| Transactions Aggregator Documentation V1.0 | |
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1. Expected behavior

For a given list of input csv files containing transactions like:

| 4 | А | В | С | D | Е | |
|---|------------|--------|--------|-----|------|--|
| 1 | date | type | amount | to | from | |
| 2 | Oct 1 2019 | remove | 99 | 182 | 198 | |
| 3 | Oct 2 2019 | add | 2000 | 198 | 188 | |
| 1 | | | | | | |

| A | Α | В | С | D | E |
|---|------------|-------------|---------|-----|------|
| 1 | date | transaction | amounts | to | from |
| 2 | 03/10/2019 | remove | 99 | 182 | 198 |
| 3 | 04/10/2019 | add | 2000 | 198 | 188 |

| 4 | Α | В | С | D | Е | |
|---|------------|--------|--------|-----|------|--|
| 1 | date | type | amount | to | from | |
| 2 | Oct 4 2019 | remove | 99 | 182 | 198 | |
| 3 | Oct 5 2019 | add | 2000 | 198 | 188 | |
| 4 | | | | | | |

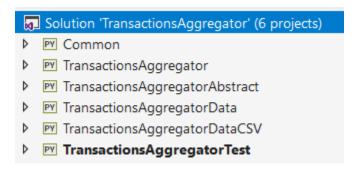
The application is expected to aggregate those transactions into a single output csv file:

| 4 | Α | В | С | D |
|---|---|--|--|--|
| 1 | | Bank1.csv | Bank2.csv | Bank3.csv |
| 2 | 0 | ['Oct 1 2019', 'remove', 99, 182, 198] | ['03/10/2019', 'remove', 99, 182, 198] | ['Oct 4 2019', 'remove', 99, 182, 198] |
| 3 | 1 | ['Oct 2 2019', 'add', 2000, 198, 188] | ['04/10/2019', 'add', 2000, 198, 188] | ['Oct 5 2019', 'add', 2000, 198, 188] |
| | | | | |

2 Technical Solution

2.1 General structure

The implemented solution on Visual Studio 2017, Python 3.7.3, is structured like below:



2.2 TransactionsAggregatorData Project

This project offers data parsing services.

2.3 TransactionsAggregatorDataCSV Project

This project offers a specific implementation of the above interface by parsing CSV files.

2.4 TransactionsAggregatorAbstract Project

This project offers the core service of the aggregation process.

2.5 TransactionsAggregator Project

This project offers the concrete implementation of the core service of the aggregation process.

2.6 TransactionsAggregatorTest Project

This project is available for acceptance tests (through Given When Then) purposes.

3 Acceptance Tests - Given When Then (GWT)

3.1 GWT Aggregate Data structure

| Given | | | | | | |
|-------|--|--|--|--|--|--|
| When | Transactio | ons Aggregator Test. test_ToT | ransactionHistoryOutput() is | s run | | |
| Then | Test OK, output.csv generated in TransactionsAggregator\TransactionsAggregatorTest\outputs | | | | | |
| | A | В | С | D | | |
| | 1 | bank1.csv | bank2.csv | bank3.csv | | |
| | 2 (| ['Oct 1 2019', 'remove', 99, 182, 198] | ['03-10-2019', 'remove', 99, 182, 198] | ['Oct 4 2019', 'remove', 99, 182, 198] | | |
| | 3 1 | ['Oct 2 2019', 'add', 2000, 198, 188] | ['04-10-2019', 'add', 2000, 198, 188] | ['Oct 5 2019', 'add', 2000, 198, 188] | | |
| | 4 | | | | | |

3.2 GWT CSV files

| | bar | nk1.csv | | | | | | | |
|---------|-----|------------------------------|----------------------------|--------------------------------|-------------|-----------------|-----------------|-------------------|---|
| Given | 4 | | A | | 3 | С | D | E | |
| | 1 | date | | type | | amount | to | from | |
| | | Oct 1 2019 | | remove | | 99 | | | |
| | _ | Oct 2 2019 | | add | | 2000 | | | |
| | 1 | 00122025 | | | | 2000 | 130 | 200 | |
| | bar | nk2.csv | | | | | | | |
| | | | | | | | | | |
| | | Α | В | С | D | E | | | |
| | 1 | date | transaction | amounts | | from | | | |
| | 2 | 03/10/2019 | | 9 | | | 98 | | |
| | 3 | 04/10/2019 | add | 200 | 0 19 | 98 1 | 88 | | |
| | 4 | Α | В | С | D | Е | | | |
| | 1 | | | | to | from | _ | | |
| | | | remove | 99 | 182 | + | 8 | | |
| | | | add | 2000 | 198 | + | _ | | |
| | 4 | 000 2015 | uuu | 2000 | 150 | , 10 | 0 | | |
| | | | | | | | | | |
| When | Tra | nsactions A | ggregatorTe | ct tect To | Transacti | on History | OutputCS | //) is rup | |
| /VIICII | па | iisactioiisA | 551 CBalul IE | 31.1531_10 | riiaiisacti | on instoly | Outputes | v() is ruir | |
| | | | | | | | | | |
| | | | | | | | | | |
| hen | Tes | st OK, outpu | t.csv genera | ated in | | | | | |
| | | • | t.csv genera | | nsAggrega | atorTest\o | utputs | | |
| | | • | _ | | nsAggrega | atorTest\o c | utputs | | D |
| | Tra | nsactionsAg | ggregator\Ti B 1.csv | ransactior | bank2.csv | C | | bank3.csv | _ |
| | Tra | nsactionsAg A bank 0 ['Oct | ggregator\Ti | ransactior e', 99, 182, 198 | bank2.csv | C | , 99, 182, 198] | ['Oct 4 2019', 'r | D remove', 99, 182 add', 2000, 198, 1 |