# BOOK AND READ

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Problem Description:

'Book & Read' is newly opened bookstore. As part of the design, they want the database to capture information about all books and all that includes its title,publication date,No of pages & MRP. Additionally, there is also information stored about the book's publisher, that includes publisher name, and publisher address. A single publisher can publish multiple books. Information on the authors of the book is also stored and that includes the author's name and address. Either a single author or several author can write any single book.

Information on sales is stored that includes customer details like Age,Gender,Address etc. It also contains data about the quantity of books purchased for each book, Total price & Discount if any. With all this data available, 'Book & Read' now wants to identify customer preferences and emerging trends for a more focused business approach.

ER DIAGRAM
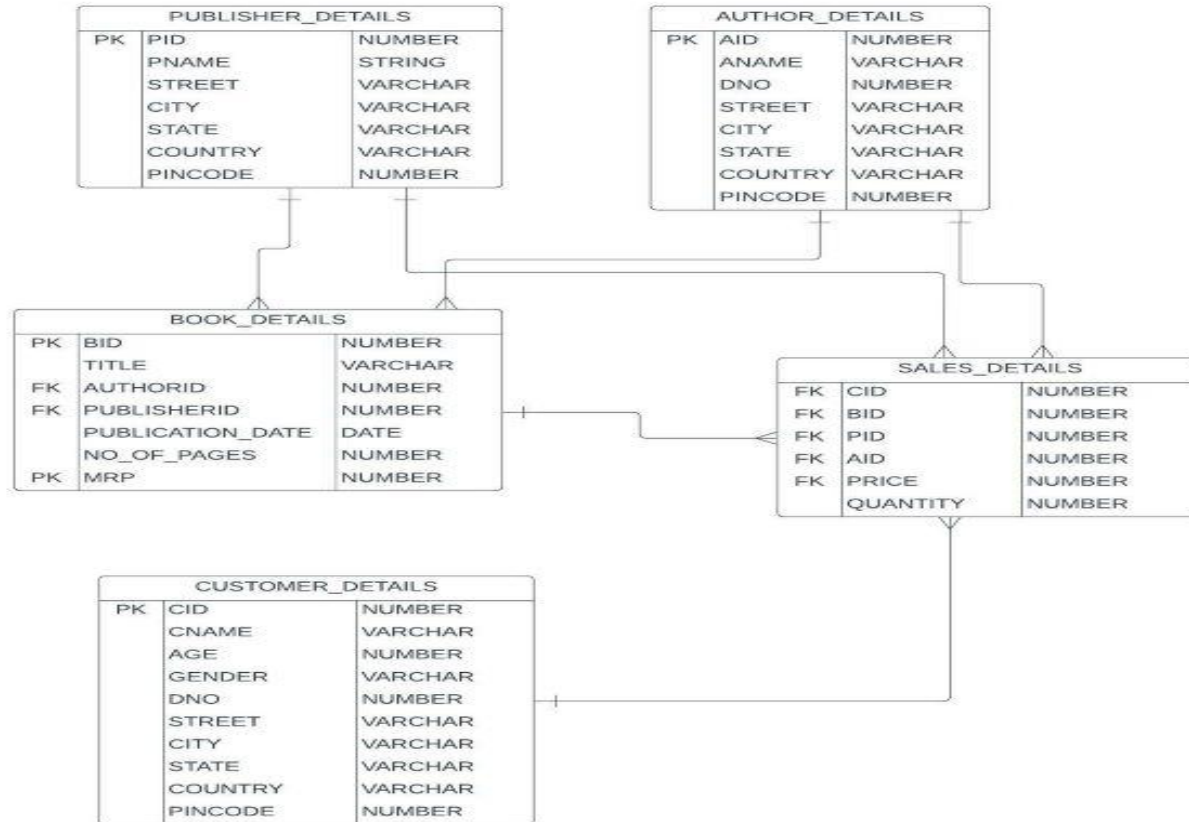
MAPPINGS

Finding the costliest and cheapest book in the store.
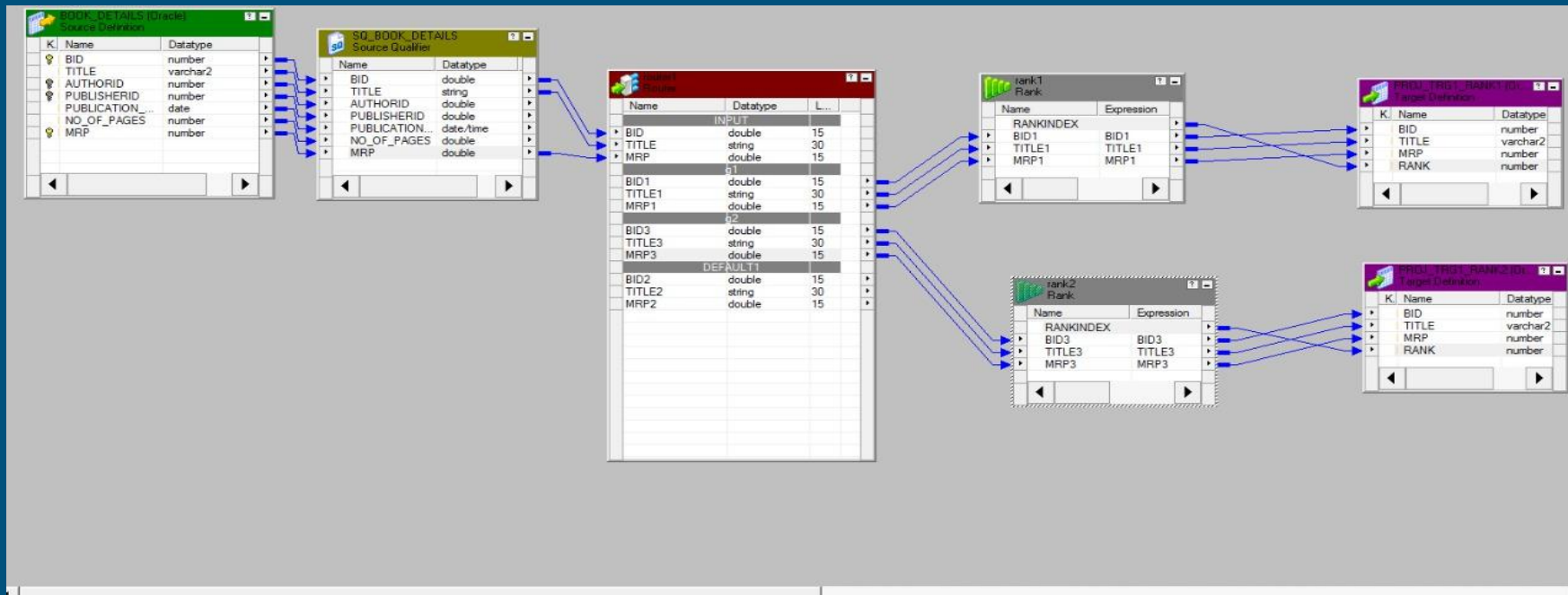
OUTPUTS

CHEAPEST BOOKS LIST:

```
INFORMATICA31_TARGET> select * from Proj_trg1_rank1;

       BID TITLE                MRP        RANK
---------- ---------- ---------- ----------
        35 UDISJFOSKK          104          1
         1 GPMVPUDOOC          109          2
        14 OTQIGZSYBC          160          3
        13 YWMPBHSMYE          198          4
        30 QESWJTZHDI          208          5
        47 VYXUMVTKES          211          6
        12 ICORHEERCZ          234          7
         8 GOHQPQDEII          243          8
         6 LTGYSJDUQB          273          9
        25 IDQGINDPOH          276         10
        39 XEMWVQANXH          280         11
        31 ZPHMOHBHQZ          287         12
        19 SDRAGQUTZH          319         13
        15 DOMYZVTVZV          322         14

14 rows selected.
```

