



Software Engineering project

Fresh Off the World

JAN 2021 - April 2021

Link to Github Repo: <https://github.com/ChetanSinha/Fresh-Off-the-World>

Developed BY:

1. Anugunj Naman - 1801022
2. Chetan Sinha - 1801046



Contributions:

- *Anugunj Naman 1801022:*
 - UI Front End Implementation
 - Documentation for SRS and DFD
 - Black Box Testing and Debugging.
 - Implementing a few bits in Back-End for Reddit.

- *Chetan Sinha 1801046:*
 - Implementation of all the functional requirements.
 - Back End Implementation for Reddit and News API.
 - Documentation for SRS and DFD.
 - Snapshot Testing.



Purpose

This application aims to provide a simple interface for the latest news and social media trends around the world in a single place.



Scope

The scope of this application is broad, ranging from millennials to baby boomers. Each generation likes specific kinds of news and the latest trends, and over time, they all find their sources. We here provide all those sources combined without the need to venture out to multiple sources.



Project Introduction

Existing System:

The present systems out there provide news in a summarised fashion but lacks several key points:

1. Since the current world is the world of social media; they play a big role in providing information about the latest news and trends. This factor is not present in the current system.
2. There is no option to select the specific news source from which one likes to hear their news. Everyone has a news source from which they want to get daily news.
3. There is no option to view a different country's latest news and social media trends. Most of the existing application caters to a particular country
4. Most of the existing application has an element of privacy risk. The personal data collected by these existing applications might sometimes be hacked or used for malpractices.

Proposed System:

The proposed system aims to solve the problems mentioned above in the existing system.

1. *Our system provides an option to choose your news source from over 100 different outlets.*
2. *The current world is social media. We want to include it in our system; therefore, we provide an interface for the latest trends and news from different social media channels such as Reddit.*
3. *There is also an option to provide news and latest trends based on country, making our system universal compared to other systems.*
4. *Since we are not collecting any personal data, this is a secure application compared to other alternatives. All the processes are on-device.*

