

Health Care System



CDB22CSDDW004 Group-B

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AIA-ModernBI-Indst) (Associate ID - 405829)

Introduction

The primary objective of the project is to create a database with required data validations as mentioned below:

Group

 To analyze the Group information given & load them into the Group table.

+

Sub Group

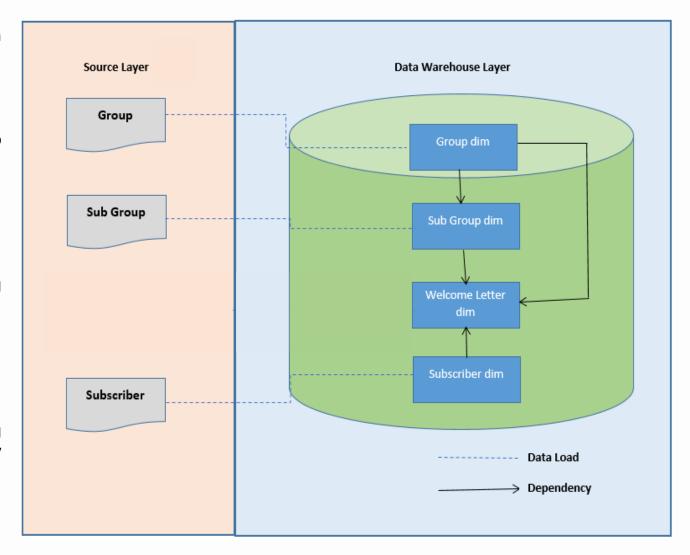
- To analyze the Sub Group data.
- Load them into the Sub Group table with the matching records in the Group table.

+

Subscriber

- To analyze the Subscriber data.
- Load them into the Subscriber table with the matching records in the Group table and subgroup table already loaded.

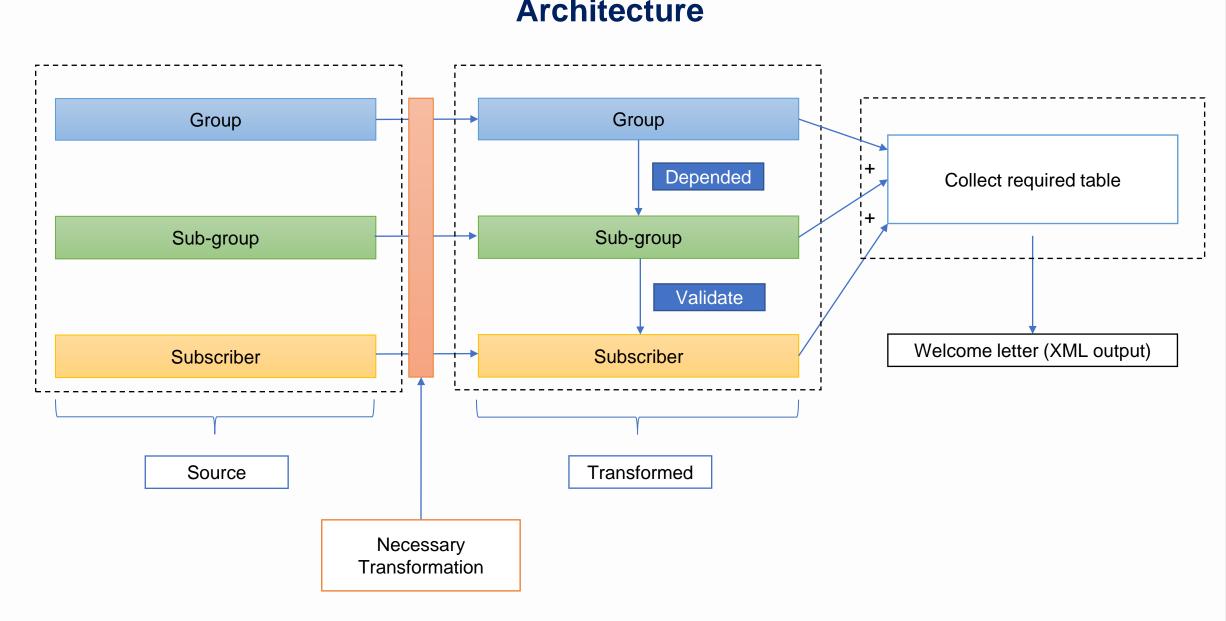
Welcome Letter



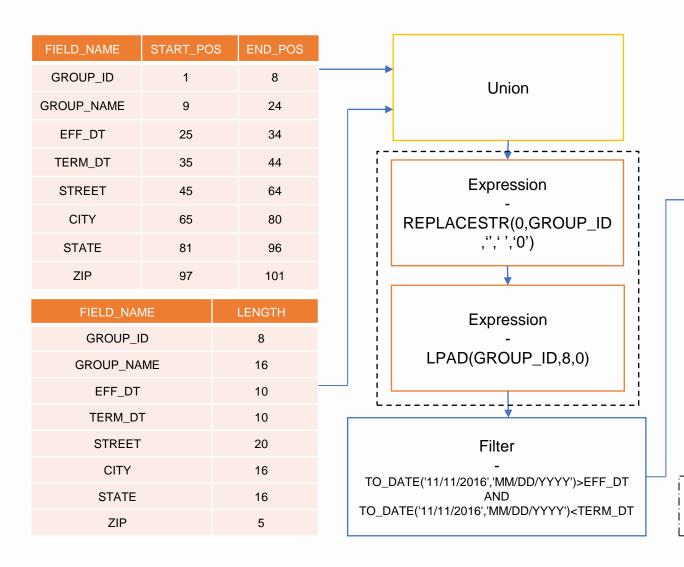
Functional requirements for GROUP

- Rename the input file as Group_Fixed_<Associate_Id>.txt and Group_Comma_<Associate_Id>.csv.
- Create a table in sql plus by name Group_<Associate_ld>.
- Validate the data from the input file and load only valid records into the target table according to the constraints mentioned in the target table.
- Load only the members who are currently effective. (i.e) SYSDATE BETWEEN EFFT_DT AND TERM_DT.
- Populate leading zeroes in GROUP_ID field while populating into the target table.
- GRP_SK is the surrogate key.

