Architecture Report

1. Introduction

- **"Ali Crypto House is a web-based crypto tracker and portfolio manager."**

- **Brief purpose: display coin prices, manage portfolio, show quotes, generate PDF reports.**

2. Architecture Overview

- **Frontend: HTML/CSS/JS (interactive UI, canvas effects, search, portfolio overlay)**

- **Backend: Node.js + Express (API endpoints for prices, portfolio, quotes, PDF report)**

- **Data Storage: JSON files (portfolio.json, quotes.json, lastprice.json)**

3. Modules / Components

- **CoinPriceFetcher → Fetches live coin prices from CoinGecko API**

- **PortfolioManager → Handles holdings, updates UI, saves to JSON**

- **QuoteManager → Provides random trade quotes**

- **PDFReportGenerator → Generates portfolio report in PDF**

- **SearchFeature → Handles search input, triggers alert**

4. Data Flow

- **Frontend requests → Backend API → Backend reads JSON / API → Backend responds → Frontend updates UI**

5. Technologies / Tools

- **Frontend: HTML, CSS, JS**

- **Backend: Node.js, Express, PDFKit, fetch, body-parser**

- **Other: CORS, rate limiting, JSON files**

6. Conclusion

- **Quick summary of system's ability to track crypto, manage portfolio, show quotes, generate report**