

Django News Aggregator Backend

Introduction:

In this backend API work project, In this application, the New Aggregator is implemented to fetch the data from the two different APIs, the source of the data is Reddit and News API. The application works on both APIs fetching the results from the sources and returning the data in JSON format. With some additional features in the work, I developed and implemented a function that takes any news to give in any user's favorite news. And also we can get the data from the specific user name and news id.

PART I :

In this part, we build the two functionalities, one is to get the News from both source APIs, with a distinct number of news (not repeated the same), and also update all the data to our DB system. So, when we get the data from the sources we mark the label of source in each News data that from which API it's come from. And the second feature is to get the listed data from a specific topic name. The results of API get is in a simple format of JSON with three labels/keys. Which identifies the value/name it.

```
1  {
2    {
3      "headline": "Transfer news LIVE: Man Utd's De Jong disagreement, new Arsenal bid, Chelsea make offer - Express",
4      "link": "https://www.express.co.uk/sport/football/1627371/Transfer-news-LIVE-Man-Utd-Frenkie-de-Jong-Liverpool-Fabio-Vieira-Arsenal-gossip-rumours",
5      "source": "newsapi"
6    },
7    {
8      "headline": "Rail and tube strikes confirmed as talks fail - BBC",
9      "link": "https://www.bbc.co.uk/news/uk-61852286",
10     "source": "newsapi"
11   },
12   {
13     "headline": "Ukraine-Russia war latest: Putin victory would be a 'CATASTROPHE' says Boris as 'fatigue setting in' for Uk... - The Irish Sun",
14     "link": "https://www.thesun.ie/news/8910728/ukraine-russia-war-latest-news/",
15     "source": "newsapi"
16   },
17   {
18     "headline": "Workers can't expect pay rises to keep up with soaring cost of living, Treasury warns - The Independent",
19     "link": "https://www.independent.co.uk/independentpremium/uk-news/cost-of-living-pay-rise-inflation-b2104146.html",
20     "source": "newsapi"
21   },
22 }
```

In the above figure 01: The fetch data from the API is shown.

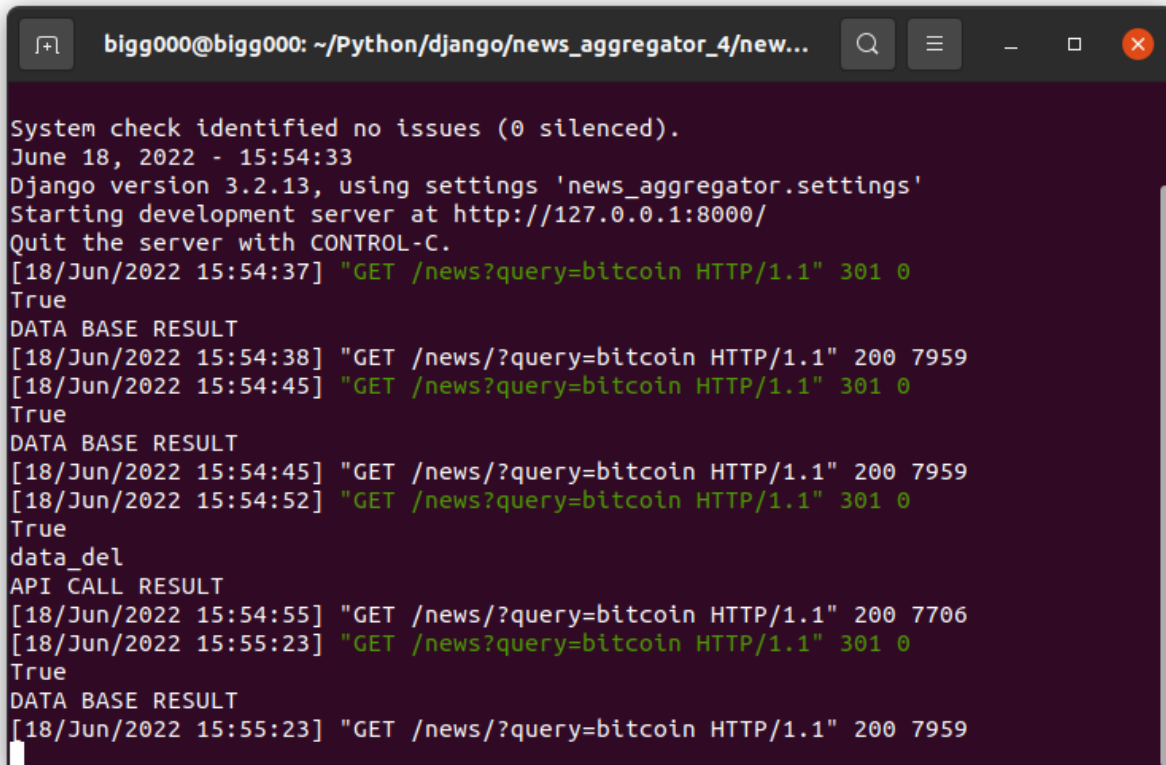
```
1  {
2    {
3      "id": 705,
4      "headline": "Crypto carnage: Bitcoin breaks $19k, Ethereum below $1k - Moneycontrol",
5      "link": "https://www.moneycontrol.com/news/business/cryptocurrency/crypto-carnage-bitcoin-breaks-19k-ethereum-below-1k-8704271.html",
6      "source": "newsapi"
7    },
8    {
9      "id": 706,
10     "headline": "Bitcoin drops below US$20000 to lowest since December 2020 - CNA",
11     "link": "https://www.channelnewsasia.com/business/bitcoin-drops-below-us20000-lowest-december-2020-2755381",
12     "source": "newsapi"
13   },
14   {
15     "id": 707,
16     "headline": "Bitcoin price plunges through important milestone, amid fears of further crypto collapse - The Independent",
17     "link": "https://www.independent.co.uk/tech/crypto-price-bitcoin-collapse-latest-b2104033.html",
18     "source": "newsapi"
19   },
20 }
```