Architecture



Group structure

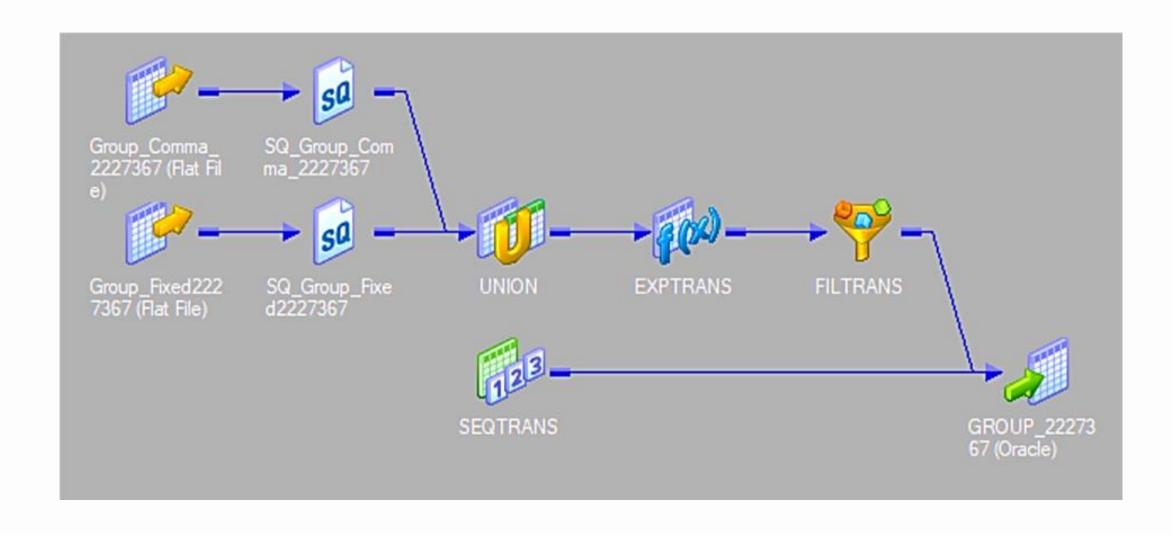


	FIELD_NAME	TARGET DATATYPE	TABLE CONSTRAINTS
	GRP_SK	NUMBER(10)	NOT NULL
	GROUP_ID	VARCHAR2(8)	PRIMARY_KEY
	GROUP_NAME	VARCHAR2(30)	NOT NULL
	EFF_DT	DATE	NOT NULL
•	TERM_DT	DATE	NOT NULL
	STREET	VARCHAR2(35)	
	CITY	VARCHAR2(15)	
	STATE	VARCHAR2(20)	
	ZIP	NUMBER(5)	NOT NULL

SEQUENCE_GENERATOR

NOTE: 11/11/2016 is taken instead of SYSDATE, since the data files consists no records which is viable for the current system date.

Mapping for Group module



Data Before and after workflow

Group

12346XYZ INC	9/1/2013	12/31/2015SECOND ST	ROCHESTER	NEW YORK	60124
12347THINK INC	6/1/2013	12/31/2016THIRD ST	BUFFALO	NEW YORK	60125
12348TANK CORP	3/1/2013	12/31/2017FOURTH ST	KENTUCKY	NEW YORK	60126
12349BUZ ASSC	12/1/2012	12/31/2014CROSS ST	CHICAGO	ILLINOIS	60127
12350BPC LTD	9/1/2012	12/31/2015FIRST CROSS ST	SAN FRANCISCO	CALIFORNIA	60128
12351WONDER BANK	6/1/2012	12/31/2016FIRST INTERSECTION	DALLAS	TEXAS	60129
12352STRANDED OFFICE	3/1/2012	12/31/2017MORILIER ST	MIAMI	FLORIDA	60130

GROUP_IE	GROUP_N	EFF_DT	TERM_DT	STREET	CITY	STATE	ZIP
12345	ABC CORP	01-01-2014	31-12-2014	FIRST ST	NEW YORK	NEW YORK	60123
12346	XYZ INC	01-09-2013	31-12-2015	SECOND S	ROCHESTE	NEW YORK	60124
12347	THINK INC	01-06-2013	31-12-2016	THIRD ST	BUFFALO	NEW YORK	60125
12348	TANK COR	01-03-2013	31-12-2017	FOURTH S	KENTUCKY	NEW YORK	60126
12349	BUZ ASSC	01-12-2012	31-12-2014	CROSS ST	CHICAGO	ILLINOIS	60127