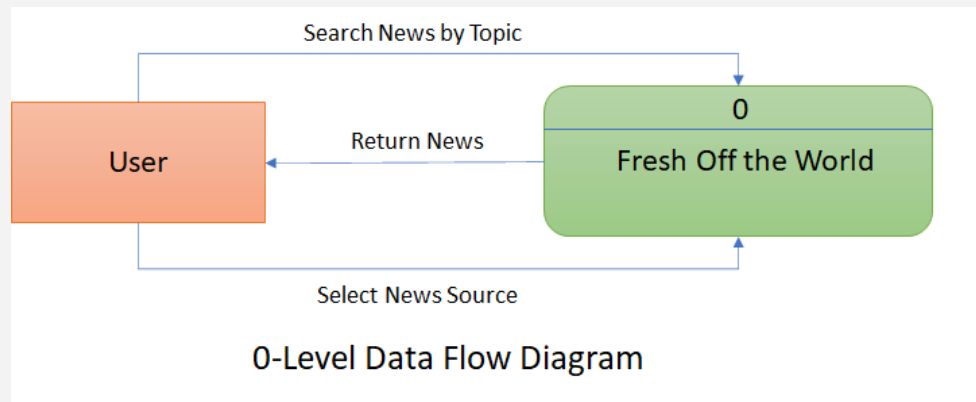


Advantages for Users

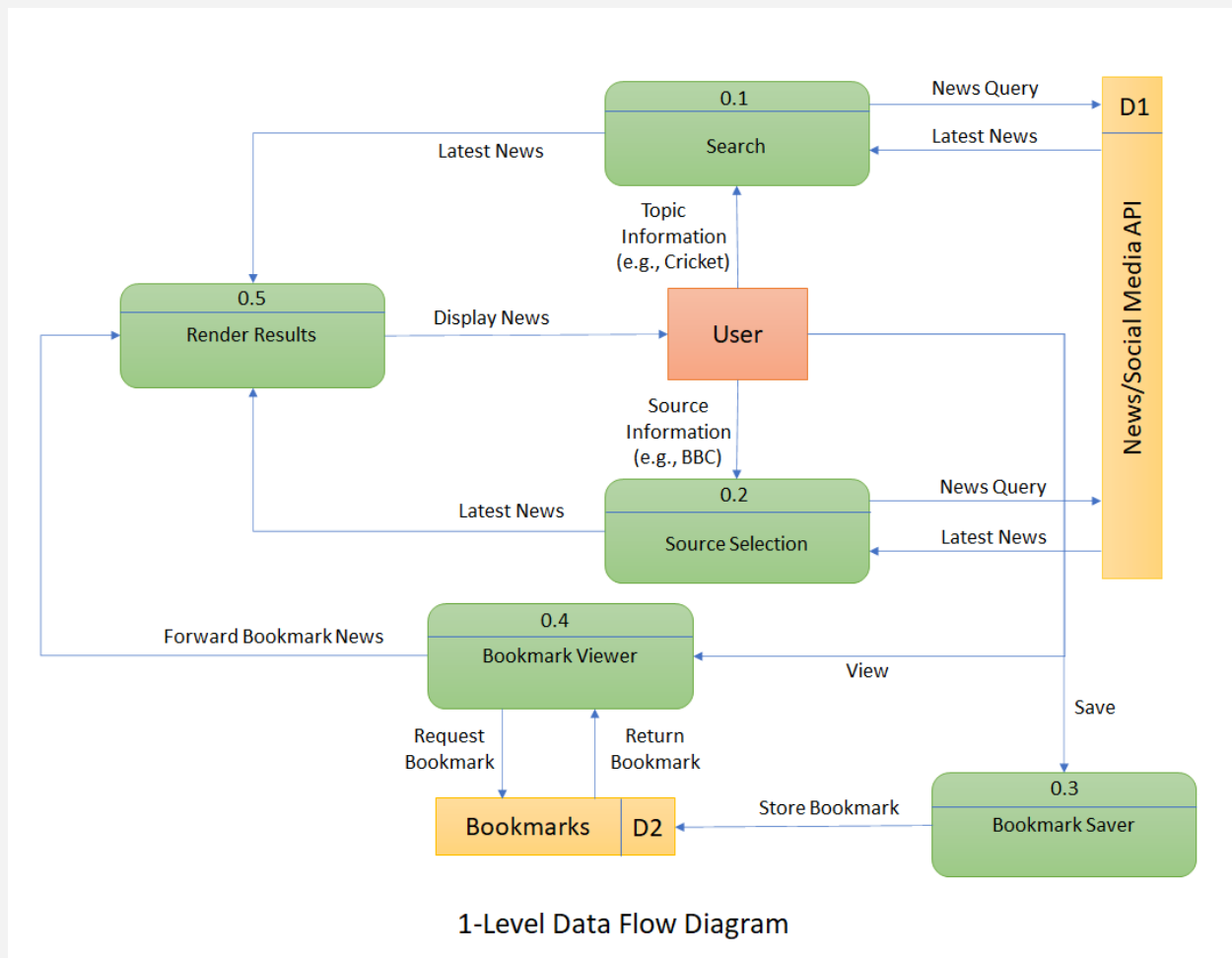
1. Time and Cost Saving: We provide news and latest trends from a large variety of sources and social media channels. So, one does not have to access multiple applications to get their daily dose of such news and trends.
2. Ease of Access: The users can easily access news and trends on the fly, whether they are on their way to work, or their morning run, or at breakfast. Anytime Anywhere.
3. Range of Users: There is content for each age group and generation, from millennials to baby boomers.
4. Flexibility: Large variety of news sources and social media channels provide flexibility to decide your content sources.
5. Independent of Location: We provide news for more than 60 countries making our system universal for our users. Your location does not need to be your limitation for your daily dose of news.
6. Privacy: Since we are not collecting any personal data, and all the processes are on-device, this provides security and privacy to our users.

