PUNS-MEDICINE FINDER

Presented By-CoDevis

Allergy-Free and Cost Effective Medicine Finder

Team Leader-Priya 2023785

Team ID- DAA-IV-T027

Team Member 1 - Nandini Singhal 2024274

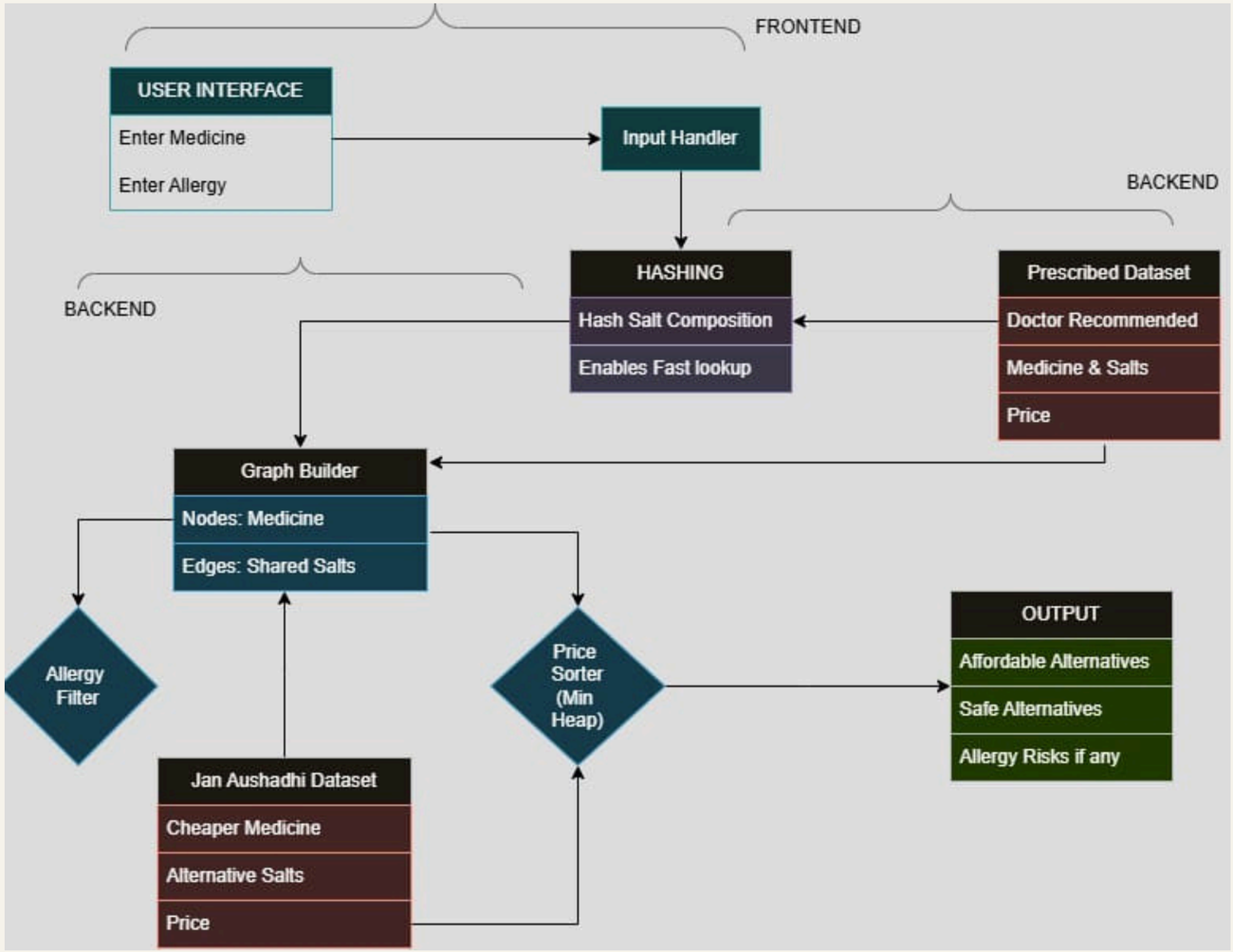
Team Member 2 - Sneha Goyal 2023934

Team Member 3 - Urvee Pundir 2023686

Objective

Sometimes, Doctors prescribe the medicines which are not affordable by the ordinary people. But these medicines plays a major role in the patient's recovery and can't be neglected. So, this project aims to find the best alternate of the prescribed medicine which can easily be afforded by all the people.

