

Deliverable #4 - Project Demonstrations

Team Name : Rental Central

Application Name : Sturents

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Functionality Of Our Application

- Crawler:
 - Is able to scrape listings from the internet.
 - Parses information from each listing.
 - Sends the parsed information to the database.
- Database:
 - Stores the parsed data of each listing that was sent to it from the crawler.
 - Is able to send the data to the application (*Modified from original requirement*)
- Application:
 - Displays 'cards' on the main page which have the ability to be swiped left or right in order to 'like' or 'dislike' a listing. There are also two buttons at the bottom of the page that can be used to 'like' or 'dislike' a listing as well.
 - 'Liked' listings are saved to the device locally.
 - If a user clicks on a 'card' then an expanded view with the full description and all of the images for the listing will be displayed.
 - The user has the ability to view a list of all their 'liked' listings, by clicking on the icon at the top right of the main page.
 - Each listing in this list of listings can be clicked on in order to bring up the expanded view for that listing. (*New feature*)
 - Each listing in this list of listings can be swiped to the left in order to show a menu with two options. (*New feature*)
 - The menu option with an icon of a chat bubble will open a web browser, and take the user to the original url where the listing was posted. (*Modified from original requirement*)
 - The menu option with the icon of an 'X' will delete the listing from the users saved listings. (*New feature*)
 - The user has the ability to change various settings, by clicking on the icon at the top left of the main page.
 - The location setting provides the user with a dropdown menu that enables them to change their location to either: Ottawa, Toronto, or Montreal. This changes where the application will pull listings from, by querying a different table within the database. (*Modified from original requirement*)
 - The range setting provides the user with a slider that will determine the maximum distance in kilometers that a displayed listing will have. The distance is calculated from the center of a location (city) to the address of the listing. (*Modified from original requirement*)
 - The price setting provides the user with a slider that will determine the maximum price in dollars that a displayed listing will have.
 - The dark mode setting provides the user with a dropdown menu that enables them to change the theme of the application to either a dark or light theme. (*New feature*)

We were able to add all of the proposed functionality that we outlined in the original document. We were even able to add in some features that were not originally outlined. However, we did have to modify some of the original requirements.

Modifications

Originally, the web-scraper was designed to push all of the listing data to the database through a JSON file in order to then pass that JSON file to the application. This decision was eventually found to be not feasible which led us to have the web scraper push the listing data directly to the database. The new implementation then required a custom built API to handle pulling the data and filtering the locations. The ability to change locations now happens through an API request, the filtering for prices and distances happens within the app instead of from a query to the database.

In our initial functional requirements, it was stated that if the user wanted to contact the poster of the listing, they would be brought to the default android email application with multiple fields already filled in for them, or taken to the URL of the listing if no email address could be found. This was later found to be a feature not worth implementing as the vast majority of listings did not have an email included as the vast majority of rental websites have their own messaging system. Providing this option would have included parsing listing descriptions for emails when needed and almost all of the time emails were not included. Therefore the user is always brought to the listing URL instead.

Originally, we planned for the app to have the ability to select any location and get listings for that location. However, our scraper and limited database capacity limited us to only being able to scrape listings from select locations which are Ottawa, Toronto and Montreal. The range filter had to be modified because of this, as the user is not guaranteed to be in the location that they set. The distance of a listing is calculated by the distance between the address of the listing and the center of the selected location. This distance is what is used in the range filter.

Youtube Video

- <https://www.youtube.com/watch?v=q5lZQ8cfOpY&feature=youtu.be>

Dev Logs

- https://github.com/JakeJazokas/Sturents/tree/master/dev_logs