



DORM DEALS

A dedicated marketplace for re-sold college goods

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MEET THE TEAM



Akshita Badkundri

Back-end & Front-end

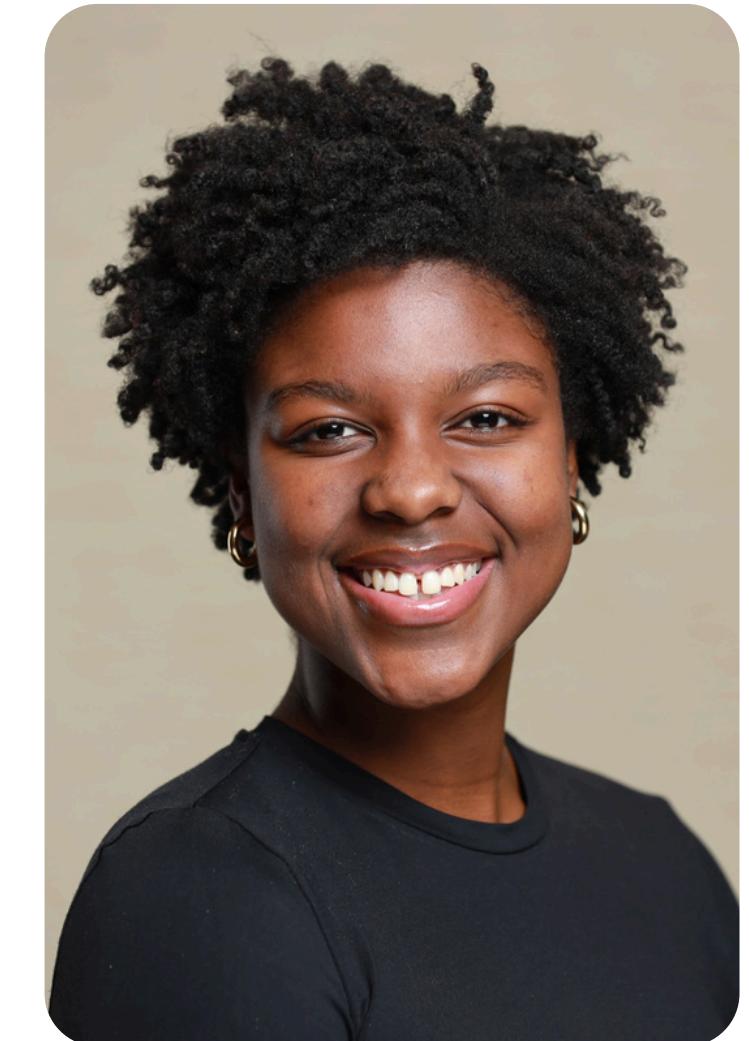
Computer Science, Math,
Computational Finance @
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Back-end

Computer Science and
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International University