In figure 02: The data is showing the results on a specific topic name.

PART II :

In this section of the program, we are achieving some additional features of News Expiration Time. Like if we hit the API so data will fetch and updated on DataBase, next time we fetch the data it will come from the DataBase, not from the API, so when data is updated on DataBase the time limit expiry will start and when it hits limited time the data will remove from the DataBase and Call it again from the API, So the time limit of expiry is 30 seconds if data is been requested in under 30 sec the results will fetch from the DataBase but after time hits the data is deleted from the DataBase and again requested from the API.

In the below figures, The Data is showing the results from where it's been called and when it's expired.



```
bigg000@bigg000: ~/Python/django/news_aggregator_4/new...
System check identified no issues (0 silenced).
June 18, 2022 - 15:54:33
Django version 3.2.13, using settings 'news_aggregator.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
[18/Jun/2022 15:54:37] "GET /news?query=bitcoin HTTP/1.1" 301 0
True
DATA BASE RESULT
[18/Jun/2022 15:54:38] "GET /news/?query=bitcoin HTTP/1.1" 200 7959
[18/Jun/2022 15:54:45] "GET /news?query=bitcoin HTTP/1.1" 301 0
True
DATA BASE RESULT
[18/Jun/2022 15:54:45] "GET /news/?query=bitcoin HTTP/1.1" 200 7959
[18/Jun/2022 15:54:52] "GET /news?query=bitcoin HTTP/1.1" 301 0
True
data_del
API CALL RESULT
[18/Jun/2022 15:54:55] "GET /news/?query=bitcoin HTTP/1.1" 200 7706
[18/Jun/2022 15:55:23] "GET /news?query=bitcoin HTTP/1.1" 301 0
True
DATA BASE RESULT
[18/Jun/2022 15:55:23] "GET /news/?query=bitcoin HTTP/1.1" 200 7959
```

PART III :

In this, part the featured function is utilized in the manner of saving any news in favourite by the User and News ID. So In that manner, the user can easily get all the news from its favorite list and easily can remove any favorite news from its list.

In the below figures, we are showing the demonstrated way of getting results.

KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/> user	danial			
Key	Value	Description		

Body Cookies Headers (7) Test Results

Status: 200 OK Time: 18 ms Size: 1.51 KB Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   {
3     "id": 637,
4     "headline": "Bitcoin drops below US$20000 to lowest since December 2020 - CNA",
5     "link": "https://www.channelnewsasia.com/business/bitcoin-drops-below-us20000-lowest-december-2020-2755381",
6     "source": "newsapi"
7   },
8   {
9     "id": 638,
10    "headline": "Bitcoin price plunges through important milestone, amid fears of further crypto collapse - The Independent",
11    "link": "https://www.independent.co.uk/tech/crypto-price-bitcoin-collapse-latest-b2104833.html",
12    "source": "newsapi"
13  },
14  {
15    "id": 639,
16    "headline": "@nerd_for_crypto : Keep Up With Crypto in Just Minutes - Cut through the fluff and noise, get your crypto news in concise Key Bullet Points #cryptonews #nft #ether #altcoin #web3 #crypto #bitcoin #blockchain #cryptocurrency #polygon #binance #metaverse #defi #fintech #dao https://t.co/q3urPyduRh",
17    "link": "https://twitter.com/nerd_for_crypto/status/1538172869565468674",
18    "source": "redditt"
19  },
20  {
21    "id": 644,
22    "headline": "@nerd_for_crypto : Keep Up With Crypto in Just Minutes - Cut through the fluff and noise, get your crypto news in concise Key Bullet Points #cryptonews #nft #ether #altcoin #web3 #crypto #bitcoin #blockchain #cryptocurrency #polygon #binance #metaverse #defi #fintech #dao https://t.co/S324l1r1d4",
23    "link": "https://twitter.com/nerd_for_crypto/status/1538149143465582592",
24    "source": "redditt"
25  }
26 }
```