Data Flow Diagram

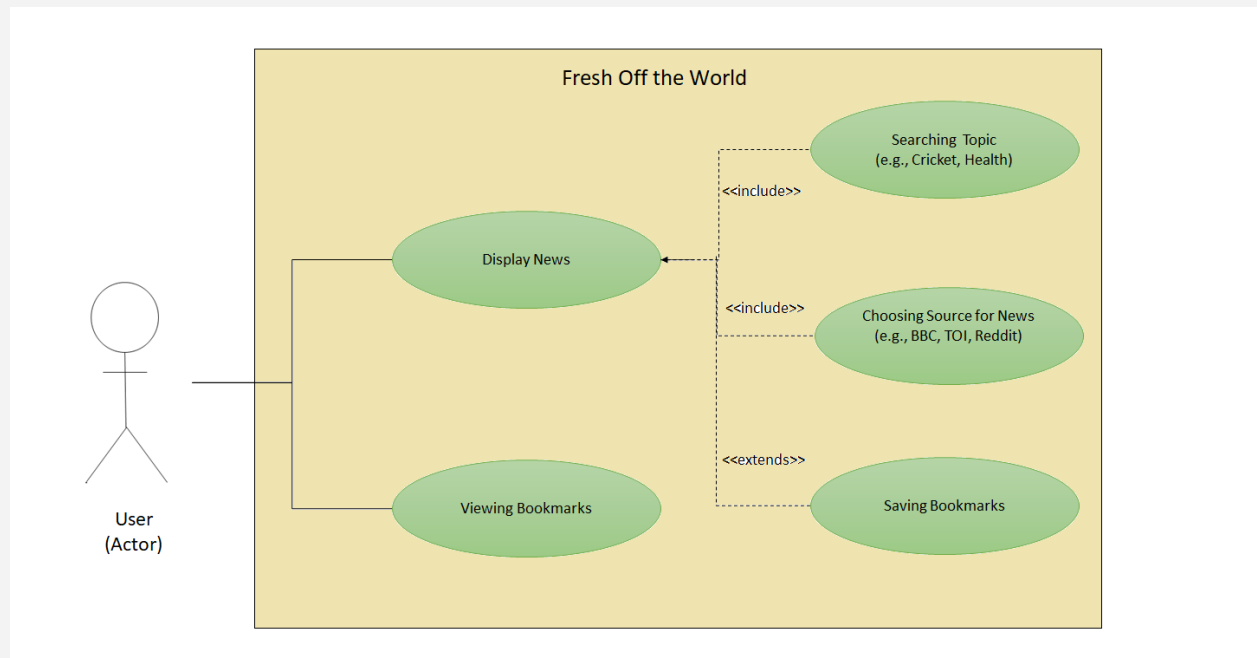
⇒ Context Diagram (Level - 0 DFD) :



⇒ Overview Diagram (Level -1 DFD) :



Use Case Diagram



Requirements

Functional Requirements:

1. Option to choose your news source and social media channels that cater to your needs.
2. Option to search for particular topics or trending threads.
3. Option to filter news according to your choice of country.
4. Option to bookmark news articles and posts for future reference using local on-device storage.
5. Option to share news articles and posts with friends and family.
6. Option to view news articles and posts in detail at their respective sources.

Non - Functional Requirements:

1. A sleek and intuitive user interface.
2. Flexibility to run on any version of android and iOS devices.
3. Better design for better optimization for android and iOS devices



Implementation

➤ *Waterfall Model* : To implement the System we followed Waterfall Model steps :

1. In the first Phase, we gathered all possible requirements of the system to be developed and finalized the tech Stack and created an SRS document.
2. In the Second Phase, We created a Data Flow Diagram and Use Case Diagram(Prepared System Design).
3. In the Next Phase (Implementation Phase), We started implementing the application in small parts starting from working model for backend to UI
4. In the Next Phase (Testing Phase), We did the testing of React Native App using Jest and finally did Black Box testing for the application.
5. In the Next Phase (Deployment) , we created an apk file.

➤ *Technology Stack :*

1. Client: Any android or iOS mobile device.
2. Development Tools: Visual Studio Code, Git, Expo Client
3. Programming Language: Javascript
4. Framework: React Native with Native Base



Testing

Snapshot Testing : Snapshot tests are a very useful tool whenever you want to make sure your UI does not change unexpectedly. A typical snapshot test case renders a UI component, takes a snapshot, then compares it to a reference snapshot file stored alongside the test.