COSTLIEST BOOKS LIST:

```
NFORMATICA32_TARGET> select * from proj_trg1_rank2;

    BID TITLE                                              MRP      RANK
-------- ----------------------------------    ---------- ----------
     10 ZKJYROKNTP                                         693         1
     28 PJBWNZVOXO                                         666         2
     37 PTLLGYAXHX                                         662         3
     49 SLTBYZBSPZ                                         660         4
     46 IWZSEMUKME                                         650         5
     11 QAVOKXPQMK                                         647         6
     29 YOSEOXBLDB                                         638         7
     16 ISKSHHEZRH                                         621         8
     27 KDQHLARSTJ                                         605         9
     40 DHMMYJDZWP                                         599        10
     45 AJIHVUPUDE                                         583        11
     23 GTLQWPUMRE                                         581        12
     24 MRFKLHKDUZ                                         572        13
      3 JXPOUROTRF                                         568        14
     34 BVTWYJCBNF                                         538        15
```
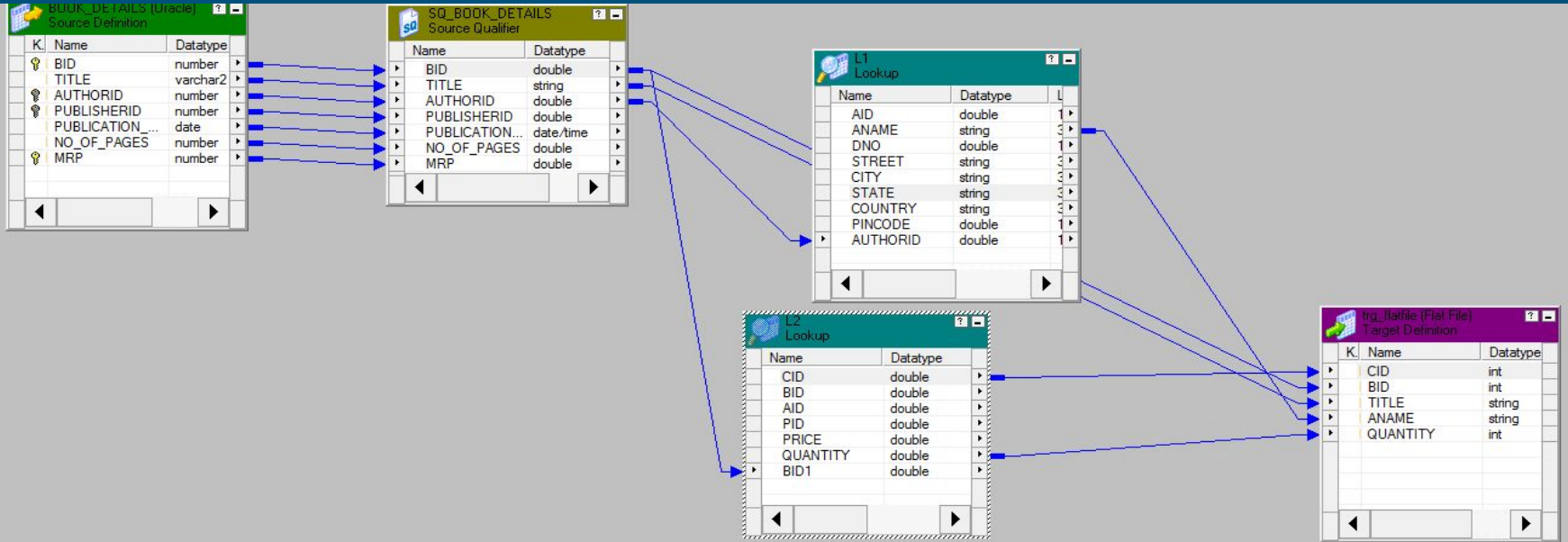
Finding the bill that customer has to pay.
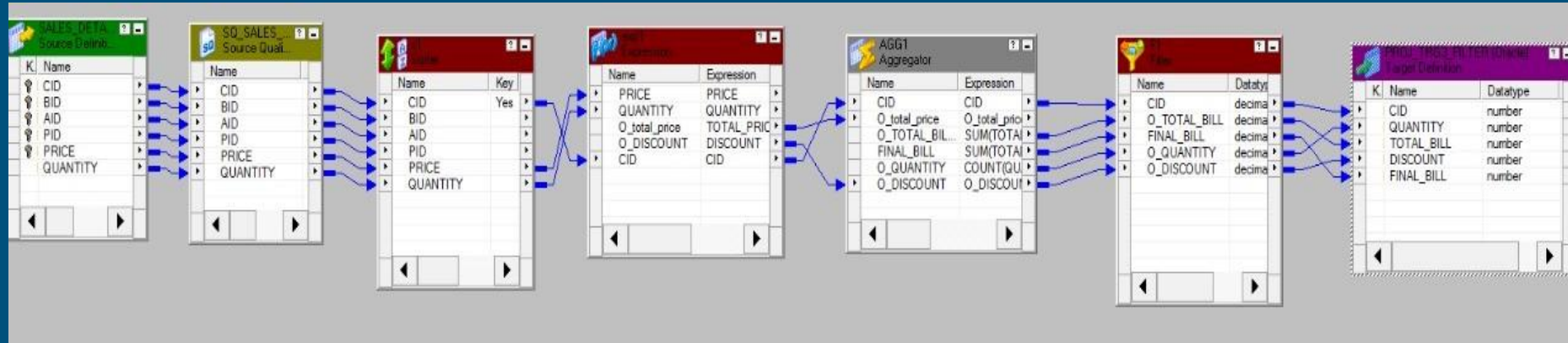
OUTPUT

CID	QUANTITY	TOTAL_BILL	DISCOUNT	FINAL_BILL
2	1	109	5	103.55
3	2	1839	5	1747.05
4	1	417	5	396.15
5	1	1020	5	969
6	1	450	5	427.5
7	3	3465	5	3291.75
8	1	1170	5	1111.5
9	1	104	5	98.8
10	2	576	5	547.2
11	1	1294	5	1229.3
12	2	881	5	836.95
13	1	198	5	188.1
14	2	716	5	680.2
15	1	322	5	305.9

Finding the most popular books?