GROUP_FIXED_2227367.txt

GROUP_COMMA_2227367.csv

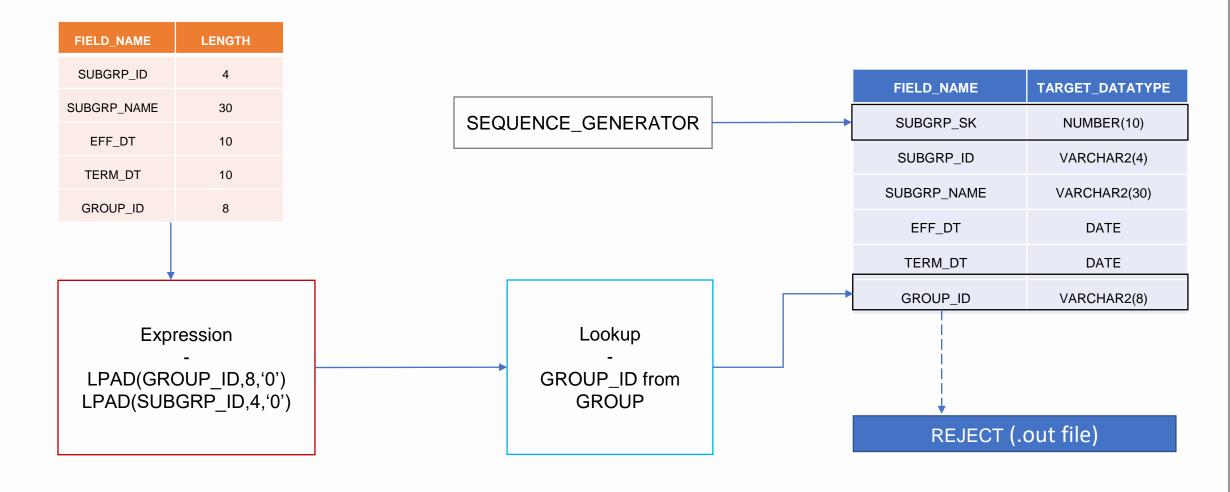
GROUP_2227374



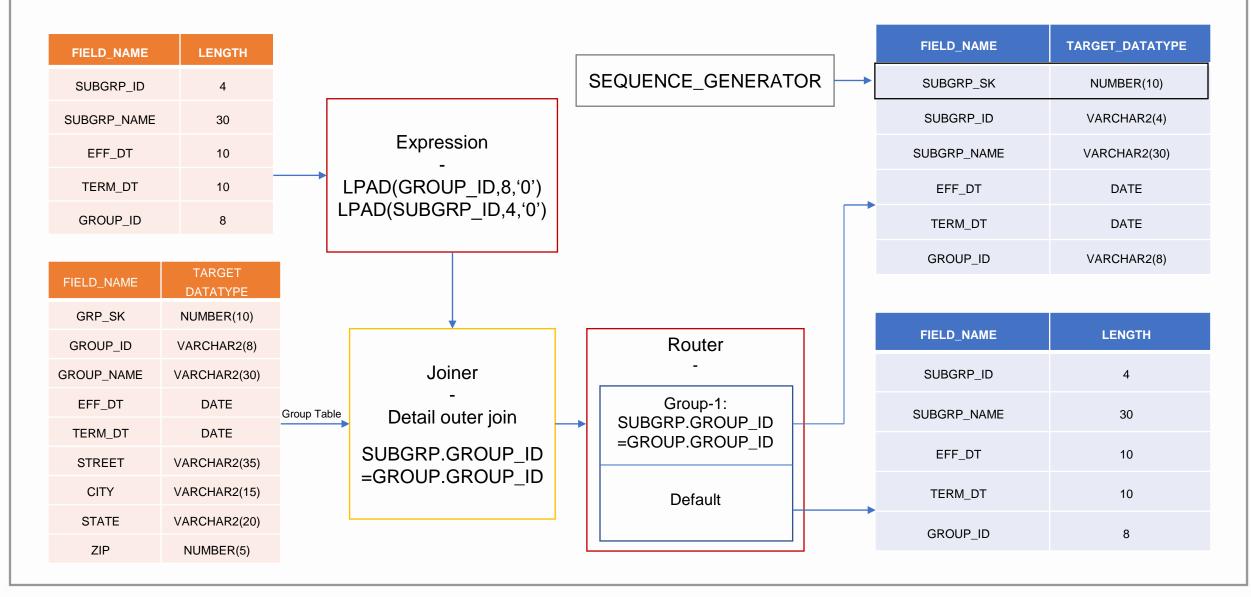
Functional requirements for SUBGROUP

- Rename the input file as SUBGRP_<Associate_Id>.txt.
- Create table in sql plus by name SUBGRP_<Associate_Id> with the above structure.
- Validate the data from the input file and load only valid records into the target table according to the constraints mentioned in the target table.
- Populate leading zeroes in the fields GROUP_ID and SUBGRP_ID while loading into the table.
- Also validate the Group Id against the Group table and load only matching data into the target table.
- Load the non matching values into Target file with the same structure as source and name the file as SUBGRP_Join_Errors_<Associate_Id>.txt
- SUBGRP_SK is the surrogate key.

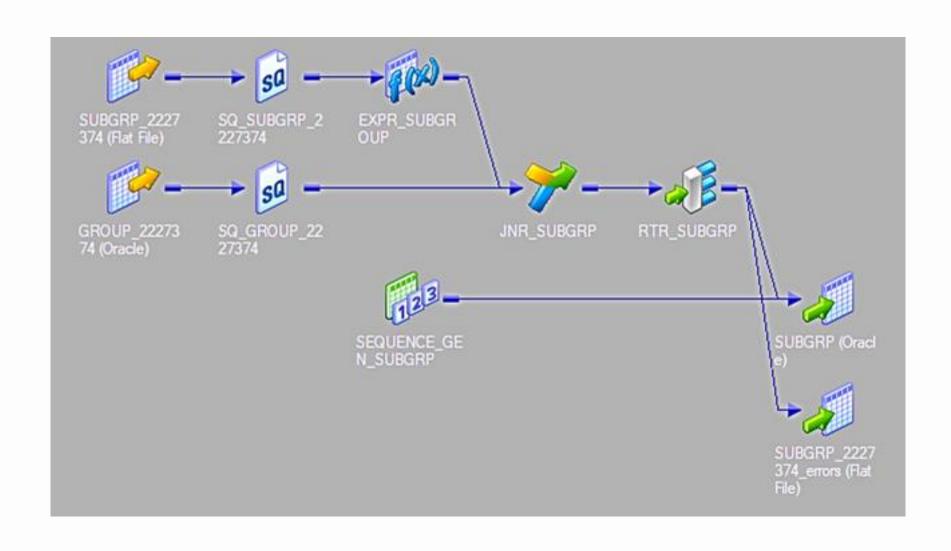
Sub-group structure (V1.0)



Sub-group structure (V1.1)



Mapping for Subgroup module



Subgroup

SUBGRP_2227374.txt

OUTPUT (SUBGRP_2227374)

