

# Master-Invoice

Built to bill, inevitable.

Presented by : Team while(1)

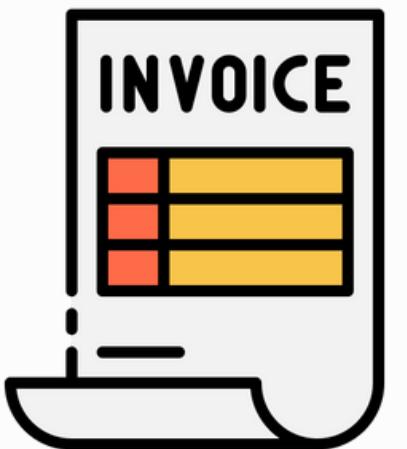


# Introduction

Inventory  
Management



Transactions



Invoice  
Generation



Analysis

Master  
Invoice



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Analysis



# Need for the Software

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## ★ **Manual inventory tracking is time-consuming and error-prone**

Many businesses rely on physical registers to track stock, prices, seller and buyer details and quantities, often leading to mismatches, missed updates, or stockouts.

## ★ **To streamline operations**

by automating inventory billing and transactions tracking

## ★ **No centralized record of retailers, suppliers, and transaction history**

Most businesses lack a single platform to view past transactions, dues, and contact details for each stakeholder, leading to confusion and poor tracking.

## ★ **Lack of insight into profit trends and product-wise sales**

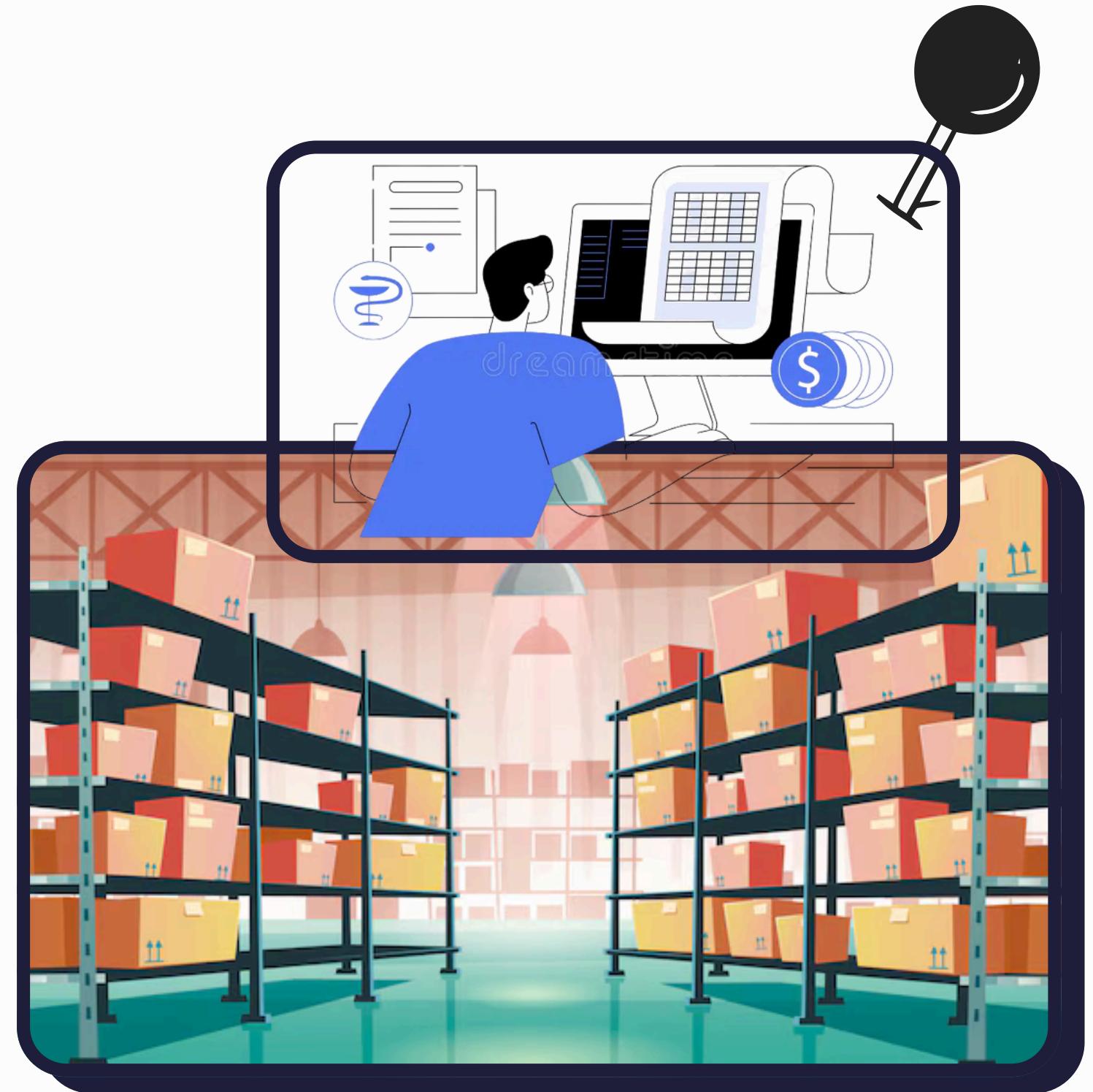
Businesses often don't analyze their sales trends due to lack of tools or time, missing key insights like seasonal demands or best-selling items.

