

COP290-Assignment3-Report

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1 Website Link : <http://10.17.51.181:5000/>

2 Overview:

Our website, called **OLX Karo**, is an online platform that allows users to buy and sell goods and services. It is a classifieds website where users can post ads for items they want to sell, as well as browse ads posted by other users to find items they want to buy. **OLX Karo**, features a wide range of categories including electronics, vehicles, property, jobs, and services, among others.

Users can browse listings in their local area or search for items nationwide. The website provides a user-friendly interface that allows users to easily create and manage their ads. It also offers features like messaging and chat functions to facilitate communication between buyers and sellers.

OLX Karo, is available in multiple languages, making it a popular platform for buying and selling goods and services in various regions around the country.

3 Content Structure:

3.1 Login/sign-up page:

In this page a User can sign-up if not registered or login with registered id and password.

3.2 Homepage:

The homepage consists of a search bar prominently displayed at the top of the page. Users can enter keywords related to the items they want to buy or sell, as well as select their location and filter their search results by category, price, and other parameters.

Below the search bar, the homepage typically displays featured listings, popular categories, and recent ads posted by users. Users can click on these listings

to view more details about the items, including photos, descriptions, and seller contact information.

The homepage of **OLX Karo** may also feature links to different sections of the website, such as the "Welcome User" section where users can manage their ads, view their messages, and edit their profile.

Overall, the homepage of **OLX Karo** is designed to provide users with a quick and easy way to find the items they are looking for, as well as a convenient platform for posting and managing their own ads.

3.3 Sell page:

This page will allow users to post their product on the platform, and add the appropriate info like **category, Price, Image, description**.

3.4 Chatbox page:

This page allows user to chat with the other user. User can send in text messages and receive messages. These messages can also be translated to user selected language.

3.5 Contacts Page:

This page allows user to select the contact with whom he/she may want to chat. It contains the list of all other users with whom the user has ever chatted before. User can select a particular contact to continue the chat.

3.6 Product Catalogue page:

Here all the products that matches the filters specified by the user can be viewed along with all the parameters included by the seller

3.7 Product Description page:

Each product comes with its own details which the seller has to describe which makes the item attractive for the buyer. User can access the page to know in detail what the product is like.

3.8 Profile page:

Each registered user will have their own profile page, you can follow the other user from their profile page as well which will be displaying their basic information, such as their username, profile picture, and the products they have uploaded and the products that the user is interested under the wishlist tag. The chats of the user can also be viewed by navigating through the chat button listing all the chats of the user with other buyers and sellers on the platform. Logged-in users can also update his/her profile from their own profile page

3.9 Edit profile page:

This page consists of basic information such as nationality, email etc. which can be changed as well as, translation and delete account, logout option etc.

4 API Description:

Mainly we have used either one or two of methods i.e GET (for viewing/retrieving data) or POST(for adding data to the database) for each API function.

5 Route Structure:

5.1 '/':

This is route for Home page this route renders index.html and the landing page contains all the links to navigate .

5.2 /login.html/login:

This is route for login page,this routes requests post method to the server for logging in the website, and redirects to the Home page.

5.3 /login.html/register:

This is route for register page ,this route sends a POST method requests to the server with the data including Username First name Last Name Email ID Phone Number Street Address and Profile Image of the user.

5.4 /logout:

This route just sets the sessions username to None and hence logs out the user and renders the homepage template.

5.5 /go to about:

This route just renders the About page of the website.

5.6 /chats.html:

This routes renders the template chatapp.html and displays all the users which the logged in user has been ever sent message to.

5.7 /chatbox.html

This routes displays all the chats between buyer and seller or any two user and the respective user receives message in the respective language either would have set.

5.8 /profile.html:

This routes gets the username from the database and shows all the data related to the user which includes all the product uploaded by the user and the wishlist cart and other personal details of the user and renders profile.html page.

5.9 /profile/edit:

This route allows the user to edit the users personal data by making changes into the database hence editing the profile of the user and redirects to the show profile page.

5.10 /products:

This route fetches all the products from the database according to the filters specifies by the user and displays it by rendering product catalogue.html page.

5.11 /products/wishlist:

This routes adds a particular product to the user database in the Wishlist table.

5.12 /add product:

This route allows the user to add his/her own product in the database of the platform bu specifying all the parameters related to the product and renders the productupload.html page.

5.13 /product_{details} :

This route requests the server for the details of the product and fetches the detailed description from the database and displays to the user.