Architecture



Technical Progress

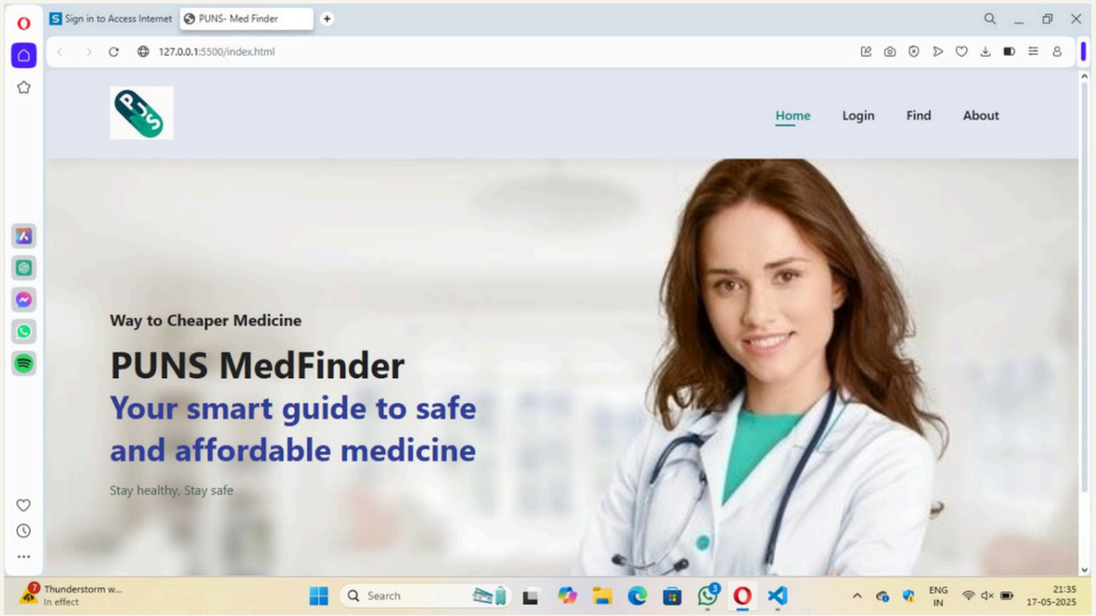
- **Initial Development**: Collected and cleaned datasets of expensive medicines and generic Jan Aushadhi medicines. Applied hashing techniques for efficient medicine name matching and faster lookup of alternatives.
- **Core Functionality Implemented**: Developed a backend logic to accept user input (medicine name) and search for similar generic alternatives based on partial salt/component matches and display the cheaper alternative(s) with name, price, size and salts.
- **Frontend Development**: Designed and implemented Home page and Login/Register pages for user authentication using HTML and CSS.
- **Future Work**: Enhance GUI for a more interactive and attractive user experience so that non-technical people can also make use of it effectively. Integrate allergy-filtering logic to exclude alternatives containing substances flagged by the user.