We have five major UI Components here:

1. Bookmarks: This component here renders the Bookmarks page where the stored bookmarks can be viewed.
2. General: This is the main trending page summarizing from all the sources.
3. Specific: This renders the page for a specific news source. The news related from that source is displayed
4. RedditTrends: This renders the page for reddit as a news and information page. The news from that subreddit is displayed
5. SearchTopic: This renders the page when searching for a specific query. The news related to that query is displayed.


```
Administrator: Command Prompt

D:\Trend-Info>npm test

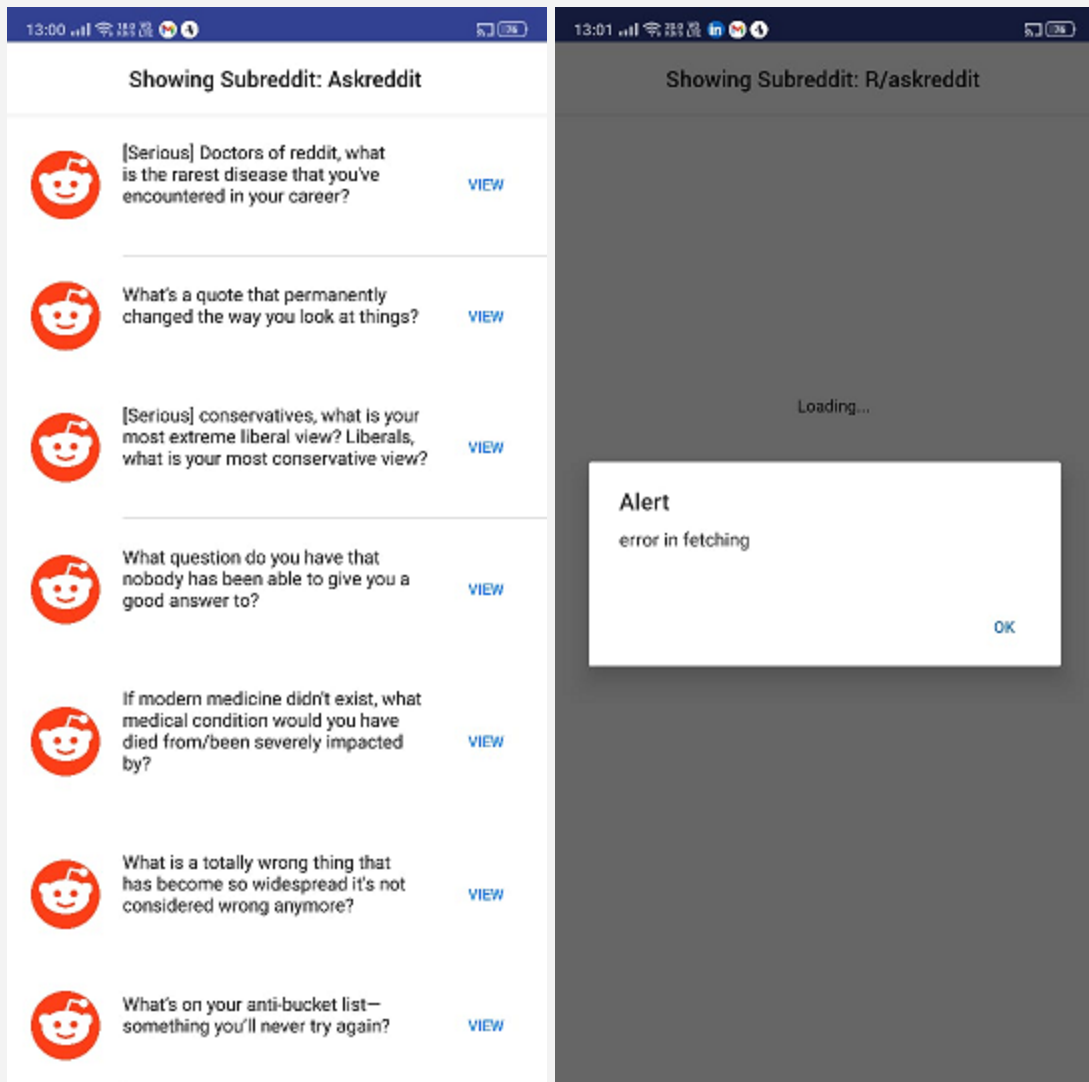
> @ test D:\Trend-Info
> jest









PASS  __tests__/General.test.js
PASS  __tests__/RedditTrends.test.js
PASS  __tests__/SearchTopic.test.js
PASS  __tests__/Specific.test.js
PASS  __tests__/Bookmarks.test.js

Test Suites: 5 passed, 5 total
Tests:       5 passed, 5 total
Snapshots:   5 passed, 5 total
Time:        4.476s, estimated 7s
Ran all test suites.

D:\Trend-Info>
```