- profile: APIs for managing users, including creating, updating, deleting, and retrieving user details like profile picture, username,email, password as well as managing their uploaded products and their wishlist.
- Chats : APIs for managing chats between buyers and sellers .
- product catalogue: APIs for managing uploaded products, adding, and retrieving product details, as well as retrieving products according to the parameters defined by the user.

- User feedback: We used an external third-party API here to collect the user feedback and save it in an excel sheet. The excel sheet can be viewed by the developers and they can get user feedback through that. **LINK TO THE EXCEL SHEET WITH USER FEEDBACKS** : Response sheet

6 ER Diagram:

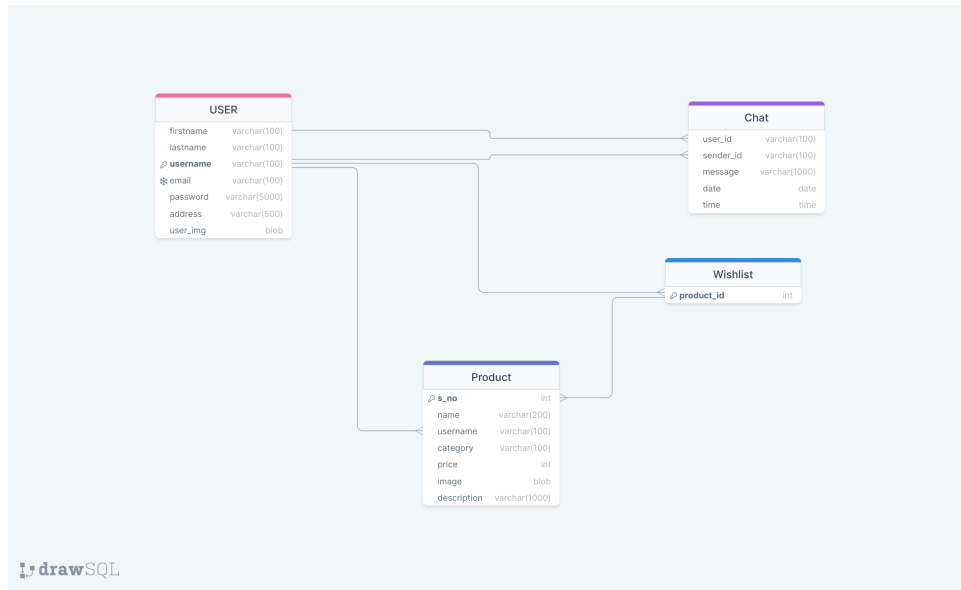


Figure 1: ER Diagram

7 Unit Testing:

Unit testing is a software testing approach where individual units or components of an API are tested in isolation from the rest of the system. The main goal of unit testing is to verify that each unit or piece of code is functioning as expected and meets the specified requirements.

We have also automated test cases to verify that each unit of the software application performs as expected and meets its specifications. We have used CircleCI for the same. CircleCi config file is stored under github circleci-project-setup branch of same repository in directory `.circleci/config.yml`. We couldn't setup database on circleci for automated testing due to not being able to setup database on it but we ran the tests locally.

We have used the Python unittest module for unit testing.
Unit Testing Coverage: **68 %** [Click for coverage report](#)

8 Design Choices:

FRONTEND Design Choices When designing a frontend for an e-commerce website, there are several important design choices to consider to create a successful user experience. Here are some design choices that can help you create an effective and engaging e-commerce website:

- **Categories:** We have prefixed the number of product categories. Users cannot add any new categories, instead can only add new products to existing categories only. This is done to make it simple for users.
- **Simple and Intuitive Navigation:** Navigation is a critical aspect of OLX Karo, and it's important to make it simple and intuitive. We have considered using clear labels, drop-down menus, and search boxes to help users quickly find what they are looking for.
- **Clear Product Display:** Displaying products clearly and attractively is essential to make them appealing to potential customers. So we have used considered using high-quality images, and detailed product descriptions to provide customers with the information they need to make informed purchasing decisions.
- **Responsive Design:** Our website is fully responsive since more and more people are accessing websites on their mobile devices.
- **Language selection option:** We have provided users a feature to translate the chat to their preferred language. We have also provided the option to choose the language in the profile only since we are adding a translation feature to other parts of the website.

