

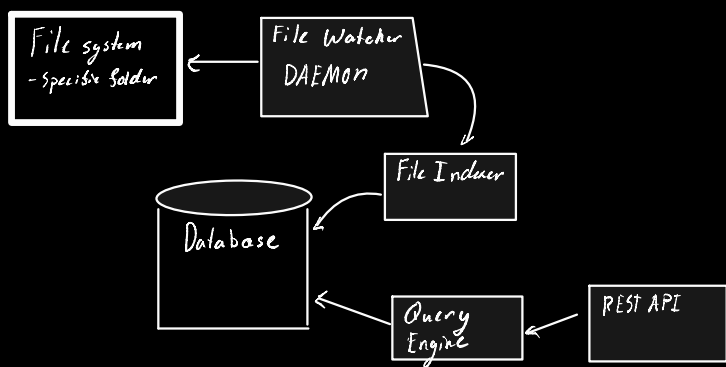
Key Objectives

- Monitor a file system tree for changes
- keep the search index in sync
- Provide low latency endpoints for querying results
- Support Ranked Results, snippets for matched terms, and tag filtering
- Lightweight for Modest Linux Server
- Should run locally

Challenges

- Incremental Indexing on only changed documents
- Balance Query Complexity
- Consistent handling of crashes mid-index crashes

Design



Components

- File Watcher
 - Java Watch Service
- Index/Query
 - Apache Lucene
- Rest API
 - Spring boot
- Database
 - SQL Light