Destiny Wilson

Front-end

Computer Science &
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PROBLEMS





College Moveout

Students have to move out **every year**

Climate Emissions

Increased greenhouse gas emissions
from landfills

Landfills receive approximately **12 million tons** of furniture and furnishings



Waste

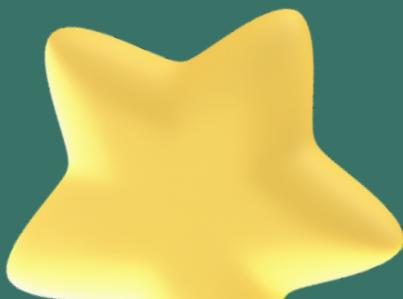
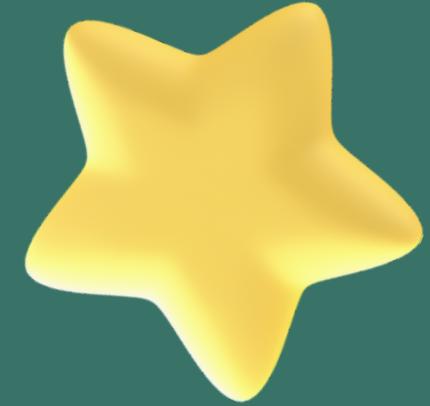
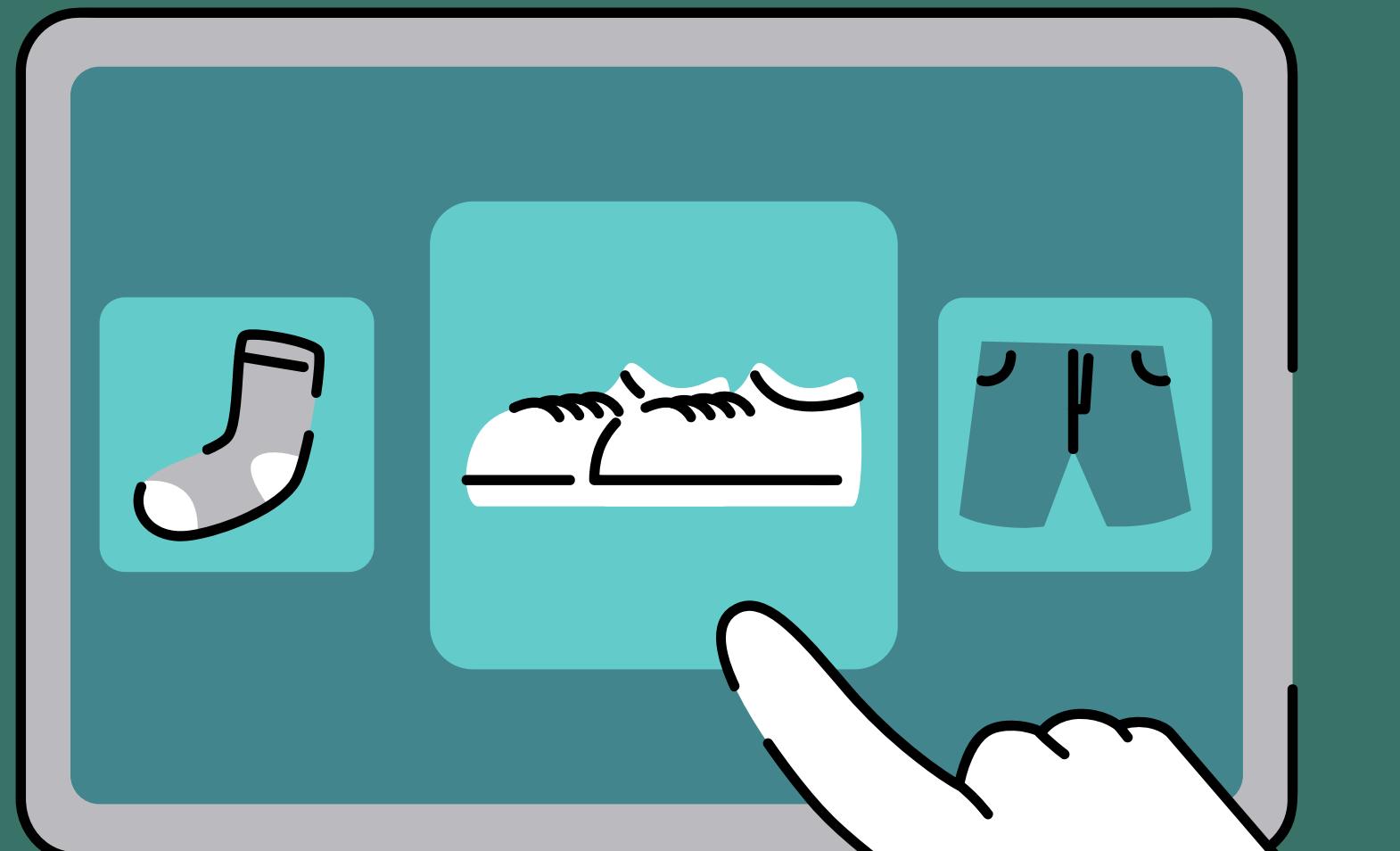
The average college student generates up to **640 pounds of waste** at this time

Usable Items

These items, such as furniture, electronics, clothing, and household goods, are still usable.