# Potential Users

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- Wholesalers
- Distributors
- Enterprises
- Super Stockists
- B2B Traders
- Chain Distributors



# Major Requirements

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## Inventory

- Manage inventory allows the user to view all the current products available in user's inventory and their details like Item ID, Cost Price, Selling Price, MRP, GST (%) and Quantity.
- The details of existing products are editable and new products can be added.
- The Selling Price, Quantity and GST % are extracted from the Inventory app during the addition of invoices.



## Inward and Outward Supply

- Stores the editable details of retailers and suppliers registered along with their invoice histories.
- Allows user to add invoice with the retailer/supplier, bill number, date, list of product-quantity pairs and discount % (incase of retailer invoice bill)
- During the addition of the bill, total amount for the bill is calculated dynamically. This amount is added to the pending transactions for the particular retailer/supplier and the quantity for each product is updated in the inventory.

# Major Requirements

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## Transactions

### Add Inward Transactions:

- Record incoming monetary value from retailers, including date and cost.

### Add Outward Transactions:

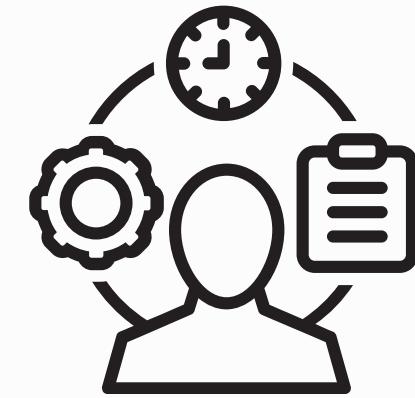
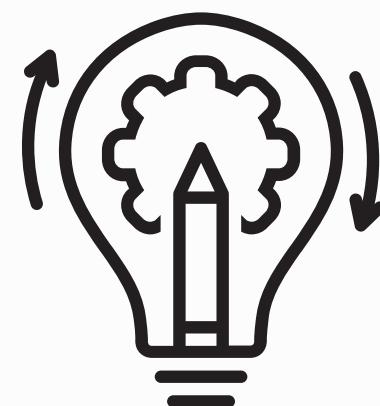
- Record incoming monetary value to suppliers, including date and cost.

### Transaction History:

- View a chronological log of all transactions with filtering options based on date ranges for easier tracking.

### Pending:

- Displays current outstanding balances, showing net debt for both suppliers and retailers in a consolidated view.