REJECTS

SUBGR	P ID SUBGR	P NAME EFF	DT TERM_I	OT GROUP ID
1	WORKERS	1/1/2014	12/31/2014	12345
2	ASSOCIATES	1/1/2014	12/31/2014	12345
3			12/31/2014	
4	HRS 1/1/2	014 12/3	1/2014 12345	
5			12/31/2014	
6	ADMINS	1/1/2014	12/31/2014	12345
7	SECURITY	1/1/2014	12/31/2014	12345
1	WORKERS	9/1/2013	12/31/2015	12346
2			12/31/2015	
3	MANAGERS	9/1/2013	12/31/2015	12346
4	HRS 9/1/2	013 12/3	1/2015 12346	
5	DIRECTORS	9/1/2013	12/31/2013	12345
6	ADMINS	9/1/2013	12/31/2013	12345
7	SECURITY	9/1/2013	12/31/2015	12346
1	WORKERS	6/1/2013	12/31/2013	12345
2			12/31/2016	
3	MANAGERS	6/1/2013	12/31/2016	12347
4	HRS 6/1/2	013 12/3	1/2016 12347	
5	DIRECTORS	6/1/2013	12/31/2016	12347
6	ADMINS	6/1/2013	12/31/2016	12347
7	SECURITY	6/1/2013	12/31/2013	12345
1			12/31/2017	
2	ASSOCIATES	3/1/2013	12/31/2017	12348
3			12/31/2017	
4	HRS 3/1/2	013 12/3	1/2017 12348	
5	DIRECTORS	3/1/2013	12/31/2017	12348
6	ADMINS	3/1/2013	12/31/2013	12348
7	SECURITY	2/1/2012	12/21/2017	122/0

SUBGRP_SK	SUBG	SUBGRP_NAME	EFF_DT	TERM_DT	GROUP_ID
485	0006	ADMINS	01-JUN-13	31-DEC-16	00012347
486	0005	DIRECTORS	01-JUN-13	31-DEC-16	00012347
487	0004	HRS	01-JUN-13	31-DEC-16	00012347
488	0003	MANAGERS	01-JUN-13	31-DEC-16	00012347
489	0002	ASSOCIATES	01-JUN-13	31-DEC-16	00012347
490	0007	SECURITY	01-MAR-13	31-DEC-17	00012348
491	0006	ADMINS	01-MAR-13	31-DEC-13	00012348
492	0005	ADMINS DIRECTORS HRS MANAGERS ASSOCIATES SECURITY ADMINS DIRECTORS HRS MANAGERS ASSOCIATES WORKERS SECURITY ADMINS DIRECTORS	01-MAR-13	31-DEC-17	00012348
493	0004	HRS	01-MAR-13	31-DEC-17	00012348
494	0003	MANAGERS	01-MAR-13	31-DEC-17	00012348
495	0002	ASSOCIATES	01-MAR-13	31-DEC-17	00012348
496	0001	WORKERS	01-MAR-13	31-DEC-17	00012348
497	0007	SECURITY	01-JUN-12	31-DEC-16	00012351
498	0005	DIRECTORS	01-JUN-12	31-DEC-16	00012351
499	0004	HRS	01-JUN-12	31-DEC-16	00012351
500	0003	MANAGERS	01-JUN-12	31-DEC-16	00012351
501	0002	ASSOCIATES	01-JUN-12	31-DEC-16	00012351
502	0001	WORKERS	01-JUN-12	31-DEC-16	00012351
503	0007	SECURITY	01-MAR-12	31-DEC-17	00012352
504	0006	ADMINS	01-MAR-12		
			01-MAR-12	31-DEC-11	00012352
	0004		01-MAR-12		
			01-MAR-12		
			01-MAR-12		
509	0001	WORKERS	01-MAR-12	31-DEC-17	00012352

A	В		D	E
#SUBGRP ID	SUBGRP NAME	EFF DT	TERM DT	GROUP ID
	WORKERS	_	12/31/2014	1234
	ASSOCIATES		12/31/2014	1234
	MANAGERS		12/31/2014	1234
	HRS		12/31/2014	1234
	DIRECTORS		12/31/2014	1234
	ADMINS		12/31/2014	1234
	SECURITY		12/31/2014	1234
	WORKERS		12/31/2014	1234
	ASSOCIATES		12/31/2015	1234
	MANAGERS			1234
			12/31/2015	
_	HRS		12/31/2015	1234
	DIRECTORS		12/31/2013	1234
	ADMINS		12/31/2013	1234
	SECURITY		12/31/2015	1234
	WORKERS		12/31/2013	1234
	SECURITY		12/31/2013	1234
	WORKERS		12/31/2014	1234
	ASSOCIATES		12/31/2014	1234
	MANAGERS		12/31/2014	1234
	HRS		12/31/2014	1234
	Join Errors 22273		12/21/2012	122/

