1 CREATE AND FILL 3NF OBJECTS
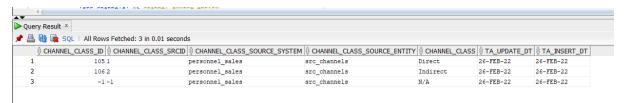
Step 1: create tables and synonyms

Example of code:

```
DROP TABLE  bl_3nf.ce_promotion_categories CASCADE CONSTRAINTS;
CREATE TABLE bl_3nf.ce_promotion_categories (
    promotion_category_id          NUMBER(38)       NOT NULL,
    promotion_category_srcid        VARCHAR2(50 CHAR)  NOT NULL,
    promotion_category_source_system   VARCHAR2(50 CHAR)   NOT NULL,
    promotion_category_source_entity   VARCHAR2(50 CHAR)   NOT NULL,
    promotion_category             VARCHAR2(50 CHAR)  NOT NULL,
    TA_UPDATE_DT                   DATE             NOT NULL,
    TA_INSERT_DT                   DATE             NOT NULL

);
ALTER TABLE bl_3nf.ce_promotion_categories
    ADD CONSTRAINT ce_promotion_category_pk
    PRIMARY KEY (promotion_category_id );

CREATE PUBLIC SYNONYM ce_promotion_categories
FOR bl_3nf.ce_promotion_categories;

DROP TABLE bl_3nf.ce_promotions_scd CASCADE CONSTRAINTS;
CREATE TABLE bl_3nf.ce_promotions_scd (
    promotion_id          NUMBER(38)       NOT NULL,
    promotion_srcid        VARCHAR2(50 CHAR)   NOT NULL,
    promotion_source_system   VARCHAR2(50 CHAR)   NOT NULL,
    promotion_source_entity   VARCHAR2(50 CHAR)   NOT NULL,
    promotion_name         VARCHAR2(50 CHAR)   NOT NULL,
    promotion_category_id    NUMBER(38)       NOT NULL,
    begin_sop_DT           DATE             NOT NULL,
    end_eop_DT             DATE             NOT NULL,
    is_active             VARCHAR2(50 char)   NOT NULL,
    cost              NUMBER(15,2)      NOT NULL,
    TA_UPDATE_DT           DATE             NOT NULL,
    TA_INSERT_DT           DATE             NOT NULL
);
ALTER TABLE bl_3nf.ce_promotions_scd
    ADD CONSTRAINT ce_promotions_scd_pk
    PRIMARY KEY ( promotion_id, begin_sop_dt );
ALTER TABLE  bl_3nf.ce_promotions_scd
    ADD CONSTRAINT ce_promotions_scd_ce_promotion_class_fk
    FOREIGN KEY ( promotion_category_id )
    REFERENCES bl_3nf.ce_promotion_categories ( promotion_category_id );
```

Code for the rest tables in folder scripts

Step 2: Fill tables

I have used Merge function. I loaded data from 2 sources for *ce_channels* and *ce_customers* tables. For the rest tables I have choose dominant source - personnel_sales and loaded data only from this source.
 Example of code:

```
MERGE INTO ce_channel_classes  ch
   USING (SELECT DISTINCT
        channel_class_id AS channel_class_srcid,
        'personnel_sales' AS channel_class_source_system,
        'src_channels' AS channel_class_source_entity,
         COALESCE(channel_class,'N/A')AS channel_class
   FROM  SA_SOURCE_SYSTEM_1.src_channels
   ) t
      ON (ch.channel_class_srcid = t.channel_class_srcid
      AND ch.channel_class_source_system = t.channel_class_source_system
      AND ch.channel_class_source_entity = t.channel_class_source_entity)
   WHEN NOT MATCHED THEN
      INSERT( channel_class_id,channel_class_srcid, channel_class_source_system,
channel_class_source_entity, channel_class, ta_update_dt, ta_insert_dt)
      VALUES(seq_ce_channel_class_id.NEXTVAL,t.channel_class_srcid,
t.channel_class_source_system, t.channel_class_source_entity, t.channel_class,
SYSDATE,SYSDATE);

MERGE INTO ce_channel_classes  ch
   USING (SELECT DISTINCT
        -1 AS channel_class_id,
        -1 AS channel_class_srcid,
        'personnel_sales' AS channel_class_source_system,
        'src_channels' AS channel_class_source_entity,
         'N/A' AS channel_class
   FROM  DUAL
   ) t
      ON (ch.channel_class_srcid = t.channel_class_srcid
      AND ch.channel_class_source_system = t.channel_class_source_system
      AND ch.channel_class_source_entity = t.channel_class_source_entity)
   WHEN NOT MATCHED THEN
      INSERT( channel_class_id,channel_class_srcid, channel_class_source_system,
channel_class_source_entity, channel_class, ta_update_dt, ta_insert_dt)
      VALUES(t.channel_class_id,t.channel_class_srcid, t.channel_class_source_system,
t.channel_class_source_entity, t.channel_class, SYSDATE,SYSDATE);
SELECT * FROM ce_channel_classes;
commit;
```

Code for the rest tables in folder scripts
Step3: results
SELECT * FROM ce_channel_classes;

	CHANNEL_CLASS_ID	CHANNEL_CLASS_SRCID	CHANNEL_CLASS_SOURCE_SYSTEM	CHANNEL_CLASS_SOURCE_ENTITY	CHANNEL_CLASS	TA_UPDATE_DT	TA_INSERT_DT
1	105 1		personnel_sales	src_channels	Direct	26-FEB-22	26-FEB-22
2	106 2		personnel_sales	src_channels	Indirect	26-FEB-22	26-FEB-22
3	-1 -1		personnel_sales	src_channels	N/A	26-FEB-22	26-FEB-22

SELECT * FROM ce_channels;

