



I build a RestAPI that can run the whole API calls that we want to achieve for ,As the diagram show this assignment.

with the processor ,(This restAPI is integrate with 2 DB's (for simplifier I use SQLite DATABASES ("black box") and the user requests.

:The restAPI has 2 schedule tasks that he made

ONE – Publish a daily report.

TWO – Check if there is a Transaction to make from the future table in the SQL DB.

The DB architecture (2 Databases):

The RestAPI DB with 2 tables:

Transaction_Table – store all the details about the transactions that already done. -

Future_Transaction – store all the details about the transactions that will be occur in the future.

The Bank DB with one table:

Bank_accounts – A table that store all the data about the bank accounts (I assume that the table is common to the processor and the restAPI).

The architecture of the rest API

The purpose of this class from one hand is to .The restAPI has a main class that called ExecManager manage the requests from the user and from the other hand to run the schedule tasks if needed.

This class is an object . 'This ExecManager class create an instance of other class called 'Transaction of a single transaction that the client wants to achieve.

.The 'Transaction' class use the proccessor black box when a perform_transaction occur

There is a two transaction types that can occur:

Debit – the transaction will occur when the restAPI get a call of this type of the transaction.

Credit – the transaction will occur in the next 12 weeks.

Flow

the details of it will be store at the 'Transaction_Table' in the SQL DB. ,When a transaction occurs

(I assume that we will have another table of the bank accounts – that common with the processor).

it will store all the future transaction ,When the restAPI get a call of making a **credit** transaction details of this transaction in the 'Future_Transaction' table at the DB for using later.

it will return an error to the user with the details. ,If a debit transaction is failed

it will put the current transaction to the end of the repayment plan. ,If a credit transaction is failed

How to use

At start you need to run the main_restapi.py file for create and open the server and waiting for requests.

After that I added a new file that called client.py. From this file you can send new requests to the RestAPI. The RestAPI runs by default on a local machine (the port number and the IP are configurable at the settings folder).