

Read me - Loop Kitchen Take Home Assignment

Instructions to run :-

1. Install my sql workbench and my sql server
2. Configure the Dbconfig file with username and password of the sql server.
3. In the project directory terminal run the Kitchen_Report.py with command - (python3 Kitchen_Report.py)

Assignment Directory :-

1 . Kitchen_Report.py (Main file) ->

- a. User interact with this file to start report generation
- b. Query previously generated report
- c. Exit the Service

2. API.py :-

- a. Contains the Api end point for Report_init
 - * returns the randomly generated report id.
 - * start a thread for db_creation, db_insertion and report_generation through querying db
- b. Contains the Api end point for Report_Display
 - * If the report is generated by the thread tell the user that report is generated with location
 - * If the thread report generation is in progress tell the user report generation is in progress please try after some time
- c. Exit end point
 - * If the thread completes execution then exit the programme
- d. Start report generation function :-
 - * A thread is initiated with this function called from Report init function It calls first the DB_creation function, DB_insertion function, Query for report generation

3. DB_operation.py :-

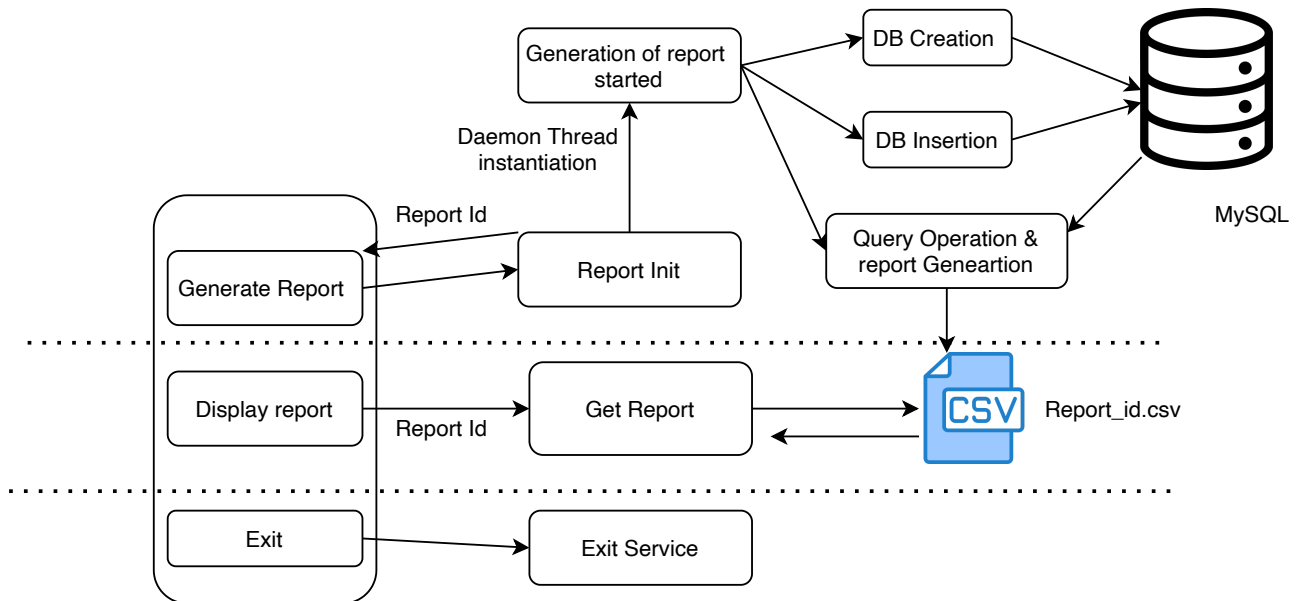
- a. DB_Create :-
 - * First check if db is already created or not if the db is not present then Create the DB for the three CSV file.
- b. BB_insert :-
 - * Checks the total no of records in the DB if the CSV contains more record then record already present then only additional records are inserted which are not present in DB.

4. Query Operation :-

- a. Generates the csv file after query the DB for total no of probes and probes with active status with day, time, and for on week

The Report containing the uptime, Down time are saved in the same project directory

Figure Architecture of the service :-



Report Probing Method :-

Reports are generated by daemon thread launched from report init method
Till the time Report is not saved in the directory
I display the message try after some time
Once report generated in csv format
On probing with report id
Msg displayed report generated with saved location of report id

Extrapolation method used:-

Uptime and downtime of stores are stored in %
based on the total number of probes to the probes in which stores are active
If there are total 3 probes in a day and 2 times the store is active then uptime is 66%
Same way week uptime is calculated and for hrs if there is any active probe with in 4 hrs duration including 2hrs before and 2hrs after then uptime of store is 100%
else downtime is 0%
$$\text{downtime} + \text{uptime} = 100\%$$