	CHANNEL_ID	CHANNEL_SRCID	CHANNEL_SOURCE_SYSTEM	CHANNEL_SOURCE_ENTITY	CHANNEL_DESCRIPTION	CHANNEL_CLASS_ID	TA_UPDATE_DT	TA_INSERT_DT
1	125 3		company_sales	src_channels	Catalog	106	26-FEB-22	26-FEB-22
2	126 1		company_sales	src_channels	B2B	105	26-FEB-22	26-FEB-22
3	127 1		personnel_sales	src_channels	Direct Sales	105	26-FEB-22	26-FEB-22
4	128 2		company_sales	src_channels	Partner	105	26-FEB-22	26-FEB-22
5	129 4		company_sales	src_channels	Internet	106	26-FEB-22	26-FEB-22
6	130 2		personnel_sales	src_channels	Tele Sales	105	26-FEB-22	26-FEB-22
7	131 3		personnel_sales	src_channels	Catalog	106	26-FEB-22	26-FEB-22
8	132 4		personnel_sales	src_channels	Internet	106	26-FEB-22	26-FEB-22
9	-1 -1		personnel_sales	src_channels	N/A	-1	26-FEB-22	26-FEB-22

SELECT * FROM ce_promotion_categories;

	PROMOTION_CATEGORY_ID	PROMOTION_CATEGORY_SRCID	PROMOTION_CATEGORY_SOURCE_SYSTEM	PROMOTION_CATEGORY_SOURCE_ENTITY	PROMOTION_CATEGORY	TA_UPDATE_DT	TA_INSERT_DT
1	71 8		personnel_sales	src_promotions	post	26-FEB-22	26-FEB-22
2	72 1		personnel_sales	src_promotions	NO PROMOTION	26-FEB-22	26-FEB-22
3	73 3		personnel_sales	src_promotions	ad news	26-FEB-22	26-FEB-22
4	74 2		personnel_sales	src_promotions	TV	26-FEB-22	26-FEB-22
5	75 5		personnel_sales	src_promotions	internet	26-FEB-22	26-FEB-22
6	-1 -1		personnel_sales	src_promotions	N/A	26-FEB-22	26-FEB-22

SELECT * FROM ce_promotions_scd;

	PROMOTION_ID	...	PROMOTION_SOU...	PROMOTION_SOUR...	PROMOTION_NAME	P...	BEGIN_SOP_DT	END_EOP_DT	IS_ACTIVE	COST	TA_UPDATE_DT	TA_INSERT_DT
1	56 1	personnel_sales	src_promotions	NO PROMOTION #	72	01-JAN-99	01-JAN-99	inactive	0	26-FEB-22	26-FEB-22
2	57 2	personnel_sales	src_promotions	post promotion #20-33	71	15-SEP-20	15-NOV-20	inactive	77200	26-FEB-22	26-FEB-22
3	58 33	personnel_sales	src_promotions	internet promotion #29-64	75	31-MAR-21	30-JUN-21	inactive	9800	26-FEB-22	26-FEB-22
4	59 30	personnel_sales	src_promotions	TV promotion #12-61	74	28-APR-21	28-JUL-21	inactive	91600	26-FEB-22	26-FEB-22
5	60 5	personnel_sales	src_promotions	everyday low price	73	01-JUN-20	01-JUN-21	inactive	0	26-FEB-22	26-FEB-22
6	-1 -1	personnel_sales	src_promotions	N/A	-1	31-DEC-99	31-DEC-99	inactive	-1	26-FEB-22	26-FEB-22

SELECT * FROM ce_brands;

	PRODUCT_BRAND_ID	PRODUCT_BRAND_SRCID	PRODUCT_BRAND_SOURCE_SYSTEM	PRODUCT_BRAND_SOURCE_ENTITY	PRODUCT_BRAND	TA_UPDATE_DT	TA_INSERT_DT
1	6057 108		personnel_sales	src_products	Redken	26-FEB-22	26-FEB-22
2	6058 109		personnel_sales	src_products	Lavera	26-FEB-22	26-FEB-22
3	6059 110		personnel_sales	src_products	Eisenberg	26-FEB-22	26-FEB-22
4	6060 111		personnel_sales	src_products	Fusion Beauty	26-FEB-22	26-FEB-22
5	6061 112		personnel_sales	src_products	Josie Maran	26-FEB-22	26-FEB-22
6	6062 113		personnel_sales	src_products	MAC	26-FEB-22	26-FEB-22
7	6063 114		personnel_sales	src_products	Poshe	26-FEB-22	26-FEB-22
8	6064 115		personnel_sales	src_products	Illuminare	26-FEB-22	26-FEB-22
9	6065 116		personnel_sales	src_products	POP Beauty	26-FEB-22	26-FEB-22
10	6066 117		personnel_sales	src_products	AMOREPACIFIC	26-FEB-22	26-FEB-22
11	6067 118		personnel_sales	src_products	e.l.f.	26-FEB-22	26-FEB-22
12	6068 119		personnel_sales	src_products	Tom Ford Beauty	26-FEB-22	26-FEB-22
13	6069 120		personnel_sales	src_products	KIKO	26-FEB-22	26-FEB-22
14	6070 121		personnel_sales	src_products	LUSH	26-FEB-22	26-FEB-22

SELECT * FROM ce_product_types;

	PRODUCT_TYPE_ID	PRODUCT_TYPE_SRCID	PRODUCT_TYPE_SOURCE_SYSTEM	PRODUCT_TYPE_SOURCE_ENTITY	PRODUCT_TYPE	TA_UPDATE_DT	TA_INSERT_DT
1	1693 109		personnel_sales	src_products	Lengthening	26-FEB-22	26-FEB-22
2	1694 110		personnel_sales	src_products	Tools	26-FEB-22	26-FEB-22
3	1695 111		personnel_sales	src_products	Hair Spray	26-FEB-22	26-FEB-22
4	1696 112		personnel_sales	src_products	Tinted	26-FEB-22	26-FEB-22
5	1697 113		personnel_sales	src_products	Shampoo	26-FEB-22	26-FEB-22
6	1698 114		personnel_sales	src_products	Volumizing	26-FEB-22	26-FEB-22
7	1699 115		personnel_sales	src_products	Tweezers	26-FEB-22	26-FEB-22
8	1700 116		personnel_sales	src_products	Sunscreen	26-FEB-22	26-FEB-22
9	1701 117		personnel_sales	src_products	Natural	26-FEB-22	26-FEB-22
10	1702 118		personnel_sales	src_products	Powder	26-FEB-22	26-FEB-22
11	1703 119		personnel_sales	src_products	Pressed	26-FEB-22	26-FEB-22
12	1704 120		personnel_sales	src_products	with SPF	26-FEB-22	26-FEB-22
13	1705 121		personnel_sales	src_products	Gel	26-FEB-22	26-FEB-22

