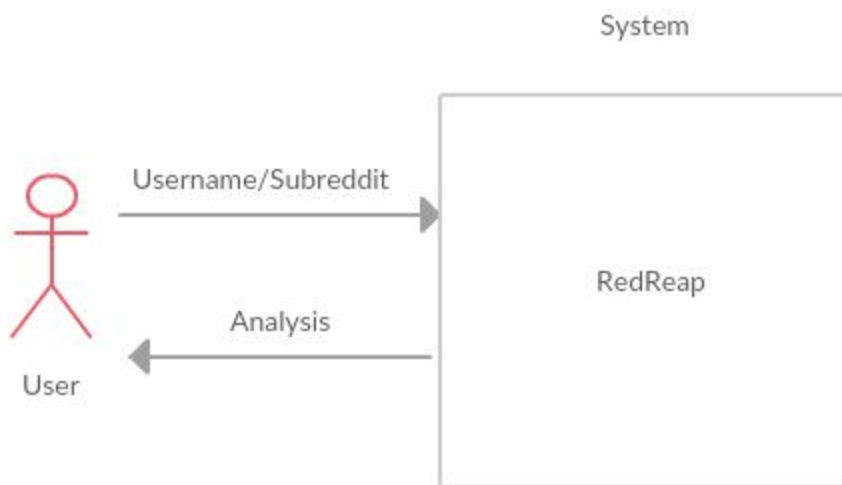
"I want to see analysis on my Reddit account."

1. Access RedReap website
2. Enter Reddit account username for analysis
 - a. Goes into a labelled text field, press enter or click button to start
3. Wait for data to be retrieved/analysis to be performed
 - a. Loading icon/information will be displayed
4. Website displays data and analysis on requested user
 - a. This information is generally organized by category
 - b. Sidebar links on the display page allow quick access to categories
 - c. Some graphs and tools can be interacted with by the user
5. Use top bar of website to return to main page for a new analysis

Basic Use Case 2:

"I want to see analysis on a subreddit."

6. Access RedReap website
7. Enter subreddit name for analysis
 - a. Goes into a labelled text field, press enter or click button to start
8. Wait for data to be retrieved/analysis to be performed
 - a. Loading icon/information will be displayed
9. Website displays data and analysis on requested subreddit
 - a. This information is generally organized by category
 - b. Sidebar links on the display page allow quick access to categories
 - c. Some graphs and tools can be interacted with by the user
10. Use top bar of website to return to main page for a new analysis



Basic Use Case Diagram

Detailed Use Case 1:

1. Access Reddit Reaper website
2. Enter Reddit account username
 - a. Username is sent to backend
 - i. Check if user has already been analyzed recently
 - b. If not already analyzed:
 - i. Make API call for user submissions and comments
 - ii. Compile basic statistics and metadata
 - iii. Analyze compiled data
 - iv. Send comments/submissions to NLP scripts for analysis
 - v. Store all compiled data and analysis into database entry for user
 - vi. Send data to frontend
 - c. If already analyzed:
 - i. Access data and analysis on user from database
 - ii. Send data to frontend
3. Website displays data and analysis on requested Reddit account
 - a. While waiting for information from backend, display loading indication and information
 - i. Loading icon, time estimate if possible
 - b. Once data is available, load analysis display page
 - i. Also load a sidebar that can be used to jump between sections
 - c. Can return to main page and thus return to Step 1

Detailed Use Case 2:

1. Access Reddit Reaper website
 - a. Click on top bar option for "Subreddit Analysis"
2. Enter subreddit name
 - d. Subreddit name is sent to backend
 - i. Check if subreddit has already been analyzed recently
 - e. If not already analyzed:
 - i. Make API call for subreddit submissions and comments
 - ii. Compile basic statistics and metadata
 - iii. Analyze compiled data
 - iv. Send key data to NLP scripts for analysis
 - v. Store all compiled data and analysis into database entry for subreddit
 - vi. Send data to frontend
 - f. If already analyzed:
 - i. Access data and analysis on subreddit from database
 - ii. Send data to frontend

4. Website displays data and analysis on requested Reddit account
 - a. While waiting for information from backend, display loading indication and information
 - i. Loading icon, time estimate if possible
 - b. Once data is available, load analysis display page
 - i. Also load a sidebar that can be used to jump between sections
 - c. Can return to main page and thus return to Step 1
 - i. Can also go directly back to subreddit analysis page

Possible variations on use cases:

1. Requested user or subreddit does not exist
 - a. Display error, return to main page
2. User wants most recent possible analysis
 - a. After website displays requested analysis retrieved from database, display option to make a new API call and perform new analysis
3. User accidentally requests analysis on wrong subject, or otherwise changes their mind
 - a. Display button to cancel ongoing analysis
4. User or subreddit exists, but has limited data e.g. no comments
 - a. Display notice along with affected analyses
5. Website is out of API requests temporarily
 - a. Return error
 - b. Give option to wait or to authenticate through Reddit
6. Website is under heavy load and can't process data
 - a. Return error, do not attempt to process new requests
7. Portion of analysis fails
 - a. Catch error internally
 - b. Continue on to produce and display other analyses
 - c. Display error for affected section

Example UML Sequence Diagram:

