| CSE | PROJECT DEVELOPMENT | 2022-26 |
|-----|---------------------|---------|

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| 4 | **Project is done in the Department (In House) or Industry. If industry project, Name of the industry** | In House | Industry |
| 5 | **Project Title:** | Ayur Medimate – Medicine Prescriber using Gen AI | |
| 6 | **Monogram** |  | |

## Description of the Project

**Objectives:**

        The primary objective of this project is to develop a robust system capable of accurately predicting suitable medications based on input symptoms. By employing AutoML regressors, the model optimizes the prediction process, providing personalized recommendations to users, thereby improving healthcare decision-making.

**Brief Description about the Project:**

        The Drug Symptom Finder and Medicine Recommendation project is designed to streamline medication selection by leveraging machine learning technology. By analyzing a comprehensive dataset containing medication-drug relationships and associated symptoms, the system offers personalized recommendations to users based on their reported symptoms. Utilizing AutoML regressors, the project automates the process of model selection and training, optimizing predictive accuracy and efficiency. Through a user-friendly interface, individuals can input their symptoms, and the system generates tailored medication recommendations, enhancing healthcare decision-making and improving patient outcomes. Key features of the project include data preprocessing to handle missing values and outliers, feature engineering to enhance predictive performance, and model validation using robust evaluation metrics. Challenges such as data quality and model interpretability were addressed, paving the way for future enhancements such as the integration of real-time medical data and continuous model improvement.