SELECT * FROM ce_products;

	PRODUCT_ID	PRODUCT_SRCID	PRODUCT_SOURCE_SYSTEM	PRODUCT_...	PRODUCT	UNIT_PRICE	UNIT_COST	PRODUCT_BRAND_ID	PRODUCT_TYPE_ID	TA_UPDATE_DT	TA_INSERT_DT
1	10496 76		personnel_sales	src_products	Long-Wear Gel Eyeliner	792.51	634.01	6249	1705	26-FEB-22	26-FEB-22
2	10497 77		personnel_sales	src_products	Metallic Eye Shadow	941.92	753.54	6249	1702	26-FEB-22	26-FEB-22
3	10498 78		personnel_sales	src_products	Metallic Long-Wear Cream Shadow	277.17	221.74	6249	1602	26-FEB-22	26-FEB-22
4	10499 79		personnel_sales	src_products	Nail Lacquer	188.56	150.85	6249	1613	26-FEB-22	26-FEB-22
5	10500 80		personnel_sales	src_products	Natural Brow Shaper & hair Touch up	93.72	74.98	6249	1705	26-FEB-22	26-FEB-22
6	10501 81		personnel_sales	src_products	No Smudge Mascara	1103.34	882.67	6249	1693	26-FEB-22	26-FEB-22
7	10502 82		personnel_sales	src_products	Pot Rouge for Lips & Cheeks	2139.74	1711.79	6249	1598	26-FEB-22	26-FEB-22
8	10503 83		personnel_sales	src_products	Powder	1243.86	995.09	6249	1652	26-FEB-22	26-FEB-22
9	10504 84		personnel_sales	src_products	Protective Face Lotion	1762.01	1409.61	6249	1612	26-FEB-22	26-FEB-22
10	10505 85		personnel_sales	src_products	Retouching Powder	1457.99	1166.39	6249	1646	26-FEB-22	26-FEB-22
11	10506 86		personnel_sales	src_products	Retractable Lip	412.67	330.14	6249	1641	26-FEB-22	26-FEB-22
12	10507 87		personnel_sales	src_products	Rich Color Gloss	1201.32	961.06	6249	1667	26-FEB-22	26-FEB-22
13	10508 88		personnel_sales	src_products	Rich Lip Color	1635.03	1308.02	6249	1674	26-FEB-22	26-FEB-22

SELECT * FROM ce_countries;

	COUNTRY_ID	COUNTRY_SRCID	COUNTRY_SOURCE_SYSTEM	COUNTRY_SOURCE_ENTITY	COUNTRY	TA_UPDATE_DT	TA_INSERT_DT
1	413	18	personnel_sales	src_countries	Poland	26-FEB-22	26-FEB-22
2	414	23	personnel_sales	src_countries	South Africa	26-FEB-22	26-FEB-22
3	415	8	personnel_sales	src_countries	Germany	26-FEB-22	26-FEB-22
4	416	14	personnel_sales	src_countries	Japan	26-FEB-22	26-FEB-22
5	417	22	personnel_sales	src_countries	United States of America	26-FEB-22	26-FEB-22
6	418	19	personnel_sales	src_countries	Saudi Arabia	26-FEB-22	26-FEB-22
7	419	16	personnel_sales	src_countries	The Netherlands	26-FEB-22	26-FEB-22
8	420	20	personnel_sales	src_countries	Turkey	26-FEB-22	26-FEB-22
9	421	2	personnel_sales	src_countries	Italy	26-FEB-22	26-FEB-22
10	422	5	personnel_sales	src_countries	Argentina	26-FEB-22	26-FEB-22

SELECT * FROM ce_states;

	STATE_ID	STATE_SRCID	STATE_SOURCE_SYSTEM	STATE_SOURCE_ENTITY	STATE_NAME	COUNTRY_ID	TA_UPDATE_DT	TA_INSERT_DT
1	101	15	personnel_sales	src_stores	CA	417	26-FEB-22	26-FEB-22
2	102	16	personnel_sales	src_stores	1	418	26-FEB-22	26-FEB-22
3	103	1	personnel_sales	src_stores	MD	424	26-FEB-22	26-FEB-22
4	104	12	personnel_sales	src_stores	NM	417	26-FEB-22	26-FEB-22
5	105	6	personnel_sales	src_stores	84	428	26-FEB-22	26-FEB-22
6	106	11	personnel_sales	src_stores	NY	417	26-FEB-22	26-FEB-22
7	107	5	personnel_sales	src_stores	S	425	26-FEB-22	26-FEB-22
8	108	7	personnel_sales	src_stores	SN	415	26-FEB-22	26-FEB-22
9	109	18	personnel_sales	src_stores	QLD	426	26-FEB-22	26-FEB-22

SELECT * FROM ce_cities;

