

Software	Feature Name	Difficulty
Mango	Optimization of Run Reports	Medium (Est. 1 file; 4 LOC)

Learning Goals:

- Perform concept location through an advanced change request
- Perform impact analysis and make technical decisions based on the analysis results
- Practice reverse engineering
- Practice writing test cases with full coverage
- Perform database optimization
- Document software design and analysis

Current Behavior

The user can generate a report for a set of sensors across a time range in the reports page. The data is stored in a derby (sql-based) database, and the report is generated by querying it. However, this can take a long time.

Report name	Run time start	Run duration	From	To	Records	Do not purge	
GH Rm 3 Electricity	2022/01/13 18:09	In progress	2022/01/12 00:00	2022/01/13 00:00		<input type="checkbox"/>	
All points	2022/01/13 16:52	1h7m	2012/01/13 16:52	2022/01/13 16:52	7052040	<input type="checkbox"/>	

Expected Behavior

This process should be optimized to generate the report more quickly. One such method would be by trying a new schema for generating reports