OUTPUT

```
#CID,BID,TITLE,ANAME,QUANTITY
1,1,GPMVPUDOOC,MZCPWQPOPN,2
32,2,ICNGLRJEKR,EEHNPDERXT,1
33,3,JXPOUROTRF,ATKBWSPUFK,2
34,4,JBNBEQCOKR,PXDRYFSXUJ,2
35,5,MMMEQDDRRS,ZCFSFEDRLP,1
36,6,LTGYSJDUQB,AQCXYUOFYR,2
37,7,JAGDKKOIWM,MYPDVGHTMI,1
38,8,GOHQPQDEII,KSEOSVQMOC,2
39,9,LMSYVZGMUM,PSWIIFTWDQ,2
40,10,ZKJYRQKNTP,EPMPQHWAWB,2
11,11,QAVOKXPQMK,TINNVYWLPJ,2
12,12,ICORHEERCZ,AQCXYUOFYR,1
14,13,YWMPBHSMYE,MZCPWQPOPN,2
14,14,OTQIGZSYBC,QWQZPLBWGO,2
16,15,DOMYZVTVZV,KSEOSVQMOC,2
16,16,ISKSHHEZRH,MFYSFLRCMT,3
17,17,KWALDJANXD,UTBQYWNEWR,2
6,18,JBRLVXIDUT,WFDHHPWAQA,1
20,19,SDRAGQUTZH,VPDYCOWHKC,5
10,20,ANAJSWKWTQ,WOVQDPNGVQ,1
23,21,YSRPDRWWVR,EDIEXCWMSA,2
22,22,HIRVDDMKJI,OQDITOKHNF,3
```

OUTPUT

```
BID ANAME                              TITLE                          MAX_OF_COUNT
---- -----------------------------     ---------------------------    ------------
  19 VPDYCOWHKC                         SDRAGQUTZH                                5
  30 IWVTLFIJKJ                         QESWJTZHDI                                4
  16 MFYSFLRCMT                         ISKSHHEZRH                                3
  22 OQDITOKHNF                         HIRVDDMKJI                                3
   3 ATKBWSPUFK                         JXPOUROTRF                                2
   4 PXDRYFSXUJ                         JBNBEQCOKR                                2
   6 AQCXYUOFYR                         LTGYSJDUQB                                2
   8 KSEOSVQMOC                         GOHQPQDEII                                2
   9 PSWIIFTWDQ                         LMSYVZGMUM                                2
  10 EPMPQHWAWB                         ZKJYRQKNTP                                2
  11 TINNVYWLPJ                         QAVOKXPQMK                                2
  13 MZCPWQPOPN                         YWMPBHSMYE                                2
  14 QWQZPLBWGO                         OTQIGZSYBC                                2
  15 KSEOSVQMOC                         DOMYZVTVZV                                2
  17 UTBQYWNEWR                         KWALDJANXD                                2
  21 EDIEXCWMSA                         YSRPDRWWVR                                2
  24 EKNLMTNMBT                         MRFKLHKDUZ                                2
  25 IKJZAOAFSJ                         IDQGINDPOH                                2
  26 JGRJFRJYJI                         YYCOSUPJUM                                2
  28 XLWTVTVQNM                         PJBWNZVOXO                                2
```

UNIT TESTING

Unit testing involves the testing of each unit or an individual component of the software application. It is the first level of functional testing.

The aim behind unit testing is to validate unit components with its performance.

A unit is a single testable part of a software system and tested during the development phase of the application software.

The purpose of unit testing is to test the correctness of isolated code.

A unit component is an individual function or code of the application.

White box testing approach used for unit testing and usually done by the developers.

Sources: BOOK_DETAILS

Mappings: M_MAPP_PROJECT_ROUTER_RANK

Targets: PROJ_TRG1_RANK1, PROJ_TRG1_RANK2,

Session: S_M_MAP_PROJECT_ROUTER_RANK

Transformations: ROUTER, RANK

Expected Results: Message in workflow manager status bar: "Workflow
WF_S_M_MAP_PROJECT_ROUTER_RANK is valid "

Actual Results: Message in workflow manager status bar: "Workflow
WF_S_M_MAP_PROJECT_ROUTER_RANK is valid "

Remarks: Pass

Sources: SALES_DETAILS

Mappings: M_MAPP_PROJECT_FILTER_AGG

Targets:PROJ_TRG3_FILTER

Session: S_M_MAP_PROJECT_FILTER_AGG

Transformations: SORTER,EXPRESSION,AGGREGATOR,FILTER.