	CITY_ID	CITY_SRCID	CITY_SOURCE_SYSTEM	CITY_SOURCE_ENTITY	CITY	STATE_ID	TA_UPDATE_DT	TA_INSERT_DT
1	161	15	personnel_sales	src_stores	New Brunswick	118	26-FEB-22	26-FEB-22
2	162	16	personnel_sales	src_stores	Charlotte	111	26-FEB-22	26-FEB-22
3	163	1	personnel_sales	src_stores	Madrid	103	26-FEB-22	26-FEB-22
4	164	12	personnel_sales	src_stores	Albany	106	26-FEB-22	26-FEB-22
5	165	6	personnel_sales	src_stores	Kastrup	105	26-FEB-22	26-FEB-22
6	166	11	personnel_sales	src_stores	New York	106	26-FEB-22	26-FEB-22
7	167	23	personnel_sales	src_stores	Istanbul	110	26-FEB-22	26-FEB-22
8	168	25	personnel_sales	src_stores	Midrand	112	26-FEB-22	26-FEB-22
9	169	5	personnel_sales	src_stores	Christchurch	107	26-FEB-22	26-FEB-22
10	170	7	personnel_sales	src_stores	Leipzig	108	26-FEB-22	26-FEB-22
11	171	18	personnel_sales	src_stores	Tarzana	101	26-FEB-22	26-FEB-22

SELECT * FROM ce_addresses;

	ADDRESS_ID	ADDRESS_SRCID	ADDRESS_SOURCE_SYSTEM	ADDRESS_SOURCE_ENTITY	STREET_ADDRESS	POSTAL_CODE	CITY_ID	TA_UPDATE_DT	TA_INSERT_
1	341	1	personnel_sales	src_stores	Plaza Canovas del Castillo 5	28005	163	26-FEB-22	26-FEB-22
2	342	2	personnel_sales	src_stores	Princesa 5	28008	163	26-FEB-22	26-FEB-22
3	343	3	personnel_sales	src_stores	Paseo de Gracia 97	8008	181	26-FEB-22	26-FEB-22
4	344	4	personnel_sales	src_stores	Rambla Canaletes 109	8002	181	26-FEB-22	26-FEB-22
5	345	5	personnel_sales	src_stores	Gran via Marques del Turia Ave, 49	46002	185	26-FEB-22	26-FEB-22
6	346	6	personnel_sales	src_stores	San Vicente, 44	46002	185	26-FEB-22	26-FEB-22
7	347	7	personnel_sales	src_stores	6 Bunny St, Lower Hutt	5011	186	26-FEB-22	26-FEB-22
8	348	8	personnel_sales	src_stores	Westfield shopping centre, Riccarton Rd, 1022 : مبنى	5011	169	26-FEB-22	26-FEB-22
9	349	9	personnel_sales	src_stores	Lufthavnsboulevarden 6, Terminal 2 - Landside	2770	165	26-FEB-22	26-FEB-22
10	350	10	personnel_sales	src_stores	Lufthavnsboulevarden 6, Terminal 3 - Airside	2770	165	26-FEB-22	26-FEB-22
11	351	11	personnel_sales	src_stores	Willy-Brandt-Platz 7	4109	170	26-FEB-22	26-FEB-22
12	352	12	personnel_sales	src_stores	GRIMMAISCHE STRASSE 14	4109	170	26-FEB-22	26-FEB-22
13	353	13	personnel_sales	src_stores	Willy-Brandt-Platz 12	99084	180	26-FEB-22	26-FEB-22

SELECT * FROM ce_stores;

	STORE_ID	STORE_SRCID	STORE_SOURCE_SYSTEM	STORE_SOURCE_ENTITY	PHONE	ADDRESS_ID	TA_UPDATE_DT	TA_INSERT_DT
1	241	15	personnel_sales	src_stores	2072590747	355	26-FEB-22	26-FEB-22
2	242	16	personnel_sales	src_stores	2076294911	356	26-FEB-22	26-FEB-22
3	243	32	personnel_sales	src_stores	661-765-4944	374	26-FEB-22	26-FEB-22
4	244	33	personnel_sales	src_stores	818-881-1639	375	26-FEB-22	26-FEB-22
5	245	39	personnel_sales	src_stores	96615453116	381	26-FEB-22	26-FEB-22
6	246	1	personnel_sales	src_stores	91.275.21.85	341	26-FEB-22	26-FEB-22
7	247	12	personnel_sales	src_stores	493412251481	352	26-FEB-22	26-FEB-22
8	248	44	personnel_sales	src_stores	27873500215	386	26-FEB-22	26-FEB-22
9	249	41	personnel_sales	src_stores	2164287573	383	26-FEB-22	26-FEB-22
10	250	42	personnel_sales	src_stores	902164741030	384	26-FEB-22	26-FEB-22
11	251	6	personnel_sales	src_stores	96.309.29.61	346	26-FEB-22	26-FEB-22
12	252	11	personnel_sales	src_stores	4934196298335	351	26-FEB-22	26-FEB-22
13	253	23	personnel_sales	src_stores	2079284557	363	26-FEB-22	26-FEB-22
14	254	25	personnel_sales	src_stores	518-489-1112	365	26-FEB-22	26-FEB-22

SELECT * FROM ce_customers;