SOLUTION





SOLUTION

Students could collectively save or earn significant amounts by selling or donating items instead of discarding them. For example, a survey found that students could save an average of \$300 each by selling unwanted items.



Dedicated marketplace for Students to sell their items during move-outs



Every student is a buyer as well as a seller



Each college having their own marketplace, where incoming students can thrift these items!



TECHNOLOGY STACK



Front End

- HTML
- CSS
- JavaScript

Middleware

- Socket.io
- Flask Cors

Back End

- Python
- APIs
- MongoDB
- SQLAlchemy



START

User logging in,
enters college

BUY

User wants to buy

Categories
Page for their
College

Login &
Registration

SQL Database

API CALL

SELL

User wants to sell

Form

Items
gets
stored

Encoded
Image

MONGODB

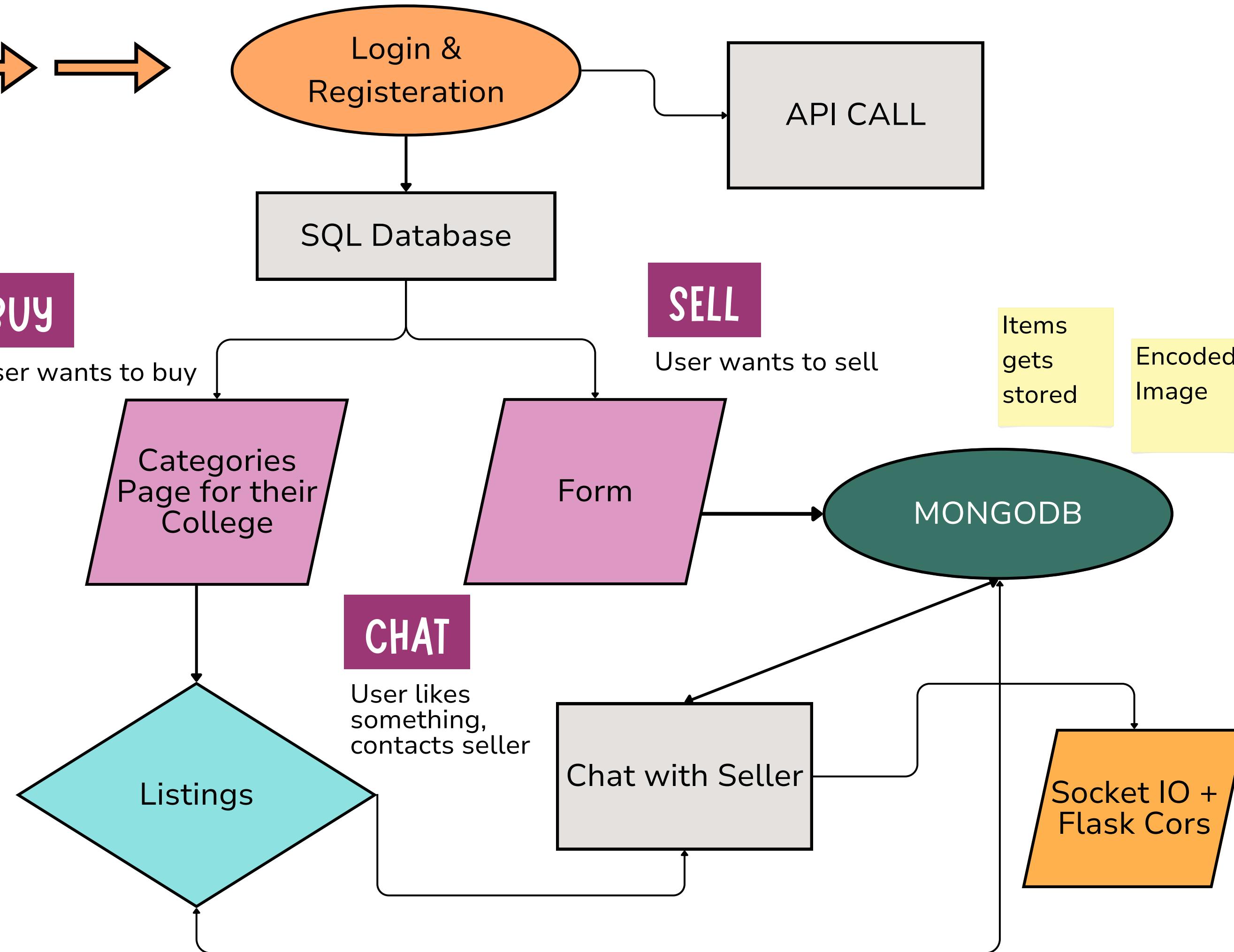
CHAT

User likes
something,
contacts seller

Chat with Seller

Listings

Socket IO +
Flask Cors





Flask Framework

- Lightweight and flexible
- Provides essential tools for routing, templating, and session management

FRONT-END



Flask-Login

- Manages user sessions and authentication
- Ensures secure login and logout functionalities

BACK-END



Socket.IO

- Enables real-time, bidirectional communication between clients and server
- Supports real-time messaging and notifications

Flask-CORS

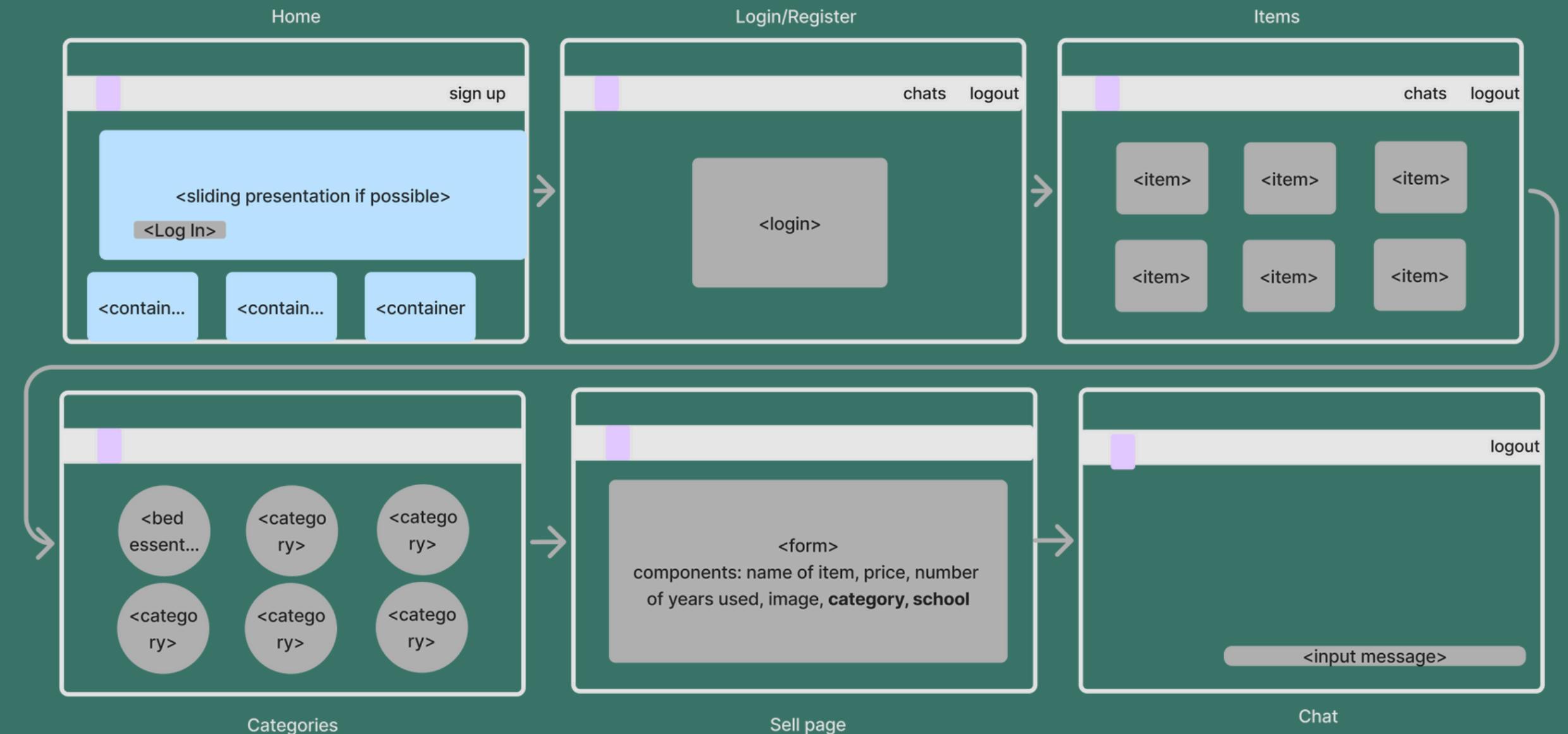
- Handles CORS policies
- Secures Cross Origin Requests for users