- **Black Box Testing:** Black box testing is used to test the system against external factors responsible for software failures. This testing approach focuses on the input that goes into the software, and the output that is produced. Since there is scope for input at only two places that is when you search for subreddit or search news by query. The testing has been done manually here. Originally we ran over 100 random queries in the past two days. Since API has a limit for query we cannot go further using the developer plan at NewsAPI. Few screenshot



Showing Subreddit: Abdhdjnah	Showing Subreddit: Batman
<p>Sorry! No Results Found :(</p>	<div data-bbox="857 247 927 317"></div> <div data-bbox="948 247 1252 275">Weekly Batman Comics (4/27/2021)</div> <div data-bbox="948 281 1252 317">Hey there, citizens of Gotham. Welcome to our [Weekly Batman Comics Thread](...</div> <div data-bbox="1292 268 1333 289">VIEW</div> <hr/> <div data-bbox="857 373 927 443"></div> <div data-bbox="948 365 1219 413">Batman Beyond Rewatch - S2E12 "Babel"</div> <div data-bbox="948 411 1198 453">**Welcome to the Batman Beyond Rewatch!**...</div> <div data-bbox="1292 396 1333 417">VIEW</div> <hr/> <div data-bbox="857 506 927 575"></div> <div data-bbox="948 504 1235 552">One of the rarest occasions where Batman seems happy and content.</div> <div data-bbox="1292 527 1333 548">VIEW</div> <hr/> <div data-bbox="857 625 927 695"></div> <div data-bbox="948 623 1255 672">[Fan Art] The Caped Crusader. By me. Hope you like it.</div> <div data-bbox="1292 646 1333 667">VIEW</div> <hr/> <div data-bbox="857 747 927 816"></div> <div data-bbox="948 743 1230 791">It is insane how good Batman: The Animated Series is.</div> <div data-bbox="948 789 1256 831">I've been doing a light rewatch on HBOMax, a little here, a little there. I just ...</div> <div data-bbox="1292 774 1333 795">VIEW</div> <hr/> <div data-bbox="857 869 927 938"></div> <div data-bbox="948 882 1094 909">My wedding cake</div> <div data-bbox="1292 892 1333 913">VIEW</div> <hr/> <div data-bbox="857 991 927 1060"></div> <div data-bbox="948 980 1245 1047">I work at a comic shop. Been buying collections all day, including these beauties.</div> <div data-bbox="1292 1012 1333 1033">VIEW</div> <hr/> <div data-bbox="857 1113 927 1182"></div> <div data-bbox="948 1121 1242 1148">Scarecrow in the Dark Knight trilogy</div> <div data-bbox="1292 1131 1333 1152">VIEW</div>