**Flow Diagram:**
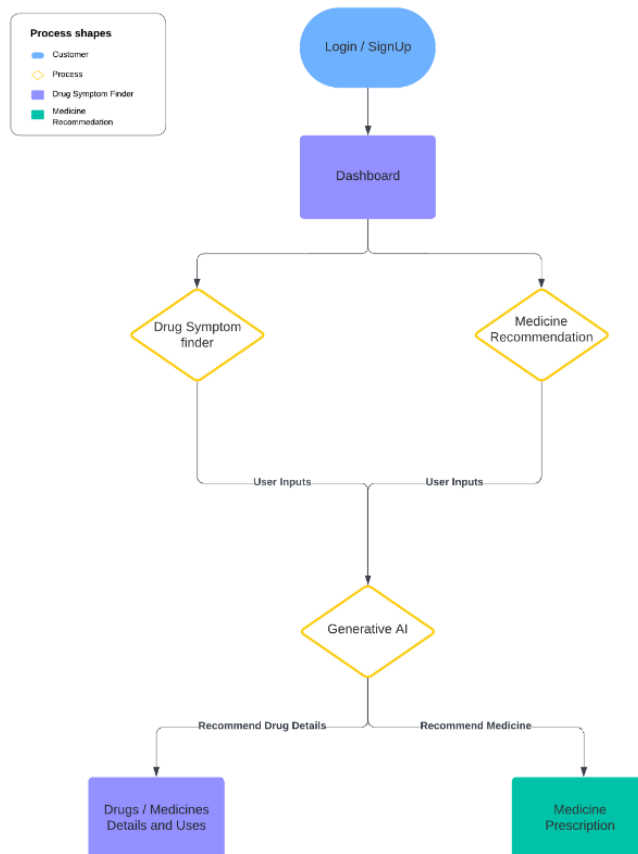
**Materials /Software Used for Implementation:**

### HARDWARE REQUIREMENT

- System           :           Core i5 Processor

- Hard Disk       :           256 SSD

- Monitor          :           15` LCD/TFT

- Mouse            :           Logitech
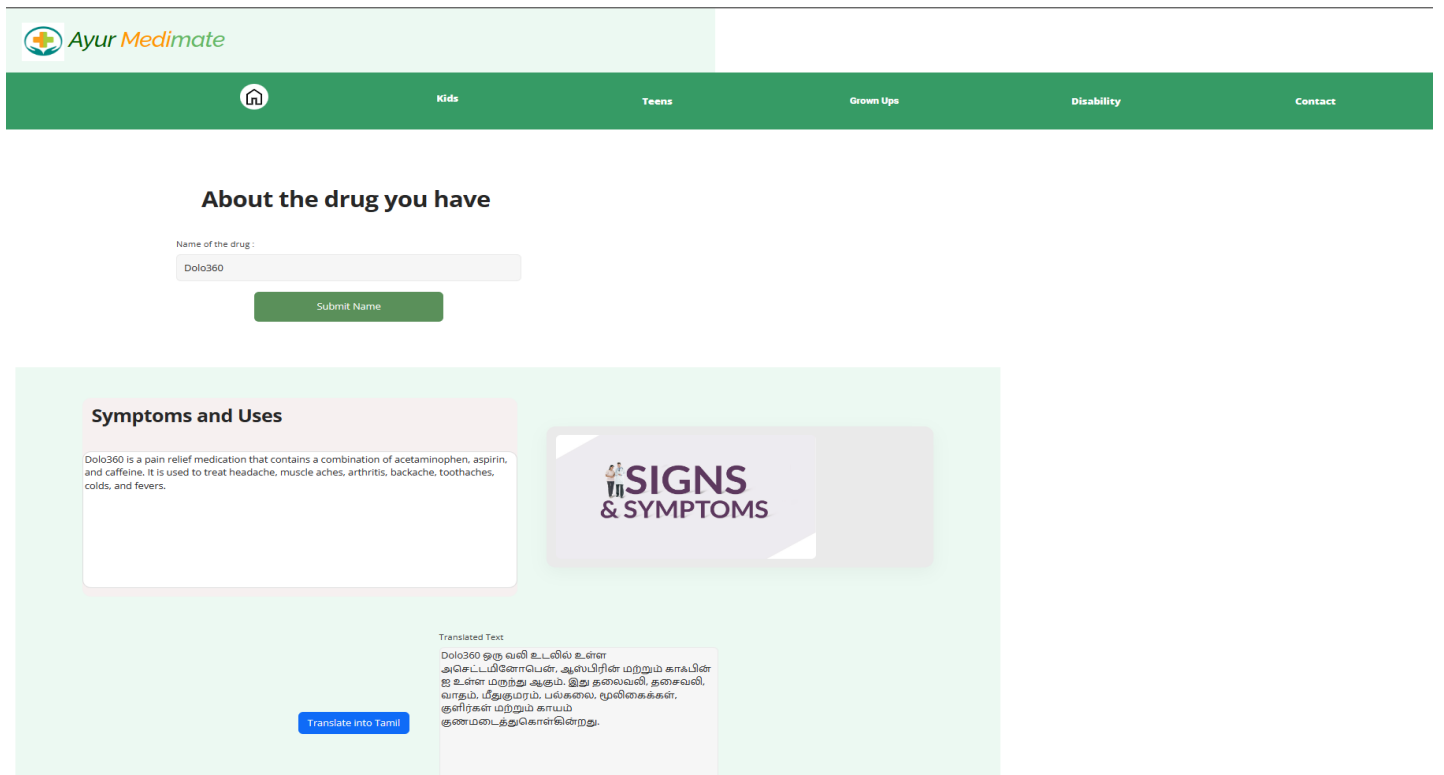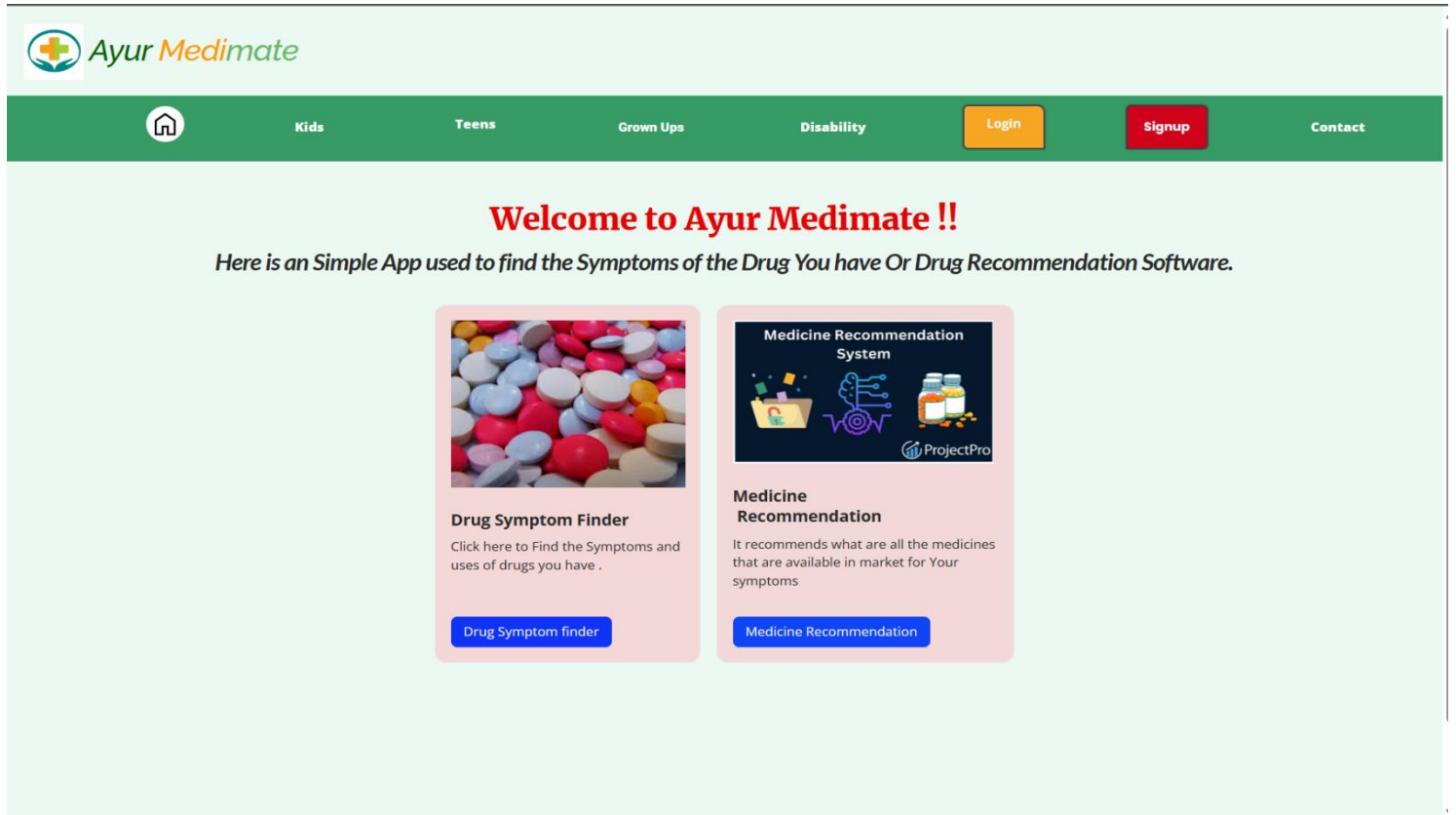
- RAM              :           4 GB