INPUT TO OUTPUT

1. Home
2. Login/Register
3. Categories
4. Buy/Sell
5. Buyer/Seller Chat
6. Logout





mongo DB

Database Performance

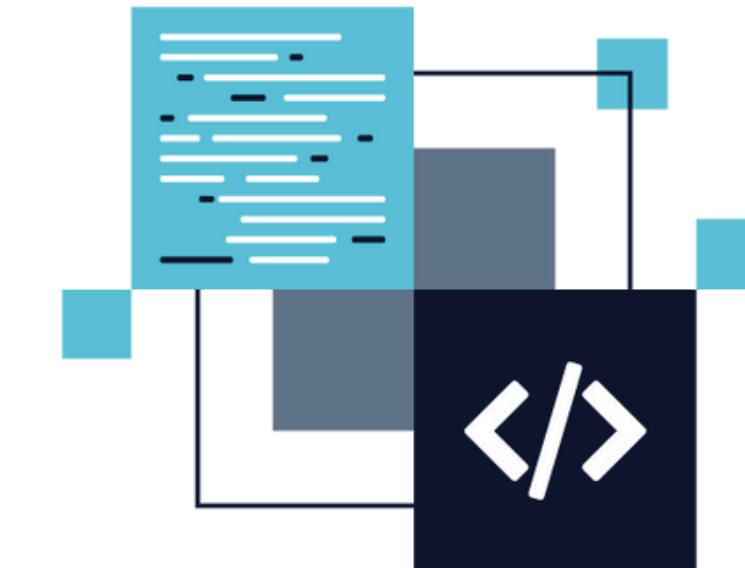
MongoDB Query Optimization

Basic indexing in place;
potential to optimize further



Flask

web development,
one drop at a time



Application Performance

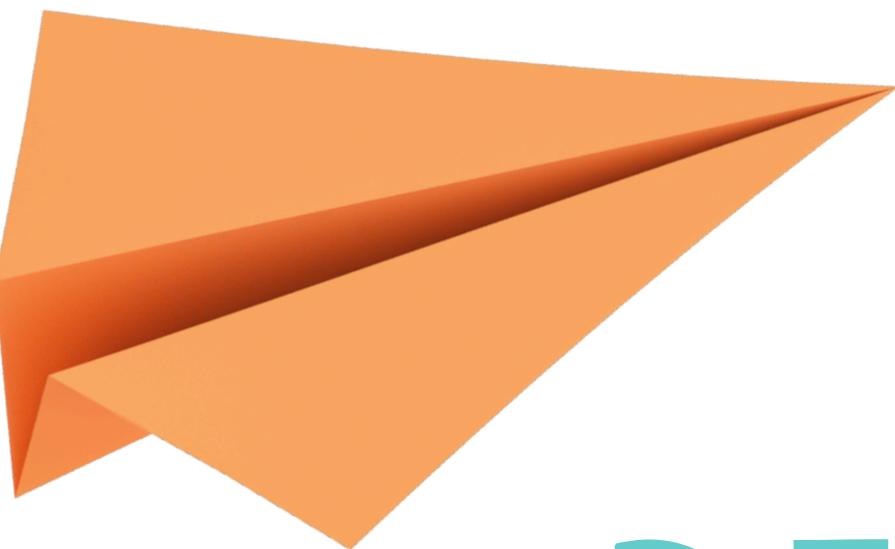
Flask App Synchronous Requests

Handles multiple requests, but
performance can degrade with
high traffic

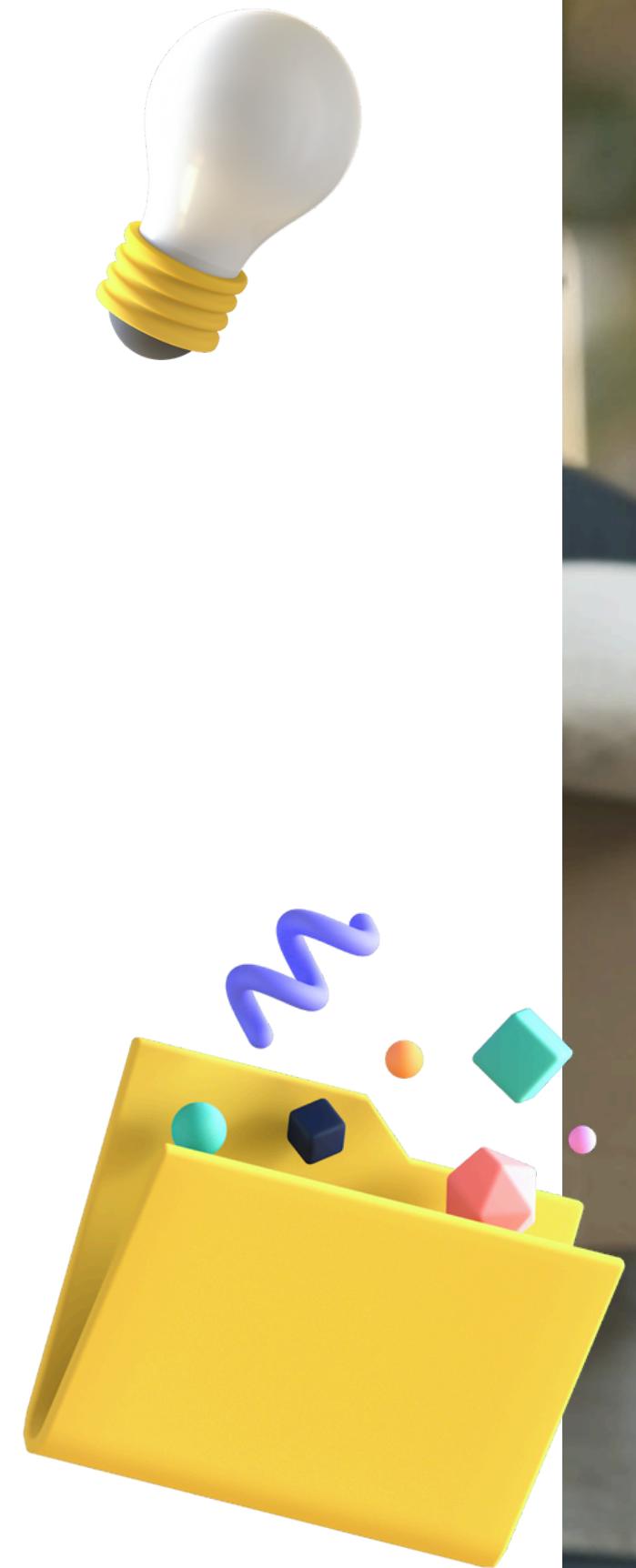
Monitoring and Analytics

Basic Monitoring Limited Insights

Basic server monitoring; lacks
detailed performance metrics

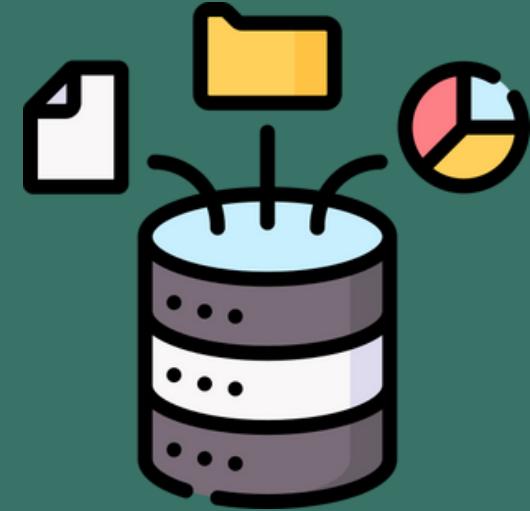


DEMO





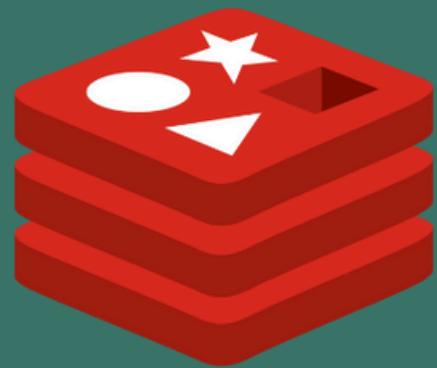
FUTURE IMPROVEMENTS