Expected Results: Message in workflow manager status bar: "Workflow WF_S_M_MAP_PROJECT_FILTER_AGG is valid "

Actual Results: Message in workflow manager status bar: "Workflow WF_S_M_MAP_PROJECT_FILTER_AGG is valid "

Remarks: Pass

Sources: TRG_FLATFILE1.TXT

Mappings: M_MAP_PROJECT_AGG_FLATFILE

Targets: PROJ_TRG7

Session: S_M_MAP_PROJECT_AGG_FLATFILE

Transformations:AGGREGATOR,EXPRESSION,SORTER

Expected Results: Message in workflow manager status bar: "Workflow WF_S_M_MAP_PROJECT_AGG_FLATFILE is valid "

Actual Results: Message in workflow manager status bar: "Workflow WF_S_M_MAP_PROJECT_AGG_FLATFILE is valid "

Remarks: Pass

INTEGRATION TESTING

Integration testing is the second level of the software testing process comes after unit testing. In this testing, units or individual components of the software are tested in a group. The focus of the integration testing level is to expose defects at the time of interaction between integrated components or units.

Unit testing uses modules for testing purpose, and these modules are combined and tested in integration testing. The Software is developed with a number of software modules that are coded by different coders or programmers. The goal of integration testing is to check the correctness of communication among all the modules.

Once all the components or modules are working independently, then we need to check the data flow between the dependent modules is known as **integration testing**.

<u>Source Tables</u> : BOOK_DETAILS

<u>Target Tables</u> : PROJ_TRG1_RANK1, PROJ_TRG1_RANK2

<u>Transformation:</u> ROUTER,RANK

<u>Expected Result:</u>

Check Mapping> Mapping is validate

Go to workflow > Message in workflow manager status bar : "WorkflowWF_S_M_MAP_PROJECT_ROUTER_RANK is valid"

<u>Actual Result:</u>

Message in workflow manager status bar : "Workflow WF_S_M_MAP_PROJECT_ROUTER_RANK is valid"

Remarks : Pass

Source Tables : SALES_DETAILS

Target Tables : PROJ_TRG3_FILTER

Transformation:Sorter,Expression,Aggregator,Filter

Expected Result:

Check Mapping> Mapping is validate

Go to workflow > Message in workflow manager status bar: "Workflow

WF_S_M_MAP_PROJECT_FILTER_AGG is valid"

Actual Result:

Message in workflow manager status bar : "Workflow WF_S_M_MAP_PROJECT_FILTER_AGG is valid

Remarks : **Pass**

Source Tables : TRG_FLATFILE1.TXT

Target Tables : PROJ_TRG7

Transformation: AGGREGATOR, EXPRESSION

Expected Result:

Check Mapping> Mapping is validate

Go to workflow > Message in workflow manager status bar:"Workflow WF_S_M_MAP_PROJECT_AGG_FLATFILE is valid"

Actual Result:

Message in workflow manager status bar : "Workflow WF_S_M_MAP_PROJECT_AGG_FLATFILE is valid"

Remarks : **Pass**

REGRESSION TESTING

The goal of Regression testing is to verify that the data in the source table will remain same before and after the mapping.Regression testing is a black box testing techniques.It is used to authenticate a code change in the software does not impact the existing functionality of the source table.Regression testing is making sure that the source table works fine with new functionality,bug fixes,or any change in the existing feature.

Regression testing is a type of software testing.Test cases are re-executed to check the previous functionality of the application is working fine, and the new changes have not produced any bugs.

1) Test Case ID: T1

Retrieved the data from source table SALES_DETAILS and grouped it in 2 categories BID , Title, MRP using transformations. The source table SALES_DETAILS contains 66 rows of data. The date remains same after the transformation.

2) Test Case ID: T2

Retrieved the data from the SALES_DETAILS and sorted,aggregated to find the bill the customer has to pay. This data will be useful to know billing details of each customer. The source table SALES_DETAILS contains 66 rows of data. The date remains the same after the transformation.

3) Test Case ID: T3

Retrieved the data from TRG_FLATFILE1.TXT and used the aggregator transformation on the data. This data is used to find the mostly sold out book and also the books which are not sold at least once. The target flat file contains 66 rows of data. The data remaines same after the transformation.

THANK YOU