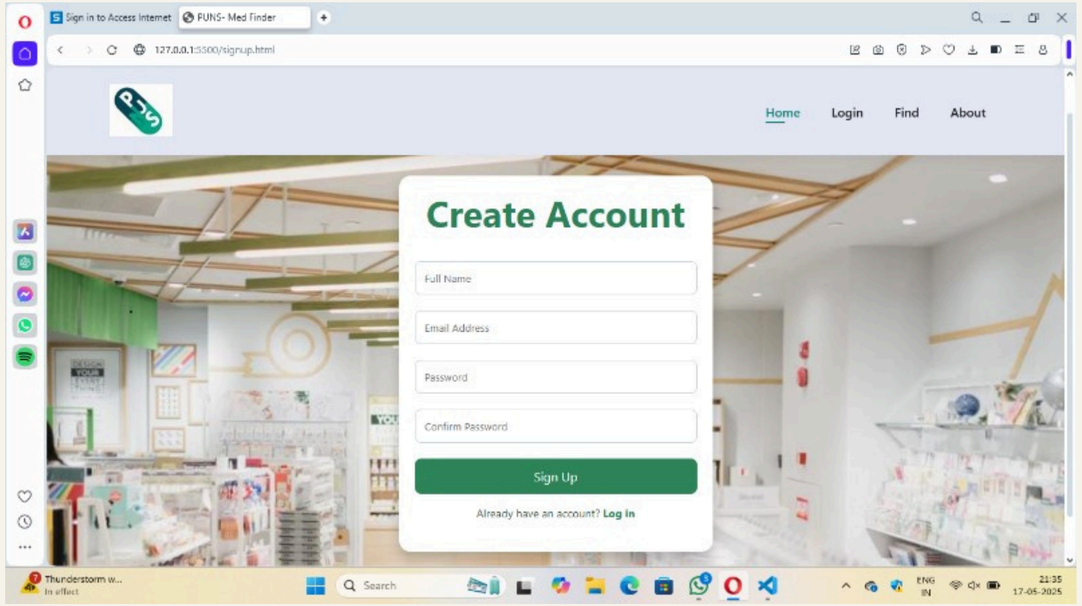
CODE

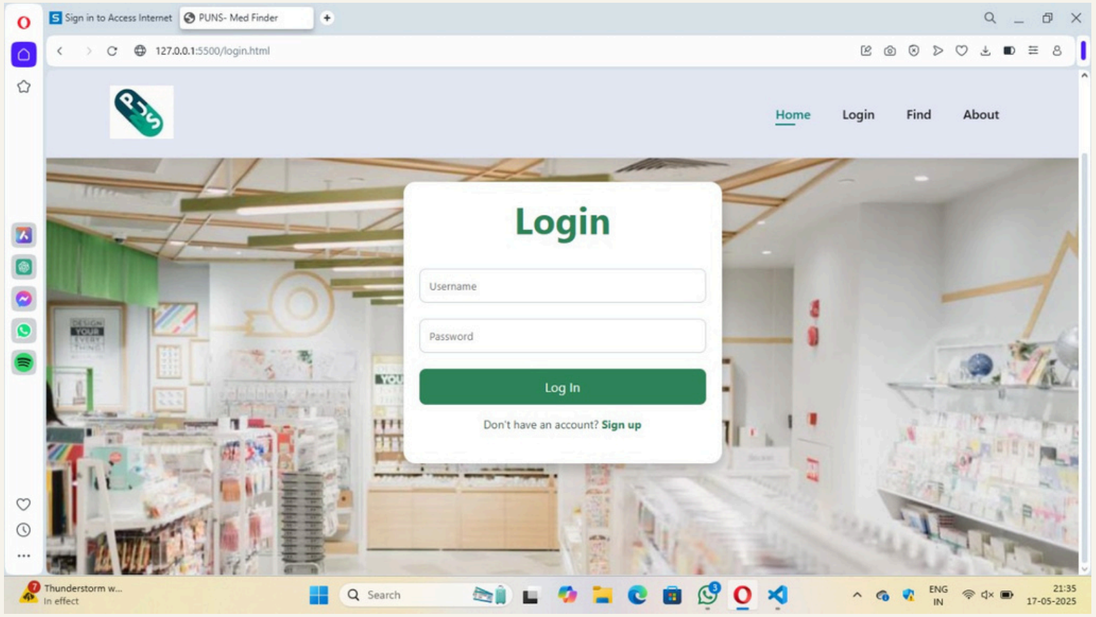
```cpp
#include <bits/stdc++.h>
using namespace std;

struct CheapMedicine
{
    string name, salt, price, unit_size;
};

string toLower(const string &str)
{
    string result = str;
    transform(result.begin(), result.end(), result.begin(), ::tolower);
    return result;
}

vector<string> split(string &str, char delimiter)
{
    vector<string> tokens;
    stringstream ss(str);
    string item;
    while (getline(ss, item, delimiter))
    {
        tokens.push_back(item);
    }
    return tokens;
}
```

```cpp
int main()
{
    ifstream file("cleaned_expensive_after_HASHING.csv");
    if (!file.is_open())
    {
        cerr << "Could not open CSV file.\n";
        return 1;
    }

    string line, header;
    getline(file, header);
    vector<vector<string>> data;

    while (getline(file, line))
    {
        vector<string> row;
        string temp;

        for (char ch : line)
        {
            if (ch == ',')
            {
                row.push_back(temp);
                temp = "";
            }
            else
            {
                temp += ch;
            }
        }
```

```cpp
        vector<string> cheap_prices = split(row[9], '|');
        vector<string> cheap_units = split(row[10], '|');

        int count = cheap_names.size();

        auto cmp = [](const CheapMedicine &a, const CheapMedicine &b)
        {
            return stof(a.price) > stof(b.price);
        };

        priority_queue<CheapMedicine, vector<CheapMedicine>, decltype(cmp)> pq(cmp);

        for (int i = 0; i < count; ++i)
        {
            string name = cheap_names[i];
            string salt = cheap_salts[i];
            string price = cheap_prices[i];
            string unit = cheap_units[i];
            try
            {
                stof(price);
                pq.push({toLower(name), toLower(salt), price, unit});
            }
            catch (...)
            {
                continue;