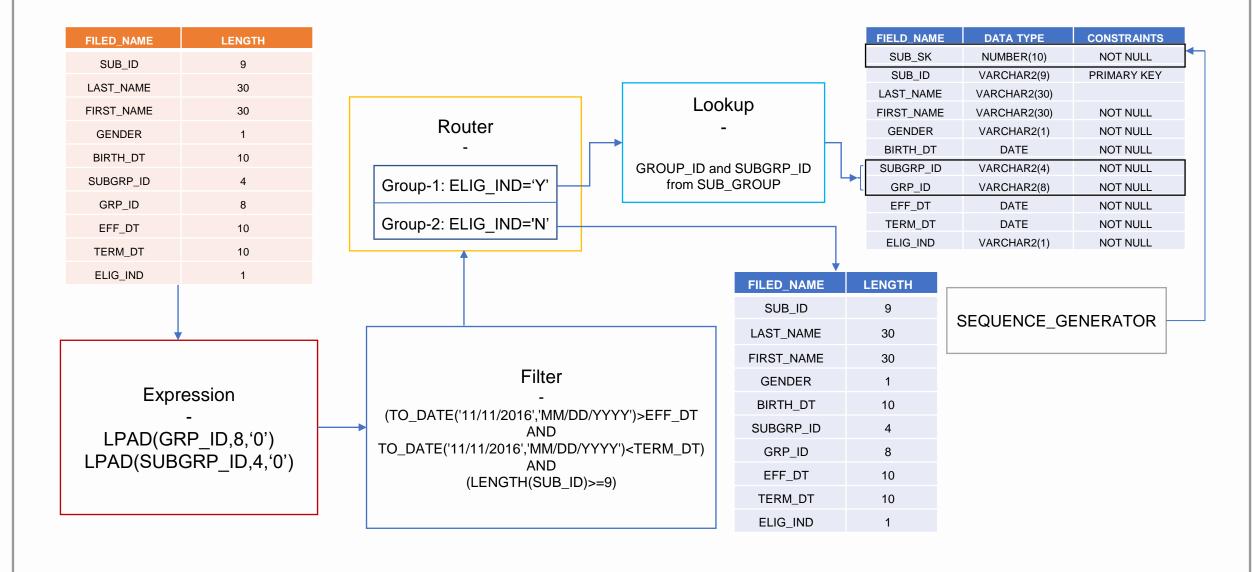
4

GROUP_2227374

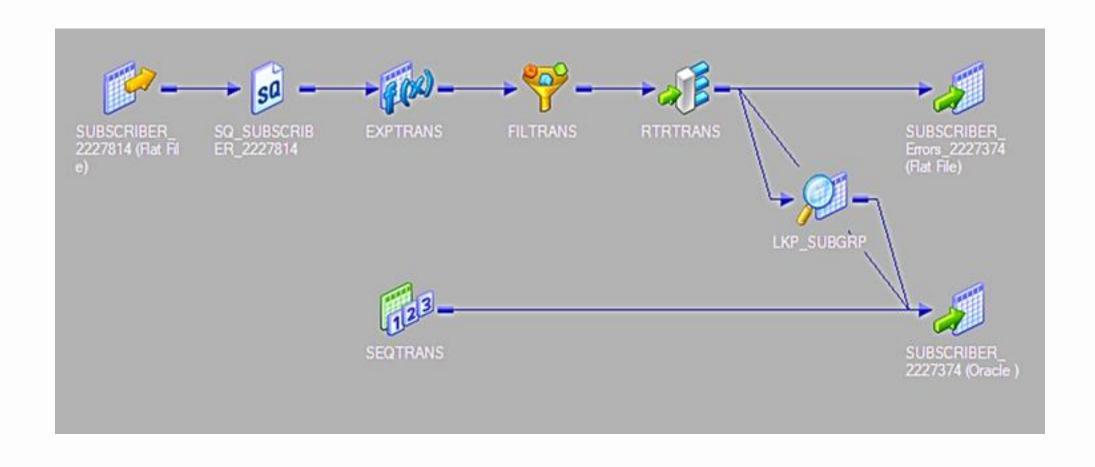
Functional requirements for SUBSCRIBER

- Rename the input file as SUBSCRIBER_<Associate_Id>.csv
- Create table in sql plus by name SUBSCRIBER_<Associate_Id> with the above structure.
- Load only the members who are currently effective. (i.e) SYSDATE BETWEEN EFFT_DT AND TERM_DT.
- Load subscribers with Elig_Ind as 'Y' in the Target table and with Elig_Ind as 'N' into Target file with the same structure as source and name the file as SUBSCRIBER_Errors_<Associate_Id>.txt
- Reject records if the Subscriber_Id has less than 9 characters.
- Populate leading zeroes in the fields GROUP_ID and SUBGRP_ID while populating data into the Target table.
- Validate the data from the input file and load only valid records into the target table according to the constraints mentioned in the target table.
- Also validate the Group Id and Subgrp_Id against the Subgrp table and load only matching data into the target table.
- SUB_SK is the surrogate key.

Subscriber structure



Mapping for Subscriber module



Subscriber

SUBSCRIBER_2227814.txt

SUB_ID	LAST_NAN	FIRST_NAM	GENDER	BIRTH_DT	SUBGRP_I	GRP_ID	EFF_DT	TERM_DT	ELIG_IND
201000001	SMITH	aaliyah	f	01-01-1957	1	12345	01-01-2014	31-12-2014	Υ
201000002	JOHNSON	aapeli	m	02-01-1957	2	12345	01-01-2014	31-12-2014	Υ
201000003	WILLIAMS	ааро	m	03-01-1957	3	12345	01-01-2014	31-12-2014	Υ
201000004	JONES	aaren	m	04-01-1957	4	12345	01-01-2014	31-12-2014	Υ
201000005	BROWN	aarne	m	05-01-1957	5	12345	01-01-2014	31-12-2014	Υ
201000006	DAVIS	aarón	m	06-01-1957	6	12345	01-01-2014	31-12-2014	Υ
201000007	MILLER	aaron	m	07-01-1957	7	12345	01-01-2014	31-12-2014	Υ
201000008	WILSON	aatami	m	08-01-1957	1	12346	01-09-2013	31-12-2015	Υ
201000009	MOORE	aatto	m	09-01-1957	2	12346	01-09-2013	31-12-2015	Υ
201000010	TAYLOR	aatu	m	10-01-1957	3	12346	01-09-2013	31-12-2015	Υ
201000011	ANDERSO	abaddon	m	11-01-1957	4	12346	01-09-2013	31-12-2015	Υ
201000012	THOMAS	abbán	m	12-01-1957	5	12345	01-09-2013	31-12-2013	Υ
201000013	JACKSON	'abbas	m	13-01-1957	6	12345	01-09-2013	31-12-2013	Υ
201000014	WHITE	abbey	f	14-01-1957	7	12346	01-09-2013	31-12-2015	Υ
201000015	HARRIS	abbie	f	15-01-1957	1	12345	01-06-2013	31-12-2013	Υ
201000016	MARTIN	abby	f	16-01-1957	2	12347	01-06-2013	31-12-2016	Υ
201000017	THOMPSO	abd-al-aziz	m	17-01-1957	3	12347	01-06-2013	31-12-2016	Υ
201000018	GARCIA	abd-allah	m	18-01-1957	4	12347	01-06-2013	31-12-2016	Υ
201000019	MARTINEZ	abd-al-ma	m	19-01-1957	5	12347	01-06-2013	31-12-2016	Υ
201000020	ROBINSON	abd-al-qac	m	20-01-1957	6	12347	01-06-2013	31-12-2016	Υ
201000021	CLARK	abd-al-rah	m	21-01-1957	7	12345	01-06-2013	31-12-2013	Υ
201000022	RODRIGUE	abdul	m	22-01-1957	1	12348	01-03-2013	31-12-2017	Υ
201000023	LEWIS	abdul-aziz	m	23-01-1957	2	12348	01-03-2013	31-12-2017	Υ
201000024	LEE	abdullah	m	24-01-1957	3	12348	01-03-2013	31-12-2017	Υ
201000025	WALKER	abdul-rahr	m	25-01-1957	4	12348	01-03-2013	31-12-2017	Υ
201000026	HALL	abe	m	26-01-1957	5	12348	01-03-2013	31-12-2017	Υ
201000027	ALLEN	abednego	m	27-01-1957	6	12348	01-03-2013	31-12-2013	Υ