Showing Trendings for: Cricket	Showing Trendings for: Bengal election
<div data-bbox="310 289 383 363"></div> <div data-bbox="402 247 657 310">Cricket: Pollard steers Mumbai to last-gasp IPL win over Chennai</div> <div data-bbox="402 315 657 373">Kieron Pollard hit an unbeaten 87 off 34 balls to power Mumbai Indians to a thrilling four-wicket In...</div> <div data-bbox="402 386 560 405">CNA 12 hours ago</div> <div data-bbox="703 317 740 333">VIEW</div> <div data-bbox="781 233 808 268"></div>	<div data-bbox="854 289 927 363"></div> <div data-bbox="946 247 1201 310">West Bengal election result 2021: 'Still hopeful we will win,' says BJP chief Dilip Ghosh</div> <div data-bbox="946 315 1201 373">West Bengal election result 2021: When asked who will take responsibility for the party's loss, ...</div> <div data-bbox="946 386 1179 405">Business Today an hour ago</div> <div data-bbox="1247 317 1284 333">VIEW</div> <div data-bbox="1325 233 1352 268"></div>
<div data-bbox="310 499 383 573"></div> <div data-bbox="402 457 657 520">Cricket: Kane Williamson replaces David Warner dumped as IPL captain</div> <div data-bbox="402 525 657 583">Australian opener David Warner has been dumped as captain of Indian Premier League side Sun...</div> <div data-bbox="402 596 678 615">New Zealand Herald 14 hours ago</div> <div data-bbox="703 527 740 543">VIEW</div> <div data-bbox="781 443 808 478"></div>	<div data-bbox="854 499 927 573"></div> <div data-bbox="946 457 1201 520">As TMC takes lead in Bengal, BJP says early trends not real indicator of election outcome</div> <div data-bbox="946 525 1201 583">Even as the ruling TMC surged ahead of challenger BJP in Bengal, leading in over 100 seats, BJP nati...</div> <div data-bbox="946 596 1146 615">India Today an hour ago</div> <div data-bbox="1247 527 1284 543">VIEW</div> <div data-bbox="1325 443 1352 478"></div>
<div data-bbox="310 730 383 804"></div> <div data-bbox="402 667 657 772">Mumbai Indians vs Chennai Super Kings Live Score Ball by Ball, IPL 2021 Live Cricket Score Of Today's Match on NDTV Sports</div> <div data-bbox="402 777 657 835">Live Updates of Today Match between Mumbai Indians vs Chennai Super Kings from Arun Ja...</div> <div data-bbox="402 848 617 867">NDTV News 14 hours ago</div> <div data-bbox="703 758 740 774">VIEW</div> <div data-bbox="781 653 808 688"></div>	<div data-bbox="854 730 927 804"></div> <div data-bbox="946 667 1201 730">West Bengal election results, COVID, Q4 earnings to set market's tone this week</div> <div data-bbox="946 735 1201 793">On the futures and options front, traders enthusiastically bought out-of-money call options of Nifty5...</div> <div data-bbox="946 806 1198 825">The Times of India an hour ago</div> <div data-bbox="1247 737 1284 753">VIEW</div> <div data-bbox="1325 653 1352 688"></div>
<div data-bbox="310 972 383 1045"></div> <div data-bbox="402 919 657 1024">Mumbai Indians vs Chennai Super Kings: IPL 2021 Live Cricket Score, Live Score Of Today's Match on NDTV Sports</div> <div data-bbox="402 1029 657 1087">Live Updates of Today Match between Mumbai Indians vs Chennai Super Kings from Arun Ja...</div> <div data-bbox="402 1100 617 1119">NDTV News 14 hours ago</div> <div data-bbox="703 1001 740 1018">VIEW</div> <div data-bbox="781 905 808 940"></div>	<div data-bbox="854 930 927 1003"></div> <div data-bbox="946 877 1201 940">West Bengal Election Results 2021: Suvendu Adhikari leads, Mamata Banerjee trails in Nandigram</div> <div data-bbox="946 945 1201 1003">Bengal Election Results 2021: Suvendu Adhikari was a TMC veteran who switched to BJP last ...</div> <div data-bbox="946 1016 1179 1035">Business Today 3 hours ago</div> <div data-bbox="1247 959 1284 976">VIEW</div> <div data-bbox="1325 863 1352 898"></div>
<div data-bbox="310 1161 383 1186"></div> <div data-bbox="402 1150 657 1186">Mumbai Indians vs Chennai Super Kings: IPL 2021 Live Cricket Score, Live Score Of Today's Match on NDTV Sports</div> <div data-bbox="402 1190 657 1249">Live Updates of Today Match between Mumbai Indians vs Chennai Super Kings from Arun Ja...</div> <div data-bbox="402 1262 617 1281">NDTV News 14 hours ago</div> <div data-bbox="703 1211 740 1228">VIEW</div> <div data-bbox="781 1127 808 1163"></div>	<div data-bbox="854 1140 927 1186"></div> <div data-bbox="946 1108 1201 1171">Bengal Election Result 2021: 10 things you need to know</div> <div data-bbox="946 1176 1201 1194">West Bengal Assembly Election Result 2021: Suvendu Adhikari leads, Mamata Banerjee trails in Nandigram</div> <div data-bbox="946 1207 1179 1226">Business Today 3 hours ago</div> <div data-bbox="1247 1169 1284 1186">VIEW</div> <div data-bbox="1325 1094 1352 1129"></div>



Back End Implementation for Reddit and News API.