	CUSTOMER_ID	CUS...	CUSTOMER...	CUSTOMER_SOU...	FIRST_NAME	LAST_NAME	COMPANY_NAME	COMPANY...	PHONE	G...	YEAR_O...	EMAIL	ADDRESS	C...	TA_UPDATE_DT	TA_INSERT_DT
1	134186	24	personnel...	src_employees	Abner	Everett	N/A	N/A	166-716-4030	M	1977	Everett@company.com	Tralee, 77 East 5th Avenue	429	26-FEB-22	26-FEB-22
2	134187	24	company_s...	src_employees	N/A	N/A	It Smart Group	671-15-3160	640-552-4405	N/A	-1	Barbee@company.com	Georgetown, 87 South Rusk Avenue	427	26-FEB-22	26-FEB-22
3	134188	25	personnel...	src_employees	Abner	Everett	N/A	N/A	650-349-6961	M	1955	Everett@company.com	Heilbronn, 77 South Mckenzie Avenue	415	26-FEB-22	26-FEB-22
4	134189	26	company_s...	src_employees	N/A	N/A	BuzzFeed	431-50-7677	594-348-7621	N/A	-1	Barbee@company.com	Kyoto, 97 North Garfield Avenue	416	26-FEB-22	26-FEB-22
5	134190	26	personnel...	src_employees	Abner	Everett	N/A	N/A	629-204-7324	M	1951	Everett@company.com	Keighley, 87 North Braxton Avenue	432	26-FEB-22	26-FEB-22
6	134191	27	company_s...	src_employees	N/A	N/A	Apple Inc.	634-21-0317	696-552-2625	N/A	-1	Mozzes@company.com	Schoonoord, 107 York Avenue	421	26-FEB-22	26-FEB-22
7	134192	27	personnel...	src_employees	Abner	Everett	N/A	N/A	513-226-7500	M	1969	Everett@company.com	Didcot, 97 East Page Avenue	432	26-FEB-22	26-FEB-22
8	134193	28	company_s...	src_employees	N/A	N/A	Danone	018-06-6223	358-348-2956	N/A	-1	Mozzes@company.com	Assen, 107 South Mcclain Avenue	421	26-FEB-22	26-FEB-22
9	134194	28	personnel...	src_employees	Abner	Kenney	N/A	N/A	173-226-3225	M	1959	Kenney@company.com	Raamadonksveer, 107 West Todd Avenue	421	26-FEB-22	26-FEB-22
10	134195	31	company_s...	src_employees	N/A	N/A	UPC	088-87-3418	334-465-4096	N/A	-1	Mozzes@company.com	Sydney, 37 North York Street	426	26-FEB-22	26-FEB-22
11	134196	31	personnel...	src_employees	Abner	Kenney	N/A	N/A	411-248-7242	M	1961	Kenney@company.com	Ravensburg, 27 Covington Boulevard	415	26-FEB-22	26-FEB-22
12	134197	32	company_s...	src_employees	N/A	N/A	Erickson	543-80-3548	647-348-3180	N/A	-1	Mozzes@company.com	Yokohama, 57 South Owen Drive	416	26-FEB-22	26-FEB-22
13	134198	32	personnel...	src_employees	Abner	Kenney	N/A	N/A	563-711-6988	M	1963	Kenney@company.com	Nanterre, 27 North Saguache Boulevard	430	26-FEB-22	26-FEB-22

SELECT * FROM ce_positions;

	POSITION_ID	POSITION_SRCID	POSITION_SOURCE_SYSTEM	POSITION_SOURCE_ENTITY	POSITION	TA_UPDATE_DT	TA_INSERT_DT
1	41	3	personnel_sales	src_employees	seller	26-FEB-22	26-FEB-22
2	42	2	personnel_sales	src_employees	cashier	26-FEB-22	26-FEB-22
3	43	1	personnel_sales	src_employees	manager	26-FEB-22	26-FEB-22
4	-1	-1	personnel_sales	src_employees	N/A	26-FEB-22	26-FEB-22

SELECT * FROM ce_employees;

	EM...	E...	EMPLOYEE_SOUR...	EMPLOYEE_SOU...	FIRST_NAME	LAST_NAME	DAY_O...	PO...	PHONE	EMAIL	ADDRESS	COUNTRY_ID	TA_UPDATE_DT	TA_INSERT_DT
1	662	42	personnel_sales	src_employees	Henry	Simpson Henry	31-AUG-68	41	7-228-154-5724	Henry_Simpson1347181570@jiman.org	Delft, 97 South Crittenden Avenue	417	26-FEB-22	26-FEB-22
2	663	43	personnel_sales	src_employees	Bryon	Bryant Bryon	24-JUL-73	42	5-116-000-4106	Bryon_Bryant1241221775@kideod.biz	Blumenau, 107 East Towner Avenue	417	26-FEB-22	26-FEB-22
3	664	44	personnel_sales	src_employees	Jolene	Addley Jolene	24-JAN-84	43	7-246-655-1554	Jolene_Addley848609427@hourpy.biz	Kuala Lumpur, 17 Panola Court	418	26-FEB-22	26-FEB-22
4	665	45	personnel_sales	src_employees	Javier	Gibbons Javier	29-APR-92	41	0-356-745-5327	Javier_Gibbons1078350082@brety.org	Wroclaw, 17 South Crittenden Court	418	26-FEB-22	26-FEB-22
5	666	46	personnel_sales	src_employees	Ramon	Walker Ramon	19-SEP-72	42	2-035-670-2751	Ramon_Walker2115855530@irrepay.com	Krakow, 37 South Towner Street	422	26-FEB-22	26-FEB-22
6	667	47	personnel_sales	src_employees	Luke	Ranks Luke	29-JUN-05	41	2-026-663-8644	Luke_Ranks611974984@yahoo.com	Wellington, 67 South Breckinridge Avenue	422	26-FEB-22	26-FEB-22
7	668	48	personnel_sales	src_employees	Nicole	Nicholls Nicole	09-SEP-64	42	4-853-084-5747	Nicole_Nicholls163216810@gompie.com	Enschede, 107 Breckinridge Avenue	422	26-FEB-22	26-FEB-22
8	669	49	personnel_sales	src_employees	Macy	Uttridge Macy	06-OCT-87	43	5-455-628-3817	Macy_Uttridge1521187196@vetan.org	Waddinxveen, 107 North Panola Avenue	426	26-FEB-22	26-FEB-22
9	670	50	personnel_sales	src_employees	Daron	Fleming Daron	21-MAY-63	41	0-182-172-6633	Daron_Fleming1934805062@ovock.tech	Georgetown, 117 West Crittenden Avenue	426	26-FEB-22	26-FEB-22
10	671	51	personnel_sales	src_employees	Aileen	Upton Aileen	28-FEB-66	42	7-433-487-4251	Aileen_Upton2028332453@aveldo.biz	Bristol, 27 South Mcpherson Boulevard	424	26-FEB-22	26-FEB-22
11	672	52	personnel_sales	src_employees	Valerie	Page Valerie	15-JUN-64	41	6-060-250-3532	Valerie_Page 1971521838@bretoux.com	Schimmert, 37 North Breckinridge Street	424	26-FEB-22	26-FEB-22
12	673	53	personnel_sales	src_employees	Shannon	Leslie Shannon	19-MAY-07	42	0-582-403-1578	Shannon_Leslie611127713@elnee.tech	Almere, 47 East Panola Road	425	26-FEB-22	26-FEB-22
13	674	54	personnel_sales	src_employees	Lara	Walsh Lara	31-MAR-91	43	6-051-731-0510	Lara_Walsh96625198@twace.org	Santos, 67 West Goodhue Avenue	425	26-FEB-22	26-FEB-22
14	675	55	personnel_sales	src_employees	Russel	Lloyd Russel	27-MAR-88	41	3-745-730-1578 Russel_Lloyd1823459133@dionrab.com	Yokohama, 27 Towner Avenue	426	26-FEB-22	26-FEB-22