+

SUBGRP_2227374

SUBSCRIBER_2227374

SUB_SK	SUB_ID	LAST_NAME	FIRST_NAME	G	BIRTH_DT	SUBG	GRP_ID	EFF_DT	TERM_DT	E
26160	201000016	MARTIN	abby	f	16-JAN-57	0002	00012347	06-JAN-13	31-DEC-1	6 Y
26161	201000017	THOMPSON	abd-al-aziz	m	17-JAN-57	0003	00012347	06-JAN-13	31-DEC-1	6 Y
26162	201000018	GARCIA	abd-allah	m	18-JAN-57	0004	00012347	06-JAN-13	31-DEC-1	6 Y
26163	201000019	MARTINEZ	abd-al-malik	m	19-JAN-57	0005	00012347	06-JAN-13	31-DEC-1	6 Y
26164	201000020	ROBINSON	abd-al-qadir	m	20-JAN-57	0006	00012347	06-JAN-13	31-DEC-1	6 Y
26165	201000022	RODRIGUEZ	abdul	m	22-JAN-57	0001	00012348	03-JAN-13	31-DEC-1	7 Y
26166	201000023	LEWIS	abdul-aziz	m	23-JAN-57	0002	00012348	03-JAN-13	31-DEC-1	7 Y
26167	201000024	LEE	abdullah	m	24-JAN-57	0003	00012348	03-JAN-13	31-DEC-1	7 Y
	201000025		abdul-rahman					03-JAN-13		
26169	201000026		abe					03-JAN-13		
202.0	201000028		abegail					03-JAN-13		
	201000043		abilene					06-JAN-12		
	201000044		abimael					06-JAN-12		
	201000045		abiram					06-JAN-12		
	201000046		abisai					06-JAN-12		
	201000047		abishag					06-JAN-12		
	201000048		abishai					06-JAN-12		
	201000049		abital					03-JAN-12		
	201000050		'abla					03-JAN-12		
	201000051		abner					03-JAN-12		
26180	201000052	SANCHEZ	abraham	m	21-FEB-57	0004	00012352	03-JAN-12	31-DEC-1	7 Y

REJECTS

#SUB_ID,LAST_NAME,FIRST_NAME,GENDER,BIRTH_DT,SUBGRP_ID,GRP_ID,EFF_DT,TERM_DT,ELIG_IND 201000982,HYDE,audra (1),f,09-09-1959,0002,00012347,01-06-2013,31-12-2016,N 201000983,FORBES,audra (2),f,10-09-1959,0003,00012347,01-06-2013,31-12-2016,N 201000984,GILLIAM,audrea,f,11-09-1959,0004,00012347,01-06-2013,31-12-2016,N 201000985,GUTHRIE,audrey,f,12-09-1959,0005,00012347,01-06-2013,31-12-2016,N 201000986,WOOTEN,august (1),m,13-09-1959,0006,00012347,01-06-2013,31-12-2017,N 201000989,BOYLE,auguste,m,16-09-1959,0001,00012348,01-03-2013,31-12-2017,N 201000990,MCMAHON,augustijn,m,17-09-1959,0003,00012348,01-03-2013,31-12-2017,N 201000991,BUCKNER,augustin,m,18-09-1959,0004,00012348,01-03-2013,31-12-2017,N 201000992,ROCHA,augustine,m,19-09-1959,0005,00012348,01-03-2013,31-12-2017,N

Functional requirements for WELCOME LETTER

• Fetch all valid records from the Group, Subgrp and Subscriber tables based on the below join conditions mentioned:

