Project Report: AI-Powered FAQ Chatbot

Introduction :

The increasing demand for quick, reliable, and automated responses has made chatbots a key component in modern web applications. This project focuses on building an AI-powered FAQ chatbot using web technologies to automate answers to frequently asked questions. The chatbot simulates human-like conversations through a simple and interactive UI, reducing the need for constant human support..

Abstract:

This project presents an AI-Powered FAQ Chatbot that responds to user queries using either a lightweight keyword-matching system or by leveraging OpenAIs GPT-3.5 model (free-tier). The chatbot is implemented using React for the frontend and Node.js/Express for the backend. The system allows users to ask natural language questions, receive intelligent answers, and improves usability through a chat interface. It is customizable and can be expanded with additional features.

Tools Used

React.js User Interface

Node.js Backend runtime

Express.js Server routing

Axios HTTP requests from frontend

OpenAI API (optional) Natural language processing

JavaScript Local logic for responses

HTML/CSS Styling and layout

VS Code Editor

Steps Involved in Building the Project:

Requirement Analysis

- Define scope: chatbot with AI or rule-based responses.

Project Setup

- Create React app (frontend)
- Create Node.js server (backend)

Backend Development

- Configure /ask route
- Connect to OpenAI API or write logic

Frontend Development

- Build chat UI
- Send questions using Axios

Integration

- Connect frontend with backend
- Display answers dynamically

Testing and Enhancements

-Validate with real questions
- Add feedback buttons, style UI

Conclusion

The AI-powered FAQ chatbot successfully showcases the potential of combining AI with modern web technologies. It can improve efficiency, user satisfaction, and reduce manual support. This scalable project lays the groundwork for more intelligent chat interfaces in the future.