SELECT * FROM ce_sales;

	SALE_ID	SALE_SOURCE_...	SALE_SO...	PRO...	DATE_ID	PROMOTION_ID	CHANNEL_ID	STORE_ID	EMPLOYEE_ID	CUSTOMER_ID	SALE_COST	SALE_PRICE	SALE_QUANTITY	TA_UPDATE_DT	TA_INSERT_DT
1	12958445	pesonnel_sales	src_sales	115312	03-JAN-21	56	131	245	719	147955	832.32	1040.4	1	26-FEB-22	26-FEB-22
2	12958446	pesonnel_sales	src_sales	118278	03-JAN-21	56	131	284	720	170595	474.11	592.64	1	26-FEB-22	26-FEB-22
3	12958447	pesonnel_sales	src_sales	110593	03-SEP-21	56	131	285	627	155149	173.94	217.43	1	26-FEB-22	26-FEB-22
4	12958448	pesonnel_sales	src_sales	113851	03-JAN-21	56	131	270	634	139220	935.51	1169.39	1	26-FEB-22	26-FEB-22
5	12958449	pesonnel_sales	src_sales	118875	03-JAN-21	56	132	241	639	172603	420.07	525.09	1	26-FEB-22	26-FEB-22
6	12958450	pesonnel_sales	src_sales	115561	03-FEB-21	56	131	271	641	167630	408.67	510.84	1	26-FEB-22	26-FEB-22
7	12958451	pesonnel_sales	src_sales	113911	03-FEB-21	56	131	260	642	167292	278.43	348.04	1	26-FEB-22	26-FEB-22
8	12958452	pesonnel_sales	src_sales	108682	03-FEB-21	56	131	261	643	162358	1422.07	1777.59	1	26-FEB-22	26-FEB-22
9	12958453	pesonnel_sales	src_sales	112858	03-FEB-21	56	132	268	644	168855	686.32	857.9	1	26-FEB-22	26-FEB-22
10	12958454	pesonnel_sales	src_sales	110276	03-MAR-21	56	130	272	645	150406	1640.23	2050.29	1	26-FEB-22	26-FEB-22
11	12958455	pesonnel_sales	src_sales	111612	03-MAR-21	56	132	253	647	144776	1862.78	2328.48	1	26-FEB-22	26-FEB-22
12	12958456	pesonnel_sales	src_sales	113415	03-MAR-21	56	132	254	649	161741	1198.58	1498.22	1	26-FEB-22	26-FEB-22
13	12958457	pesonnel_sales	src_sales	112246	01-JAN-21	56	131	281	650	160825	52.12	65.15	1	26-FEB-22	26-FEB-22

1 CREATE OBJECTS FOR STAR SCHEMA

Step 1: create objects

```
drop table dim_channels  CASCADE CONSTRAINTS;
CREATE TABLE dim_channels (
    channel_surr_id     NUMBER(38) NOT NULL,
    channel_id          VARCHAR2(50) NOT NULL,
    source_system       VARCHAR2(50) NOT NULL,
    source_entity       VARCHAR2(50) NOT NULL,
    channel_description VARCHAR2(50) NOT NULL,
    channel_class_id    NUMBER(38) NOT NULL,
    channel_class       VARCHAR2(50) NOT NULL,
    ta_update_dt        DATE  NOT NULL,
    ta_insert_dt        DATE NOT NULL
);

ALTER TABLE dim_channels ADD CONSTRAINT dim_channels_pk PRIMARY KEY (
channel_surr_id );
```

```
BL_DM.DIM_CHANNELS
P *  CHANNEL_SURR_ID        NUMBER (38)
  *  CHANNEL_ID             VARCHAR2 (50 BYTE)
  *  SOURCE_SYSTEM          VARCHAR2 (50 BYTE)
  *  SOURCE_ENTITY          VARCHAR2 (50 BYTE)
  *  CHANNEL_DESCRIPTION    VARCHAR2 (50 BYTE)
  *  CHANNEL_CLASS_ID       NUMBER (38)
  *  CHANNEL_CLASS          VARCHAR2 (50 BYTE)
  *  TA_UPDATE_DT           DATE
  *  TA_INSERT_DT           DATE
DIM_CHANNELS_PK (CHANNEL_SURR_ID)
DIM_CHANNELS_PK (CHANNEL_SURR_ID)
```

drop table dim_customers CASCADE CONSTRAINTS;
CREATE TABLE dim_customers (
    customer_surr_id NUMBER(38) NOT NULL,
    customer_id   VARCHAR2(50) NOT NULL,
    source_system   VARCHAR2(50) NOT NULL,
    source_entity   VARCHAR2(50) NOT NULL,
    first_name   VARCHAR2(50) NOT NULL,
    last_name   VARCHAR2(50) NOT NULL,
    company_name   VARCHAR2(50) NOT NULL,
    phone   VARCHAR2(50) NOT NULL,
    company_number   VARCHAR2(50) NOT NULL,
    gender   VARCHAR2(50) NOT NULL,
    yeart_of_birth   NUMBER(38)   NOT NULL,
    email   VARCHAR2(50) NOT NULL,
    country   VARCHAR2(50) NOT NULL,
    country_id   NUMBER(38)   NOT NULL,
    address   VARCHAR2(50) NOT NULL,
    ta_update_dt   DATE NOT NULL,
    ta_insert_dt   DATE NOT NULL
);

