Database Management Systems
Term Project
DBMS22

Paulina, Shweta, Rutuja & Utsav

Our Dataset & Tables

- We have used a sales dataset which is a culmination of data from some kaggle datasets and mock data generator "Mockaroo"

- The dataset consists of 15 columns describing the customer details, item details and invoice details

- We have 5 tables that we created from the raw csv: consist, customer, invoice, invoice item & item

- We have 5 pk namely: 5th one is a combination of 2 fk

Customer Sales

Cust_id	first_name	last_name	Cust_address	Cust_state	Cust_postcode	Invoice_no	Invoice_date	Invoice_time	Line_no	Quantity	Item_no	Item_type	Item_price	Discount
X674	Nerti	Pentlow	849 Shasta Trail	Colorado	81010	ZDTR827NO	17/04/2021	10:09 AM	D52	5	FZ349	Soup - Campbellschix Stew	64.4	9
D570	Jordan	Dreier	1 Summit Avenue	Missouri	65211	BMXG722YG	27/09/2021	11:10 PM	B16	10	WG897	Bacardi Breezer - Tropical	95.3	6
J883	Ferdinanda	Vasenkov	589 Blue Bill Park Point	Georgia	30336	MQBW148KK	2/9/2021	7:33 PM	J01	8	FA271	Pasta - Spaghetti, Dry	93	12
N854	Laryssa	Lidstone	3 Eliot Terrace	Texas	75353	VPLT986VP	9/7/2021	9:01 PM	L29	1	EX622	Carrots - Jumbo	13.4	8
C465	Bobette	Philipson	29801 Hagan Place	California	92612	RMTS932JX	12/5/2021	11:02 AM	Z46	8	CN516	Hold Up Tool Storage Rack	6.4	12
L495	Sada	Stokell	8538 Westend Avenue	Ohio	43240	TVPC770BD	7/7/2021	9:08 PM	J71	3	AW555	Island Oasis - Sweet And Sour Mix	67.9	15
S705	Kendre	MacCallam	601 Homewood Street	Georgia	30195	JKLP239FP	9/8/2021	9:46 AM	F51	4	NE918	Wheat - Soft Kernal Of Wheat	33.4	7
H204	Shell	Lefley	09 Mcbride Trail	Ohio	44505	QTMQ907GK	29/08/2021	9:56 PM	D67	5	RI334	Pesto - Primerba, Paste	40.9	9

Tables that were created

Consist Table - Operational DB

Line_No	Invoice_No
► A19	ZGBQ807GX
A22	ROSX015RO
A28	FNUD086VI
A33	OWZQ340NY
B16	BMXG722YG
B17	LORX189KQ
B30	ZOTZ783UV

Customer - Operational DB

Cust_ID	Cust_state	Cust_address	Cust_postco...	first_name	last_name
A701	Tennessee	1001 Hudson Way	97200	Gill	Mahoney
A876	Colorado	82303 Old Shore Circle	80328	Winfred	Kennelly
B231	New Mexico	3 Meadow Ridge Lane	87195	Franzen	Swaite
B605	Washington	88 3rd Drive	98042	Galen	Versey
B667	District of Columbia	92059 Monterey Trail	20392	Lia	Satchel
B696	Texas	527 Sunbrook Pass	78405	Jerrie	Rossi
C041	New York	47576 Monica Hill	10474	Hertha	McFater
C155	Pennsylvania	0032 Reindahl Trail	19495	Sibella	Benneton

Invoice Table - Operational DB

Invoice_No	Invoice_Date	Invoice_time	Cust_ID
AOW161ENG	1/2/2021	1:11 PM	IL11
ALTP092SU	9/4/2021	1:30 PM	C155
ARDF946BY	1/5/2021	9:42 PM	L192
BDNH098NU	22/07/2021	6:09 PM	K337
BDPH664JY	21/03/2021	10:26 AM	X097
BFHM145TT	21/05/2021	7:47 PM	E738
BMXG722YG	27/09/2021	11:10 PM	D570

Invoice Item Table - Operational DB

Line_no	Quantity	Item_No
A19	9	RQ758
A22	4	II829
A28	3	NS115
A33	4	KJ316
B16	10	WG897
B17	10	UA179
B30	7	KB286

Item Table - Operational DB

Item_No	Item_type	Discount	Item_price
AC525	Pate - Liver	12	11
AR412	Jagermeister	8	27
AW555	Island Oasis - Sweet And Sour Mix	15	68
AY268	Urban Zen Drinks	6	6
BD890	Soup - Campbells - Tomato	10	59
BH681	Asparagus - White, Canned	12	54
BJ579	Cheese - Comte	9	2
BK596	Bacardi Breezer - Tropical	14	14

Tables that were created - Analytical DB

Calendar dim - Analytical DB

Invoice_No	Invoice_Date	Invoice_time
AAFF878PY	2/10/2021	6:14 PM
ACWT842HC	7/2/2021	1:17 PM
ALTP092SU	9/4/2021	1:30 PM
ARDF946BY	1/5/2021	9:42 PM
BDNH098NU	22/07/2021	6:09 PM