Efficient Data Handling

MongoDB Sharding

- Distributes data across multiple servers for horizontal scalability
- Ensures high availability and data redundancy



Caching Mechanisms

Redis

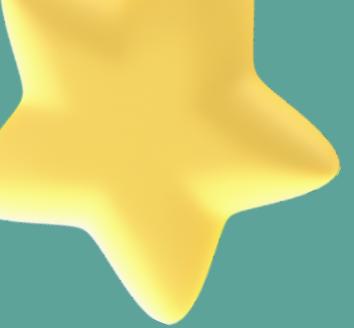
- In-memory data structure store for caching frequently accessed data
- Reduces database load and accelerates data retrieval



Auto-Scaling

AWS Auto Scaling

- Automatically adjusts the number of active servers based on traffic demands
- Maintains performance during traffic spikes



COMPETITIVE EDGE

Target Audience

Dorm Deals is designed by and for college students to resell dorm living and study supplies.

Seller Transparency

DD's chat functionality and accessible seller contact information remove all barriers to buyer-seller communication

Less is More

Our select categories ensure that buyers can find their desired item in just a few clicks



LESSONS LEARNED & GOALS



01

Branch out

Explore different frameworks and implementation methods when encountering output errors

02

Start small

When developing large e-commerce websites, isolate core functionality components, then add on

03

Be Ambitious

- Implement profile page and favoriting option
- Add DUO and Google Auth to increase security



Sources:

1. National Solid Wastes Management Association (NSWMA)
2. EPA Waste Management Report
3. U.S. Environmental Protection Agency (EPA)
4. EPA Landfill Methane Outreach Program
5. National Association of College Stores (NACS) survey

THANK YOU!

Questions?