

J.P Morgan Java Technical Test Notes

Overview

This document explains more details about the application development for the Java Technical Test at the JP Morgan. The JPMorgan application display the report on console in Unicode format. It shows all the incoming and outgoing transactions based on client instructions for a day. You can get the report output by passing a date and with -CSV parameter you will get all the raw data in csv format.

Design

The following java classes are developed for the application:

- Main.java
- Report.java
- SetUpData.java
- Setting.java
- rec/CurrencyRateRec.java
- rec/CurrencyRec.java
- rec/TradeInstructionRec.java
- rec/WeekTypeRec.java

Main

Main class is the starting class. It initialize the data from the SetUpData and run the report to print output. You can pass date to print report for that date. It shows all the transaction for the actual settlement date for the parameter passed.

Report

Report class prints the report.

SetUpData

SetUpData sets the data for the report.

Settings

All the settings for the application are available in this class.

CurrencyRateRec

This class holds data for a currency rate. Assuming in future it can be modified to a record in the database for currency rate.

Currency

Similar to Currency Rate Rec. It holds information about currency. At the moment only Currency Week type is stored.

TradeInstructionRec

This class keeps information for trade instruction record from client.

WeekTypeRec

Week type rec to keep information for the currency working days and week ends.

SetUpDataTest

This class is used for Junit tests for the SetUpData class.

Only one class was tested in Junit, as it was using most of the program logic. Other classes had not much to test. Report class is printing to the console. Can be tested by running it. Main class also similar to Report class. Setting and all the record classes are just variables and methods were generated by eclipse.

Other Files

Data.xlsx

This excel file got all the trading instruction data used in the report. You can filter on actual settlement date and match the output by running the report.

jpMorgan.jar

it is a jar file to run the application.

Assumption and Limitation

Few assumptions were made to keep the application simple and shorter keeping in mind the three-hour time limit.

- Currency rates are assumed to be up to two decimal places
- It would have nice to display the currency symbol in the report. For simplifying avoided it.
- Report header and columns, I started to make flexible for easy modification in the future. After writing First two lines, I realize it will take long time, so I hard coded everything. As the test just expect the output to the console, no mention of formatting.
- Adding and modifying more data in setup class is welcome, but some junit cases may fail. You may have to update some final variables defined in the beginning of the class.