CSC326 Final Lab Report

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1.

Front End:
- Tweets Feature: Using the twitter API, this feature shows the latest tweets related to the search result
- News Articles Feature: Using a news article API, this feature shows the latest news articles related to the search result and displays all the key news information including the title, description, date, and an image of the article.
- Maps Feature: The user can choose to hit to "search on map" for the program to display a map for the query. This displays the nearest spot to a user's current location. This was done using the Google Places API.
- Displaying description of URLs
- Displaying title of URLs
- Displaying search Suggestions

Back End:
- MongoDB Speed Improvement: After doing research on how to optimize mongoDB insert functions, the inserting documents time went from 10 minutes to 1 minute. This was done by
- We also retrieved the data at the start of the program before launching the server, reducing the API call to just 1 call instead of calling the mongo db API every time needed.
- One-click deployment was enabled.
- Minimize search query time.

2. Most of the functionality we started out to achieve was achieved by us. The only thing we could not get to was the integration of google maps on the same page where we are displaying the search results. The main reason for this was, Google's places API does not allow post requests and only allows get requests.
3. Our testing strategy was to test all the corner cases possible with pages displaying more than 5 results for a query or displaying less than 5 results for a query. We also made sure that most of the features work with the log in feature on localhost. We also, wrote tests in python to test functionality of data retrieval.
4. One of the most important lessons learnt was to work carefully with AWS instances as these can incur charges if not used wisely. We also learnt how to work and solve problems together as a team, helping each other on each other's parts.
5. The integration of Google maps took way longer than expected. One of the things we could have done if more time was provided, would have been to read the google documentation in more detail and figure out how to render the map on the same page instead of redirecting. Also, figuring out maps doesn't allow a post request, sped things down significantly.

6. The knowledge of scoping amongst other things taught in the lecture proved to be very helpful. Also, the tutorials helped understand python code in a better way.
7. It took a lot of time outside the lab sessions since those were only bi-weekly. We spent close to 4 days doing labs 3 and 4, however, labs 1 and 2 were significantly faster.
8. I think developing a language would have been an interesting project, since the course covered a lot of that material.
9. The labs were pretty interesting overall and helped us gain the knowledge to develop a functioning search engine which was interesting and useful. We do not think any of the parts of the lab were redundant.
10. Enjoyed the course overall!
11. Responsibilities:
    a. Manik: All Frontend
    b. Zafeer: All Backend