Here's a detailed project explanation that you can get a knowledge on my project

**Sales Data Entry Web Application - Project Report**

## Motivation Behind This Project

After graduating two years ago, I faced challenges in securing a job despite my interest in **data analytics and software development**. To bridge the gap between theoretical knowledge and real-world applications, I decided to build this **Sales Data Entry** project.

This project serves as a **learning milestone** to strengthen my skills in **Flask, SQL, Power BI, and web development** while also demonstrating my ability to develop functional data-driven applications. My goal is to showcase this project as a **portfolio piece** to potential employers and contribute to real-world business solutions.

**1. Project Overview**

The **Sales Data Entry Web Application** is a simple yet effective tool for recording and managing sales transactions. This project is built using **Flask (Python), MySQL, HTML, CSS**. Users can enter sales details such as **date, product name, quantity, and price**, which are stored in a structured database.

**Key Highlights**

* **User-friendly Interface**: A clean and simple form to enter sales data.
* **Database Connectivity**: Sales records are stored securely in MySQL.
* **Flask-powered Backend**: Handles form submissions and database interactions.
* **Scalability**: Can be extended with features like authentication, dashboards, and data analytics.

**2. Technologies Used**

The project leverages the following technologies:

| **Technology** | **Purpose** |
| --- | --- |
| **Flask** (Python) | Backend framework to handle form submissions and database connections |
| **MySQL** | Database to store sales records |
| **HTML, CSS** | Frontend design for the user interface |
| **VS Code** | IDE for development |
| **Git & GitHub** | Version control and project hosting |

**3. Project Structure**

The project is structured as follows:

/sales-data-entry

/templates

index.html --> Frontend form for data entry

/static

style.css --> (Optional) For styling

app.py --> Main Flask application

requirements.txt --> Python dependencies

README.md --> Project documentation

config.py --> (Optional) Database settings

**4. Features**

**Frontend (HTML, CSS)**

* **User-friendly Sales Form**: Allows users to input sales details easily.

**Backend (Flask - Python)**

* **Handles Form Submission**: The Flask application receives and processes the sales data.
* **Database Storage**: Data is securely stored in a MySQL database.
* **Real-time Data Entry**: Users can submit data, which is immediately added to the database.

**5. Database Schema**

The **MySQL database** consists of a single table named **sales**, with the following structure:

|  |
| --- |
| Sql  CREATE DATABASE sales\_db; |
| USE sales\_db; |
|  |
| CREATE TABLE sales\_data ( |
| id INT AUTO\_INCREMENT PRIMARY KEY, |
| date DATE NOT NULL, |
| product\_name VARCHAR(255) NOT NULL, |
| quantity INT NOT NULL, |
| price DECIMAL(10,2) NOT NULL); |

**Each record stores:**

* **Date** of the sale
* **Product name**
* **Quantity** sold
* **Price** of the product

**6. Installation & Setup Guide**

**Prerequisites**

Ensure you have the following installed:  
✅ **Python (3.7 or higher)**  
✅ **MySQL Server**  
✅ **VS Code (or any code editor)**

**Steps to Run the Project**

**Step 1: Clone the Repository**

git clone https://github.com/yourusername/sales-data-entry.git

cd sales-data-entry

**Step 2: Set Up a Virtual Environment (Optional, but Recommended)**

python -m venv venv

source venv/bin/activate # (For macOS/Linux)

venv\Scripts\activate # (For Windows)

**Step 3: Install Dependencies**

pip install -r requirements.txt

**Step 4: Configure the Database**

1. Open MySQL and execute the database schema commands.
2. Ensure Flask is connected to the database in app.py.

**Step 5: Run the Flask Application**

python app.py

**Step 6: Open the Web Application**

Go to http://127.0.0.1:5000/ in your browser.

**7. Code Explanation**

**index.html (Frontend)**

* A simple HTML form that collects sales data.

**app.py (Backend)**

* **Handles HTTP Requests**: Receives form data and processes it.
* **Connects to MySQL**: Stores submitted data securely.
* **Runs a Flask Server**: Hosts the application locally.

**requirements.txt**

Contains a list of required Python packages, including Flask and MySQL libraries.

**8. Future Enhancements**

🚀 **Dashboard Integration**: Use **Power BI** to visualize sales trends.  
🔒 **User Authentication**: Secure access with login credentials.  
📊 **Data Export**: Export sales records to **Excel or CSV** for further analysis.

**9. Author**

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**10. License (MIT License)**

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**1. How to Upload to GitHub**

1. **Initialize a Git repository**

git init

git add .

git commit -m "Initial commit"

1. **Add the remote repository**

git remote add origin https://github.com/yourusername/sales-data-entry.git

git branch -M main

1. **Push to GitHub**

git push -u origin main

**Conclusion**

This **Sales Data Entry Web Application** provides a foundation for businesses to manage sales data effectively. With a simple interface, structured database, and powerful backend, it can be further enhanced into a full-fledged sales management system.