### SOFTWARE REQUIREMENT

- Operating System    :           Windows

**Budget Utilized with Details:**

| Components | Amount in Rupees |
|---|---|
| Data Set Collection | 3000 |
| Report preparation | 1000 |
| Implementation | 6000 |
| Testing cost | 1500 |
| TOTAL AMOUNT | 11,500 |

**Outcomes:**

- The project successfully delivers accurate medication recommendations based on user-reported symptoms.

- Utilizing Auto Ml regressors, the system optimizes prediction processes for tailored suggestions.

- Health care decision-making is significantly enhanced, leading to improved treatment outcomes.

- The user-friendly interface streamlines symptom input and recommendation retrieval, promoting proactive health care management.

- Automation of model selection and training improves efficiency for healthcare professionals

- The project serves as a foundation for future enhancements, including real-time data integration and continuous model improvement.
- Overall, it represents a significant advancement in leveraging machine learning for personalized healthcare solutions.

## Feasibility for Product Making:

The product's feasibility is rooted in extensive medication-drug datasets, facilitating precise recommendations. AutoML regressors streamline model selection and training, simplifying development. User-friendly interfaces enhance usability by streamlining symptom input and recommendation retrieval. Process automation boosts efficiency, minimizing deployment resources. Its scalability enables integration with real-time medical data, ensuring adaptability. Market demand supports its viability and adoption in personalized healthcare solutions. Regulatory compliance ensures adherence to standards. Collaboration with healthcare professionals enhances relevance and effectiveness in clinical settings, aligning with evolving needs. Overall, the project's robust foundation, simplified development process, user-centric design, efficiency gains, scalability, market demand, regulatory compliance, and collaboration with healthcare experts mark it as a significant advancement in personalized healthcare technology.

### Mapping of Program Outcomes (POs) and Program Specific Outcomes (PSOs):

### (Mark √ in the box)

| PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO 12 | PSO1 | PSO2 | PSO3 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-------|------|------|------|
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |

Project Co-Ordinator                                             HOD