ALTER TABLE dim_customers ADD CONSTRAINT dim_customers_pk PRIMARY KEY (
customer_surr_id);

BL_DM.DIM_CUSTOMERS

P *	CUSTOMER_SURR_ID	NUMBER (38)
*	CUSTOMER_ID	VARCHAR2 (50 BYTE)
*	SOURCE_SYSTEM	VARCHAR2 (50 BYTE)
*	SOURCE_ENTITY	VARCHAR2 (50 BYTE)
*	FIRST_NAME	VARCHAR2 (50 BYTE)
*	LAST_NAME	VARCHAR2 (50 BYTE)
*	COMPANY_NAME	VARCHAR2 (50 BYTE)
*	PHONE	VARCHAR2 (50 BYTE)
*	COMPANY_NUMBER	VARCHAR2 (50 BYTE)
*	GENDER	VARCHAR2 (50 BYTE)
*	YEART_OF_BIRTH	NUMBER (38)
*	EMAIL	VARCHAR2 (50 BYTE)
*	COUNTRY	VARCHAR2 (50 BYTE)
*	COUNTRY_ID	NUMBER (38)
*	ADDRESS	VARCHAR2 (50 BYTE)
*	TA_UPDATE_DT	DATE
*	TA_INSERT_DT	DATE

DIM_CUSTOMERS_PK (CUSTOMER_SURR_ID)

DIM_CUSTOMERS_PK (CUSTOMER_SURR_ID)

drop table dim_employees CASCADE CONSTRAINTS;
CREATE TABLE dim_employees (
employee_surr_id   NUMBER(38) NOT NULL,
employee_id   VARCHAR2(50) NOT NULL,
source_system   VARCHAR2(50) NOT NULL,
source_entity   VARCHAR2(50) NOT NULL,
first_name   VARCHAR2(50) NOT NULL,
last_name   VARCHAR2(50) NOT NULL,
day_of_birthday_dt DATE NOT NULL,
position_id   NUMBER(38) NOT NULL,
position   VARCHAR2(50) NOT NULL,
phone   VARCHAR2(50) NOT NULL,
email   VARCHAR2(50) NOT NULL,
address   VARCHAR2(50) NOT NULL,
country_id   NUMBER(38) NOT NULL,
country   VARCHAR2(50) NOT NULL,
ta_update_dt   DATE NOT NULL,
ta_insert_dt   DATE NOT NULL
);

ALTER TABLE dim_employees ADD CONSTRAINT dim_employees_scd_pk PRIMARY KEY (employee_surr_id);

```
                 BL_DM.DIM_EMPLOYEES
P  *  EMPLOYEE_SURR_ID      NUMBER (38)
   *  EMPLOYEE_ID           VARCHAR2 (50 BYTE)
   *  SOURCE_SYSTEM         VARCHAR2 (50 BYTE)
   *  SOURCE_ENTITY         VARCHAR2 (50 BYTE)
   *  FIRST_NAME            VARCHAR2 (50 BYTE)
   *  LAST_NAME             VARCHAR2 (50 BYTE)
   *  DAY_OF_BIRTHDAY_DT    DATE
   *  POSITION_ID           NUMBER (38)
   *  POSITION              VARCHAR2 (50 BYTE)
   *  PHONE                 VARCHAR2 (50 BYTE)
   *  EMAIL                 VARCHAR2 (50 BYTE)
   *  ADDRESS               VARCHAR2 (50 BYTE)
   *  COUNTRY_ID            NUMBER (38)
   *  COUNTRY               VARCHAR2 (50 BYTE)
   *  TA_UPDATE_DT          DATE
   *  TA_INSERT_DT          DATE
  ☞ DIM_EMPLOYEES_SCD_PK (EMPLOYEE_SURR_ID)
  ◇ DIM_EMPLOYEES_SCD_PK (EMPLOYEE_SURR_ID)
```

drop table dim_products CASCADE CONSTRAINTS;
CREATE TABLE dim_products (
   product_surr_id NUMBER(38) NOT NULL,
   product_id   VARCHAR2(50) NOT NULL,
   source_system   VARCHAR2(50) NOT NULL,
   source_entity   VARCHAR2(50) NOT NULL,
   product_name   VARCHAR2(50) NOT NULL,
   product_brand_id NUMBER(38) NOT NULL,
   product_brand   VARCHAR2(50) NOT NULL,
   product_type_id NUMBER(38) NOT NULL,
   product_type   VARCHAR2(50) NOT NULL,
   ta_update_dt   DATE NOT NULL,
   ta_insert_dt   DATE NOT NULL
);

ALTER TABLE dim_products ADD CONSTRAINT dim_products_pk PRIMARY KEY (
product_surr_id);

```
                 BL_DM.DIM_PRODUCTS
P  *  PRODUCT_SURR_ID       NUMBER (38)
   *  PRODUCT_ID            VARCHAR2 (50 BYTE)
   *  SOURCE_SYSTEM         VARCHAR2 (50 BYTE)
   *  SOURCE_ENTITY         VARCHAR2 (50 BYTE)
   *  PRODUCT_NAME          VARCHAR2 (50 BYTE)
   *  PRODUCT_BRAND_ID      NUMBER (38)
   *  PRODUCT_BRAND         VARCHAR2 (50 BYTE)
   *  PRODUCT_TYPE_ID       NUMBER (38)
   *  PRODUCT_TYPE          VARCHAR2 (50 BYTE)
   *  TA_UPDATE_DT          DATE
   *  TA_INSERT_DT          DATE
  ☞ DIM_PRODUCTS_PK (PRODUCT_SURR_ID)
  ◇ DIM_PRODUCTS_PK (PRODUCT_SURR_ID)
```