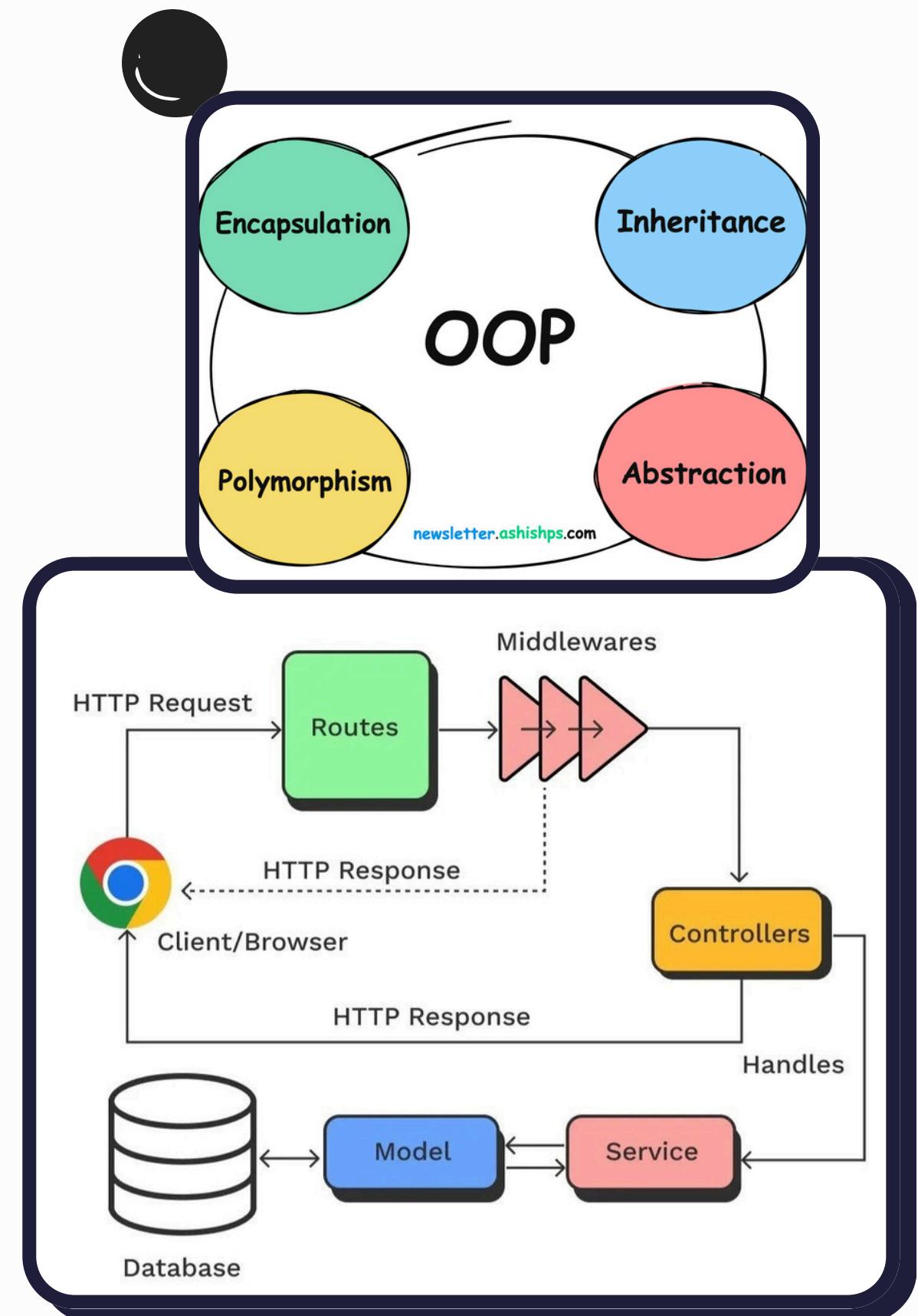
## Analysis

- Display profits and sales over time based on user-defined periods with basic statistics
- Present graphs for:
  - Bills generated (last 2 months)
  - Inward transactions (last 2 months)
- Present tables showing sales per product for:
  - 1-month period
  - 3-month period
  - 6-month period

# Design



- **Model View Architecture**  
Multiple views for common data access
- **Object Oriented Design**  
Encapsulated, modular, and reusable classes
- **Page-wise Views and Controllers**  
Separate logic for each feature page



# Implementation



## Frontend :

- Built using HTML, CSS, and JavaScript for a responsive and interactive user interface.