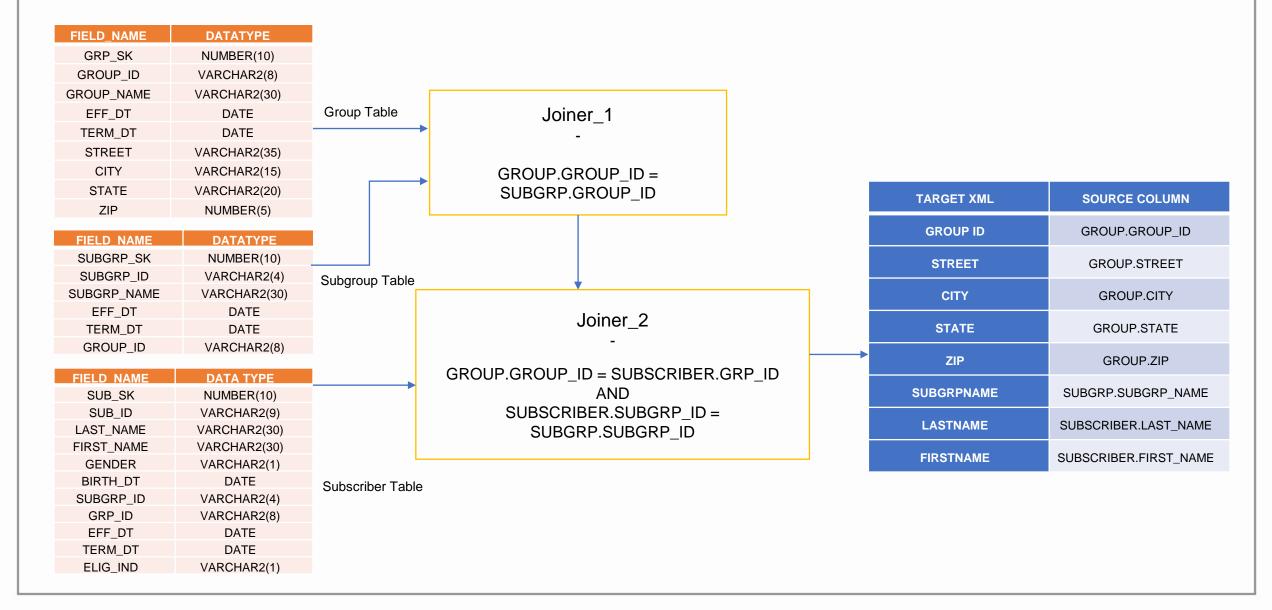
GROUP.GROUP_ID = SUBGRP.GROUP_ID

AND GROUP.GROUP_ID = SUBSCRIBER.GRP_ID

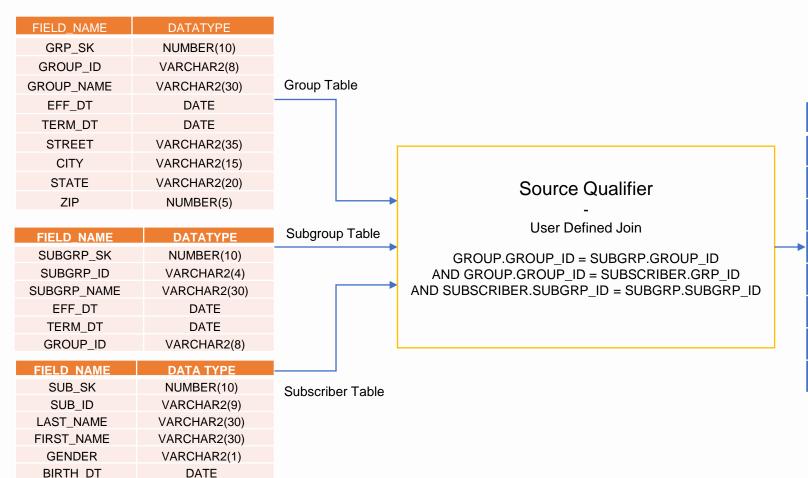
AND SUBSCRIBER.SUBGRP_ID = SUBGRP.SUBGRP_ID

Populate the below fields as per the data objects

Welcome Letter structure (V1.0)



Welcome Letter structure (V1.1)



BIRTH_DT SUBGRP_ID

GRP_ID

EFF_DT

TERM_DT

ELIG_IND

VARCHAR2(4)

VARCHAR2(8)

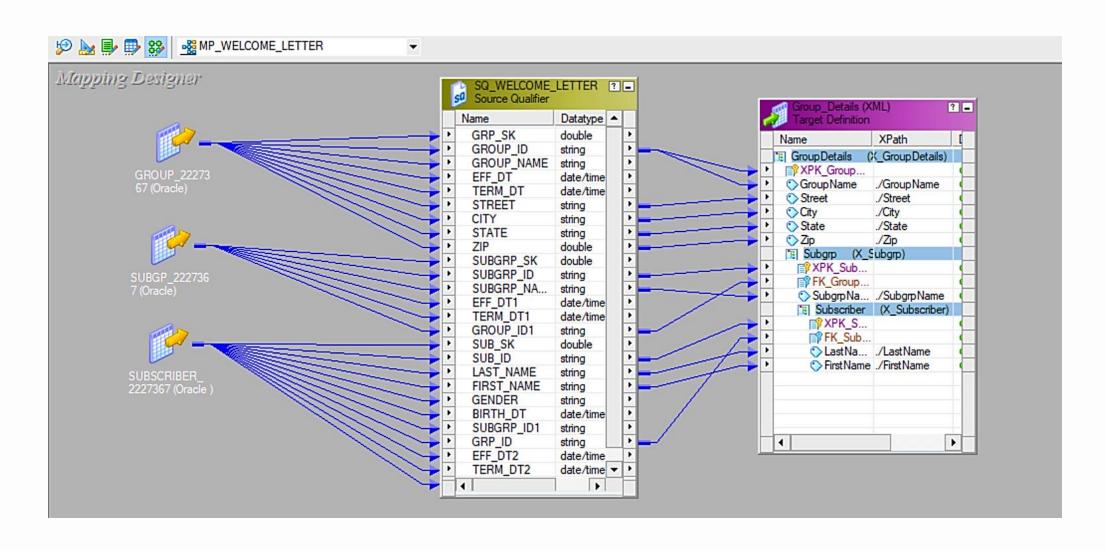
DATE

DATE

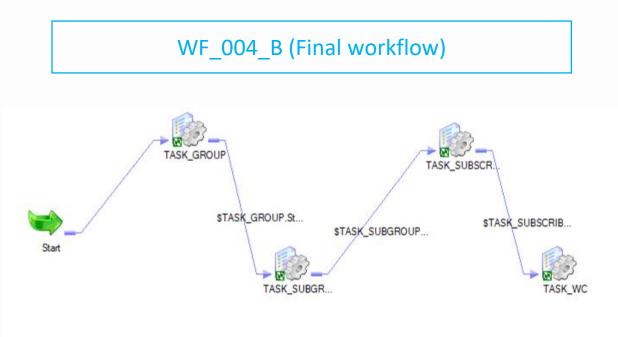
VARCHAR2(1)

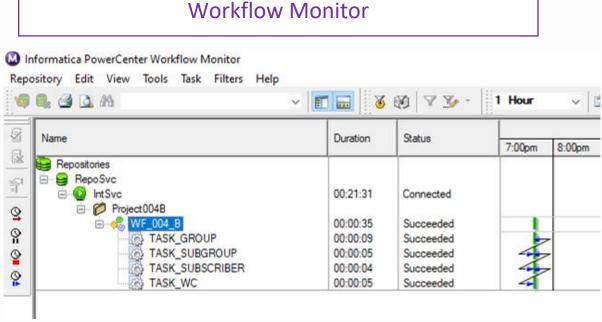
TARGET XML	SOURCE COLUMN		
GROUP ID	GROUP.GROUP_ID		
STREET	GROUP.STREET		
CITY	GROUP.CITY		
STATE	GROUP.STATE		
ZIP	GROUP.ZIP		
SUBGRPNAME	SUBGRP.SUBGRP_NAME		
LASTNAME	SUBSCRIBER.LAST_NAME		
FIRSTNAME	SUBSCRIBER.FIRST_NAME		

Mapping for Welcome module



Workflow





We carefully design a workflow which includes four tasks arranged in such a way that the task involving Group mapping is followed by task involving subgroup mapping and subscriber mapping in sequence. After all the data is created, the task to export XML document is followed. The XML outputs are given in the next slide.