            }
        }

        if (pq.empty())
```








```
Enter medicine name (partial allowed, 'exit' to quit): ondwell

=== Expensive Medicine ===
Name      : Ondwell-MD Tablet
Unit Size : strip of 10 tablet md
Price     : 45
Salts     : Ondansetron (4mg)

--- Cheaper Alternatives (Sorted by Price) ---
Name      : ondansetron injection ip 2mg per ml
Salt      : ondansetron
Price     : 4.4
Unit Size : 2 ml
----------------------------
Name      : ondansetron tablets ip 4 mg
Salt      : ondansetron
Price     : 6.6
Unit Size : 10's
----------------------------
Name      : ondansetron 4mg oral disintegrating strips
Salt      : ondansetron
Price     : 55.0
Unit Size : 12's in Mono Carton
----------------------------
Name      : ondansetron 8mg oral disintegrating strips
Salt      : ondansetron
Price     : 110.0
Unit Size : 12's in Mono Carton
----------------------------
```

Roles And Responsibility of Each Team Member

Team leader(Priya): ✅ **Done:** • Helped logic for salt-based filtering • Backend for cheaper alternatives via hash tables(In progress) • Frontend Tasks	**Team Member 1(Nandini):** ✅ **Done:** • Dataset Cleaning • Backend for cheaper alternatives via hash tables(In progress) • Frontend Tasks
🟡 **Next:** • Merge backend and frontend • Allery dataset preprocessing • Backend for allergy manipulation	🟡 **Next:** • Finalize allergy dataset for code use • Merge backend and frontend • Backend for allergy manipulation

Team Member 2(Sneha):	Team Member 3(Urvee):
✅ **Done:** • Collected datasets • Cleaned and normalized data • Created hash tables from datasets • Backend for cheap medicine retrieval	✅ **Done:** • Created hash tables from datasets • Check Dataset integrity • Backend for cheap medicine retrieval
🟡 **Next:** • Finalize allergy dataset for code use • Integrate spelling error + allergy • Backend for allergy manipulation	🟡 **Next:** • Integrate spelling error + allergy • Allery dataset preprocessing • Backend for allergy manipulation

THANK YOU