## Backend :

- Developed with Django (Python), following OOP-inspired modular architecture for maintainable and scalable server-side logic.

## Database :

- Utilizes SQLite3, a lightweight and fast database, ideal for local development and testing.

## Graphs & Visualization :

- Integrated Chart.js to show data through dynamic charts and graphs.

## Authentication :

- Secure authentication via Google SMTP, used for email-based verification and notifications (e.g., OTP systems).

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# WEBSITE



<https://master-invoice.onrender.com/>

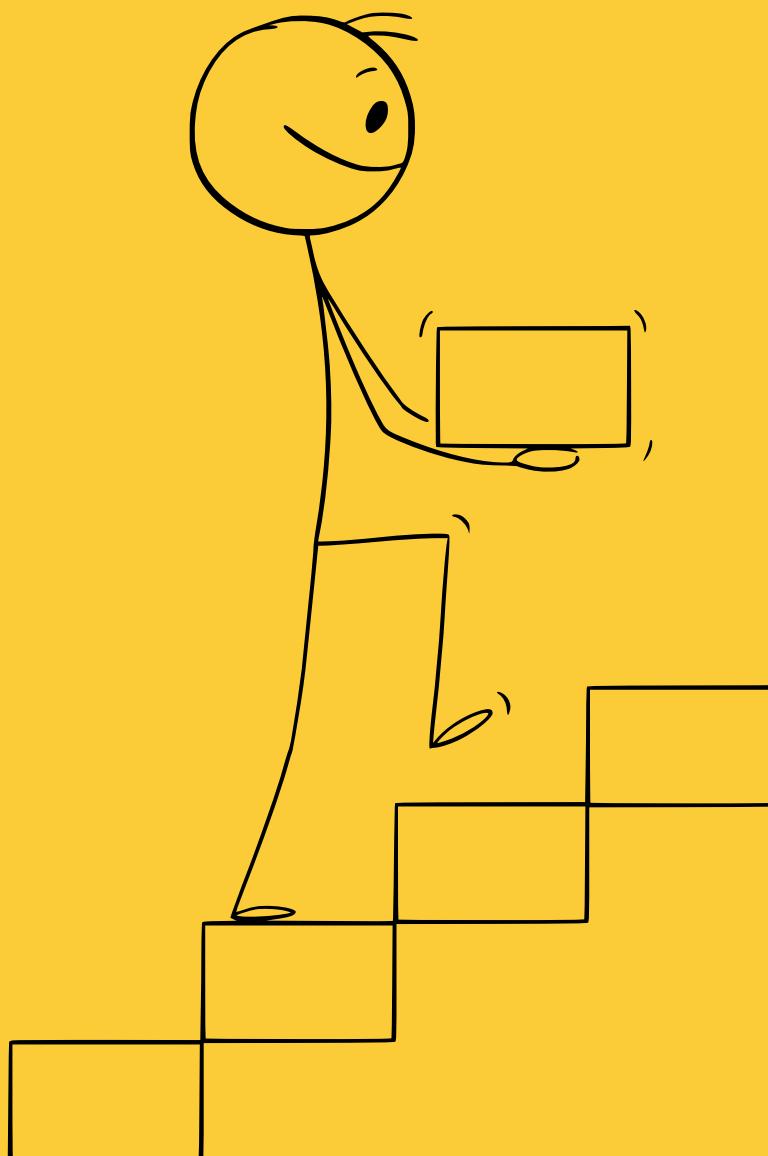
[LINK](https://master-invoice.onrender.com/)

# Future Implementations

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- ★ ML BASED RECOMMENDATION SYSTEMS FOR PRODUCT ANALYSIS
- ★ CLOUD BASED DATABASE SYSTEM,
- ★ WAY BILL AND MORE ENHANCED FORMAT OF BILL
- ★ PDF AND EMAIL GENERATION FOR BILLS TO THE RETAILERS
- ★ SORT FILTERS IN VIEW INVENTORY, SUPPLIERS, TRANSACTIONS AND IMPROVED TAX SYSTEM



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# Learnings...