drop table dim_promotions_scd CASCADE CONSTRAINTS;
CREATE TABLE dim_promotions_scd (
   promotion_surr_id   NUMBER(38) NOT NULL,

```
    promotion_id         VARCHAR2(50) NOT NULL,
    source_system        VARCHAR2(50) NOT NULL,
    source_entity        VARCHAR2(50) NOT NULL,
    promotion_name       VARCHAR2(50) NOT NULL,
    promotion_category_id NUMBER(38) NOT NULL,
    promotion_categoty   VARCHAR2(50) NOT NULL,
    begin_sop_dt         DATE NOT NULL,
    end_eop_dt           DATE NOT NULL,
    is_active            VARCHAR2(50) NOT NULL,
    cost                 NUMBER(15, 2) NOT NULL,
    ta_update_dt         DATE  NOT NULL,
    ta_insert_dt         DATE NOT NULL
);

ALTER TABLE dim_promotions_scd ADD CONSTRAINT dim_promotions_scd_pk
PRIMARY KEY ( promotion_surr_id );
```


BL_DM.DIM_PROMOTIONS_SCD

P *	PROMOTION_SURR_ID	NUMBER (38)
*	PROMOTION_ID	VARCHAR2 (50 BYTE)
*	SOURCE_SYSTEM	VARCHAR2 (50 BYTE)
*	SOURCE_ENTITY	VARCHAR2 (50 BYTE)
*	PROMOTION_NAME	VARCHAR2 (50 BYTE)
*	PROMOTION_CATEGORY_ID	NUMBER (38)
*	PROMOTION_CATEGOTY	VARCHAR2 (50 BYTE)
*	BEGIN_SOP_DT	DATE
*	END_EOP_DT	DATE
*	IS_ACTIVE	VARCHAR2 (50 BYTE)
*	COST	NUMBER (15,2)
*	TA_UPDATE_DT	DATE
*	TA_INSERT_DT	DATE

DIM_PROMOTIONS_SCD_PK (PROMOTION_SURR_ID)

DIM_PROMOTIONS_SCD_PK (PROMOTION_SURR_ID)

```
drop table dim_stores  CASCADE CONSTRAINTS;
CREATE TABLE dim_stores (
    store_surr    NUMBER(38)  NOT NULL,
    store_id      VARCHAR2(50) NOT NULL,
    source_system  VARCHAR2(50) NOT NULL,
    source_entity  VARCHAR2(50) NOT NULL,
    phone         VARCHAR2(50) NOT NULL,
    street_address VARCHAR2(50) NOT NULL,
    postal_code   VARCHAR2(50) NOT NULL,
    city_id       NUMBER(38) NOT NULL,
    city          VARCHAR2(50) NOT NULL,
    state_id      NUMBER(38) NOT NULL,
    state         VARCHAR2(50) NOT NULL,
    country_id    NUMBER(38) NOT NULL,
    country       VARCHAR2(50) NOT NULL,
    ta_update_dt   DATE  NOT NULL,
    ta_insert_dt   DATE  NOT NULL
);
```

ALTER TABLE dim_stores ADD CONSTRAINT dim_stores_pk PRIMARY KEY (store_surr);

```
             BL_DM.DIM_STORES
P *  STORE_SURR          NUMBER (38)
  *  STORE_ID            VARCHAR2 (50 BYTE)
  *  SOURCE_SYSTEM       VARCHAR2 (50 BYTE)
  *  SOURCE_ENTITY       VARCHAR2 (50 BYTE)
  *  PHONE               VARCHAR2 (50 BYTE)
  *  STREET_ADDRESS      VARCHAR2 (50 BYTE)
  *  POSTAL_CODE         VARCHAR2 (50 BYTE)
  *  CITY_ID             NUMBER (38)
  *  CITY                VARCHAR2 (50 BYTE)
  *  STATE_ID            NUMBER (38)
  *  STATE               VARCHAR2 (50 BYTE)
  *  COUNTRY_ID          NUMBER (38)
  *  COUNTRY             VARCHAR2 (50 BYTE)
  *  TA_UPDATE_DT        DATE
  *  TA_INSERT_DT        DATE
━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━
▷  DIM_STORES_PK (STORE_SURR)
━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━
◆  DIM_STORES_PK (STORE_SURR)
```

drop table fct_sales CASCADE CONSTRAINTS;
CREATE TABLE fct_sales (
   source_system   VARCHAR2(50) NOT NULL,
   soutce_entity   VARCHAR2(50) NOT NULL,
   product_surr_id   NUMBER(38) NOT NULL,
   promotion_surr_id NUMBER(38) NOT NULL,
   channel_surr_id   NUMBER(38) NOT NULL,
   store_surr_id   NUMBER(38) NOT NULL,
   employee_surr_id NUMBER(38) NOT NULL,
   customer_surr_id NUMBER(38) NOT NULL,
   date_id   DATE NOT NULL,
   unit_cost   NUMBER(15, 2),
   unit_price   NUMBER(15, 2),
   sales_quantity   NUMBER(38),
   ta_update_dt   DATE NOT NULL,
   ta_insert_dt   DATE NOT NULL
);

```
             BL_DM.FCT_SALES
  *  SOURCE_SYSTEM       VARCHAR2 (50 BYTE)
  *  SOUTCE_ENTITY       VARCHAR2 (50 BYTE)
  *  PRODUCT_SURR_ID     NUMBER (38)
  *  PROMOTION_SURR_ID   NUMBER (38)
  *  CHANNEL_SURR_ID     NUMBER (38)
  *  STORE_SURR_ID       NUMBER (38)
  *  EMPLOYEE_SURR_ID    NUMBER (38)
  *  CUSTOMER_SURR_ID    NUMBER (38)
  *  DATE_ID             DATE
     UNIT_COST           NUMBER (15,2)
     UNIT_PRICE          NUMBER (15,2)
     SALES_QUANTITY      NUMBER (38)
  *  TA_UPDATE_DT        DATE
  *  TA_INSERT_DT        DATE
```

ALTER TABLE dim_stores ADD CONSTRAINT dim_stores_pk PRIMARY KEY (store_surr);