**CodexRay Project Documentation**

**Overview**

CodexRay is a simple system monitor app. It collects data about CPU and memory usage, checks if they are too high, and alerts the user. Alerts are saved so you can review them. You can also upload logs for analysis.

Components

* app.py Main web app and API
* auth.py User login and session management
* alerts.py Alert checking and thresholds
* database.py Stores alerts in SQLite
* log\_analyzer.py Analyzes log files for errors/warnings
* metrics.py Gets CPU and memory data
* run.py Script to start the app and metrics thread

**How It Works**

The app runs a background thread that collects system metrics every 5 seconds. When thresholds are crossed, alerts are created and stored. The web frontend shows charts, alerts, and allows threshold changes.

**How to Use**

* Register or login to use alert threshold features
* Upload log files to see error summary
* Watch live system metrics on dashboard

**Future Improvements**

* Use a real database for users and alerts
* More detailed log analysis
* Better user interface