## Operational :

Team Collaboration

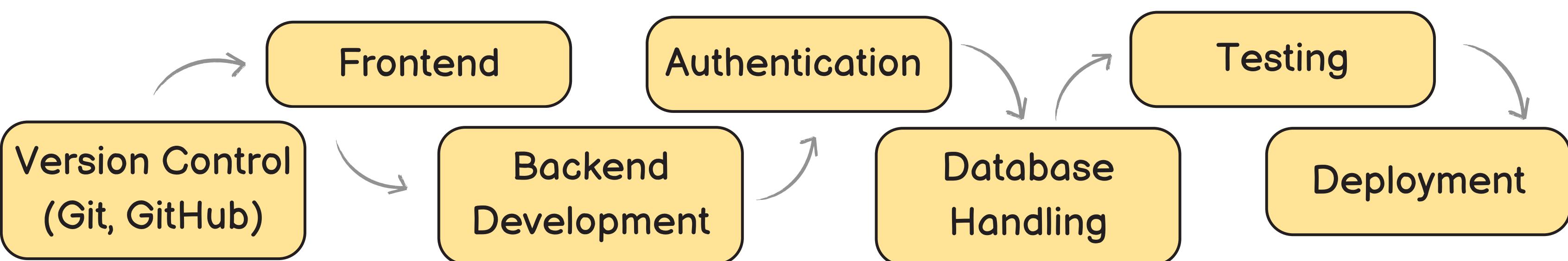
Plan-driven Process

Decision Making

Time and Resource Management

Accountability & Responsibility

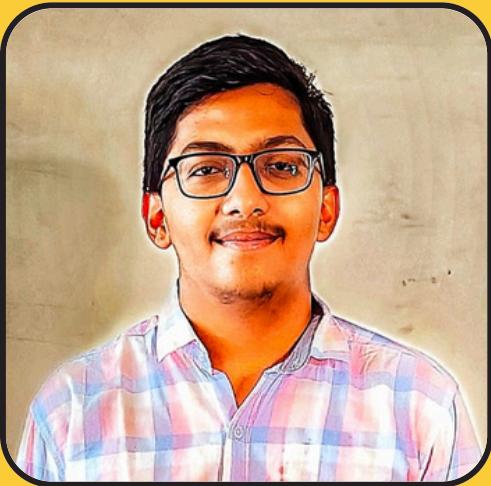
## Technical :



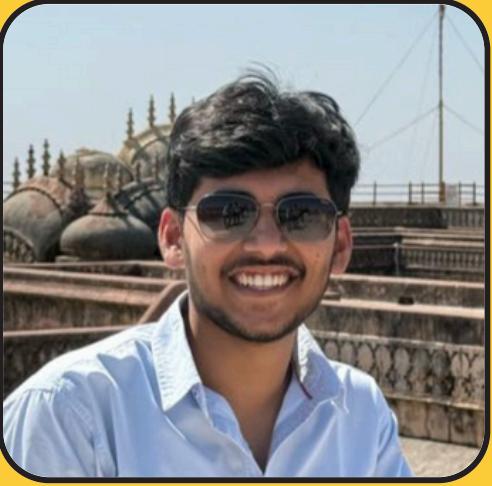
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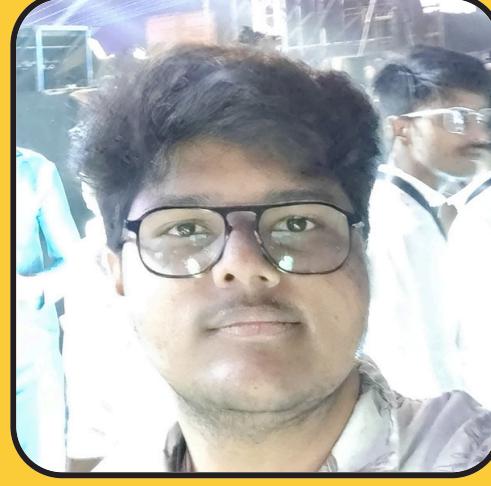
# TEAM



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