Cryptocurrency Price Tracker Implementation Report

## Project Overview

I have successfully implemented a real-time cryptocurrency tracking system as per the project requirements. The system provides live monitoring of the top 50 cryptocurrencies with automatic price updates and multiple viewing options.

## Key Deliverables

1. Live Data Tracking System

- Automated collection of cryptocurrency data from CoinGecko API

- Real-time price updates every 30 seconds

- Tracking of key metrics including current price, market cap, 24h volume, and price changes

2. User Interface

- Clean, responsive web interface

- Color-coded price changes for improved readability

- Automatic highlighting of price movements

- Live update counter and timestamp display

3. Excel Integration

- Built-in support for Excel web queries

- Easy-to-follow setup instructions for Excel integration

- Configurable refresh rates for data updates

Technical Implementation

The system has been built using Python for the backend service and HTML/JavaScript for the frontend interface. The implementation includes:

- A dedicated HTTP server for data distribution

- Threaded architecture for concurrent operations

- Comprehensive error handling for API failures

- Formatted number display for improved readability

Testing Results

The system has been thoroughly tested and demonstrates:

- Stable performance over extended periods

- Graceful handling of API interruptions

- Accurate price tracking and updates

- Responsive user interface across different browsers

## Setup Requirements

The system requires minimal setup:

1. Python environment with required dependencies

2. Local port 8000 availability for the server

3. Web browser for viewing the interface

4. Optional: Microsoft Excel for spreadsheet integration

## Conclusion

The implemented system meets all specified requirements and provides a robust solution for real-time cryptocurrency price tracking. The system is ready for deployment and use.