BACKEND Design Choices Some design choices related to the backend that we made are :

- We used Werkzeug security module in python for encrypting the user password. This is done to maintain security and confidentiality of the user.
- We used jinja for connecting our frontend with the backend flask app. It helped us to pass on data from the database to render in html and also get the user input. We used jinja because of its simplicity.
- We used an external api sheetdb.io for saving user responses.
- We stored the user uploaded images in the database in the form of BLOB(Binary Large Objects) entries. To display them in the html we converted them using the base64 library in python.

9 ML API:

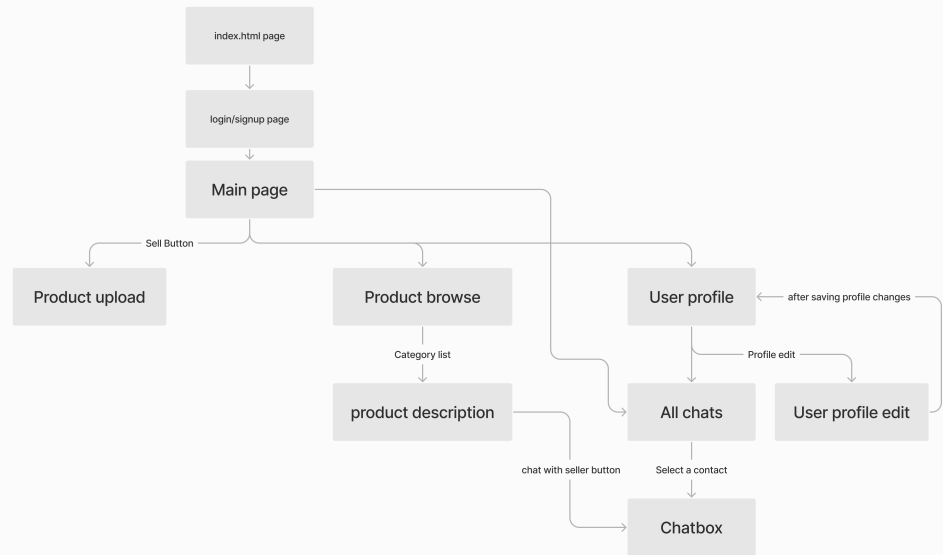
Our website employs the **Translator Text** ML API provided by Rapid API. This API can translate from any source language to any target language available in Rapid API's database. We integrated this API into our website to offer a translation feature to our users. With this feature, users can translate any chats from English into any other language, facilitating communication between users from different linguistic backgrounds on our social media platform. Click for ML API

10 Unique Features

- Our **Search Bar** is designed to find all relevant products based on the keyword entered.
- **Chats** which allows interaction between buyers and sellers.
- **Chat Translate** which allows chats to be translated to user selected language.
- **User feedback:** this is handled using a third party external API which stores the user's response in an excel sheet.
- Using **Add to Wishlist** a user can save any of the products user is interested in for future considerations.

11 Sitemap

Sitemap/webpage hierarchy



12 Challenges

- One of the challenge was uploading and processing images on a MySQL database. We resolved this issue by utilizing Python's Image and Base64 libraries, which encoded (and decoded) the file into a BLOB object that could be stored in (and retrieved from) the MySQL database.
- Another issue we faced was the time it took to load the landing page was quite large because we had to load maps into the server. We achieved this by just rendering the template for landing page at first hand.

13 Limitations:

- At this point a user cannot be sure if the products shown in the catalogue is sorted according to the distance from the user.

- At this point user cannot post any video for his/her product, this basic functionality can be added by storing the addresses of the videos in a mysql table and extracting the videos from server/local machine using the addresses when required.

14 Future work:

- The idea is to create an algorithm that will sort the products in ascending order of the distance from the user.
- Filters to sort the products such as Price, location, etc. and also sorting options like sort according to latest, sort according to price, etc.
- We will also add translating features to most of the website.
- We will also improve the UI/UX of the website for better user experience.
- Option to upload more than one picture for the product.
- Option to upload images in chatbox also.

15 Acknowledgements:

- We used bootstrap templates, libraries and classes to create our frontend design. This enabled us to create better UI and responsive webpages.
- We used Gligtbox and some other javascript code(taken from internet sources or bootstrap libraries) to enhance the interactive experience of the website.

16 Website, Github and Figma Links:

- Github
- OLX Karo Website
- Sitemap
- Figma prototype
- Interaction Video
- Google Doc Submission link
- ER Diagram

17 Token Distribution

Table 1: Token distribution

Name	Tokens
Shaurya Divyam	10
Shank Gupta	10
Khushal Srova	10
Naman Nirwan	10