Welcome (output)

group_details_tgt.xml

group_details_tgt1.xml

group_details_tgt2.xml

group_details_tgt3.xml

```
<?xml version="1.0" encoding="WINDOWS-1252"?>
                                                                                               <?xml version="1.0" encoding="WINDOWS-1252"?>
                                                                                                                                                 <?xml version="1.0" encoding="WINDOWS-1252"?>
                                                <?xml version="1.0" encoding="WINDOWS-1252"?
< Group Details
                                                                                                                                                 < Group Details
xmlns:xsi="http://www.w3.org/2001/XMLSchema-
                                                                                                                                                 xmlns:xsi="http://www.w3.org/2001/XMLSchema-
                                               < Group Details
                                                                                               xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
                                                                                                                                                 instance">
                                                xmlns:xsi="http://www.w3.org/2001/XMLSchema-
                                                                                              instance">
                                                                                                                                                    <GroupName>00012352</GroupName>
   <GroupName>00012347</GroupName>
                                                                                                  <GroupName>00012351</GroupName>
   <Street>THIRD ST </Street>
                                                                                                                                                    <Street>MORILIER ST </Street>
                                                   <GroupName>00012348</GroupName>
                                                                                                  <Street>FIRST INTERSECTION </Street>
   <City>BUFFALO </City>
                                                   <Street>FOURTH ST </Street>
                                                                                                  <City>DALLAS </City>
                                                                                                                                                    <City>MIAMI </City>
   <State>NEW YORK</State>
                                                                                                                                                    <State>FLORIDA </State>
                                                   <City>KENTUCKY </City>
                                                                                                  <State>TEXAS </State>
   <Zip>60125.0000</Zip>
                                                   <State>NEW YORK</State>
                                                                                                  <Zip>60129.0000</Zip>
                                                                                                                                                    <Zip>60130.0000</Zip>
</GroupDetails>
                                                   <Zip>60126.0000</Zip>
                                                                                                - <Subgrp>
                                                                                                                                                  - <Subgrp>
                                                                                                     <SubgrpName>DIRECTORS</SubgrpName>
                                                                                                                                                       <SubgrpName>WORKERS</SubgrpName>
                                                </GroupDetails>
                                                                                                                                                    </Subgrp>
                                                                                                  </Subgrp>
                                                                                               </GroupDetails>
                                                                                                                                                       <SubgrpName>ASSOCIATES</SubgrpName>
                                                                                                                                                    </Subgrp>
                                                                                                                                                  - <Subgrp>
                                                                                                                                                       <SubgrpName>MANAGERS</SubgrpName>
                                                                                                                                                  - <Subgrp>
                                                                                                                                                       <SubgrpName>HRS</SubgrpName>
                                                                                                                                                       <SubgrpName>ADMINS</SubgrpName>
    group_details_tgt.1.xml
                                                                                                                                                     - <Subscriber>
                                                              09/03/2023 19:45
                                                                                              XML Document
                                                                                                                                  1 KB
                                                                                                                                                          <LastName>ROBINSON</LastName>
                                                                                                                                                          <FirstName>abd-al-gadir</FirstName>
        group_details_tgt.2.xml
                                                              09/03/2023 19:45
                                                                                              XML Document
                                                                                                                                  1 KB
                                                                                                                                                       </Subscriber>
                                                                                                                                                    </Subgrp>
        group_details_tgt.3.xml
                                                              09/03/2023 19:45
                                                                                              XML Document
                                                                                                                                  1 KB
                                                                                                                                                  - <Subgrp>
                                                                                                                                                       <SubgrpName>SECURITY</SubgrpName>
                                                                                                                                                     - <Subscriber>
        group_details_tgt.xml
                                                              09/03/2023 19:45
                                                                                              XML Document
                                                                                                                                  1 KB
                                                                                                                                                          <LastName>YOUNG</LastName>
                                                                                                                                                          <FirstName>abegail</FirstName>
                                                                                                                                                       </Subscriber>
        group_details_tgt.xml.lst
                                                              09/03/2023 19:45
                                                                                              LST File
                                                                                                                                  1 KB
                                                                                                                                                     - <Subscriber>
                                                                                                                                                          <LastName>EVANS</LastName>
                                                                                                                                                          <FirstName>abishai</FirstName>
                                                                                                                                                       </Subscriber>
                                                                                                                                                     - <Subscriber>
                                                                                                                                                          <LastName>REED</LastName>
                                                                                                                                                          <FirstName>absolon</FirstName>
                                                                                                                                                       </Subscriber>
                                                                                                                                                    </Subgrp>
                                                                                                                                                 </GroupDetails>
```

Change Log

Version Number	Changes made							
V1.0	Vanilla Version - Naveen Anil Kumar (Welcome module) - Riya Rachel Jose (Group module) - Sartaj Khayyum Deshmukh (Subscriber module) -Tarpan Das (Sub-group module)							
	Page no	Changed by	Effective date	Changes effected				
V1.1	15	Naveen Anil Kumar, Riya Rachel Jose	06-03-2022	M_WELCOME (Mapping for Welcome Letter): Used Single Transformation (Source Qualifier) instead of 2 joiner, reducing the transformations				
	8	Riya Rachel Jose, Tarpan Das	09-03-2022	M_SUBGRP (Mapping for Subgroup table): Made it more effective to collect proper reject records in a separate file				

Summary

- We used Informatica PowerCenter to design a workflow where we amalgamated subscriber details along with their group and subgroup details and created a mapping where the output is stored in XML files.
- We proposed multiple mapping designs for few of our tasks to illustrate our knowledge and understanding of informatica PowerCenter when it comes to providing multiple solutions to a problem.
- Output: We can sent welcome letter to people whoever is the subscriber using the XML outputs. This gives a validation to the right people.
- Also, the databases stored in the 3 tables can be used for other purposes.