Customer dim - Analytical DB

Cust_ID	first_name	last_name	Cust_state	Cust_address	Cust_postco...
A040	Riane	Rosengart	Texas	54103 Wayridge Hill	77050
A731	Gill	Fitzhenry	Tennessee	49601 Russell Way	37205
A876	Winfred	Kennelly	Colorado	82303 Old Shore Circle	80328
B231	Franzen	Swaite	New Mexico	3 Meadow Ridge Lane	87195
B605	Galen	Versey	Washington	88 3rd Drive	98042
B667	Lia	Satchel	District of Columbia	92059 Monterey Trail	20392

Item dim - Analytical DB

Item_No	Item_type	Line_No
AO791	Jam - Blackberry, 20 Ml Jar	U75
AO920	Pate - Liver	B84
AR412	Jagermeister	U37
AW555	Island Oasis - Sweet And Sour Mix	J71
AY268	Urban Zen Drinks	G39
BD890	Soup - Campbells - Tomato	G15
BH681	Asparagus - White, Canned	H42
BJ579	Cheese - Comte	S80
BK596	Bacardi Breezer - Tropical	L93

Sales Fact Table - Analytical DB

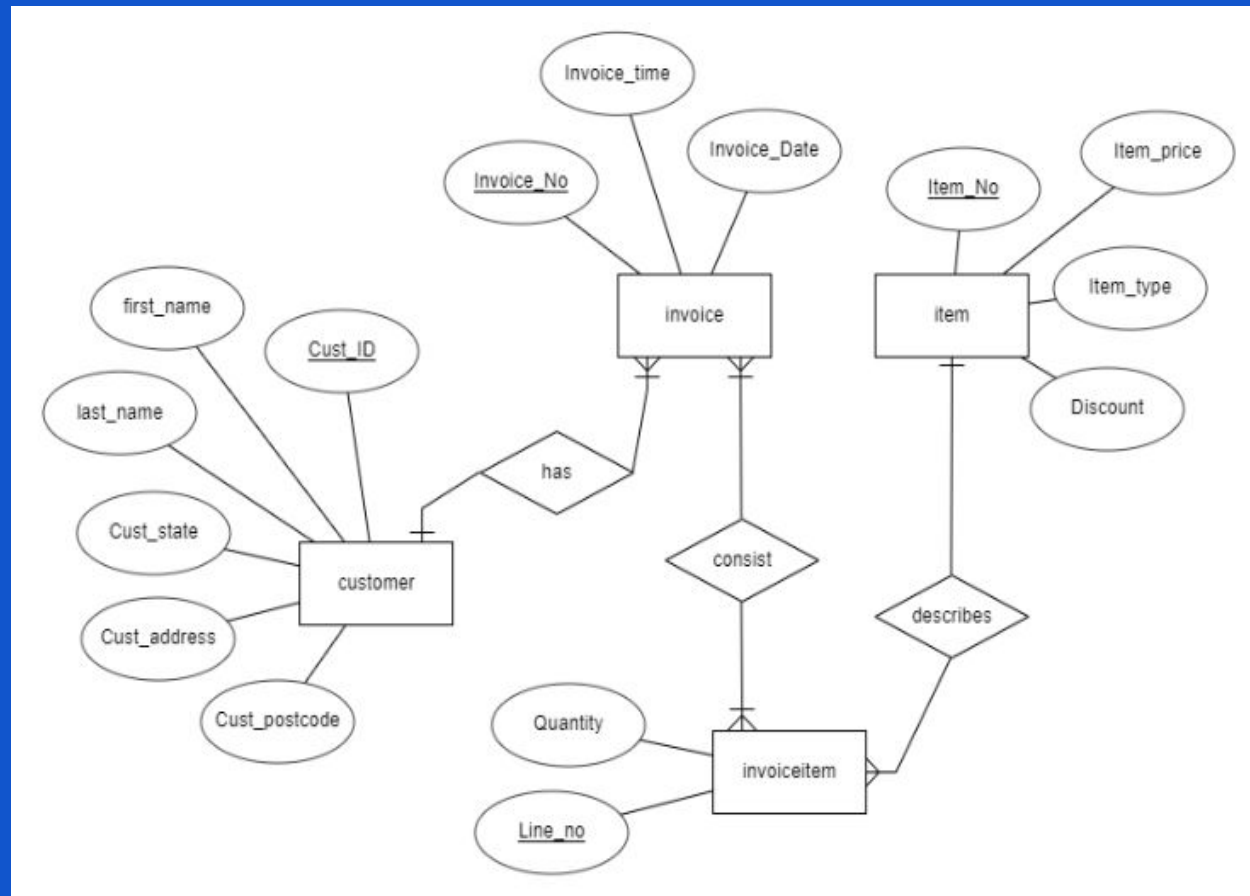| Item_Price	Quantity	Discount	Item_No	Cust_ID	Invoice_No
3	5	11	AO791	A040	AAFF878PY
3	5	11	AO791	A731	HJRZ858TU
3	5	11	AO791	A876	OETL269GF
3	5	11	AO791	B231	IHDR948LV
3	5	11	AO791	B605	RCTF429OB
3	5	11	AO791	B667	HNAU396KS
3	5	11	AO791	B696	SUJN264MF
3	5	11	AO791	C041	CCTZ924JT
3	5	11	AO791	C155	ALTP092SU

Our Application

The purpose of our application is to provide small business with tools to track their sales transactions as well as offer these businesses the option to create rewards programs for their customers as it captures customer data
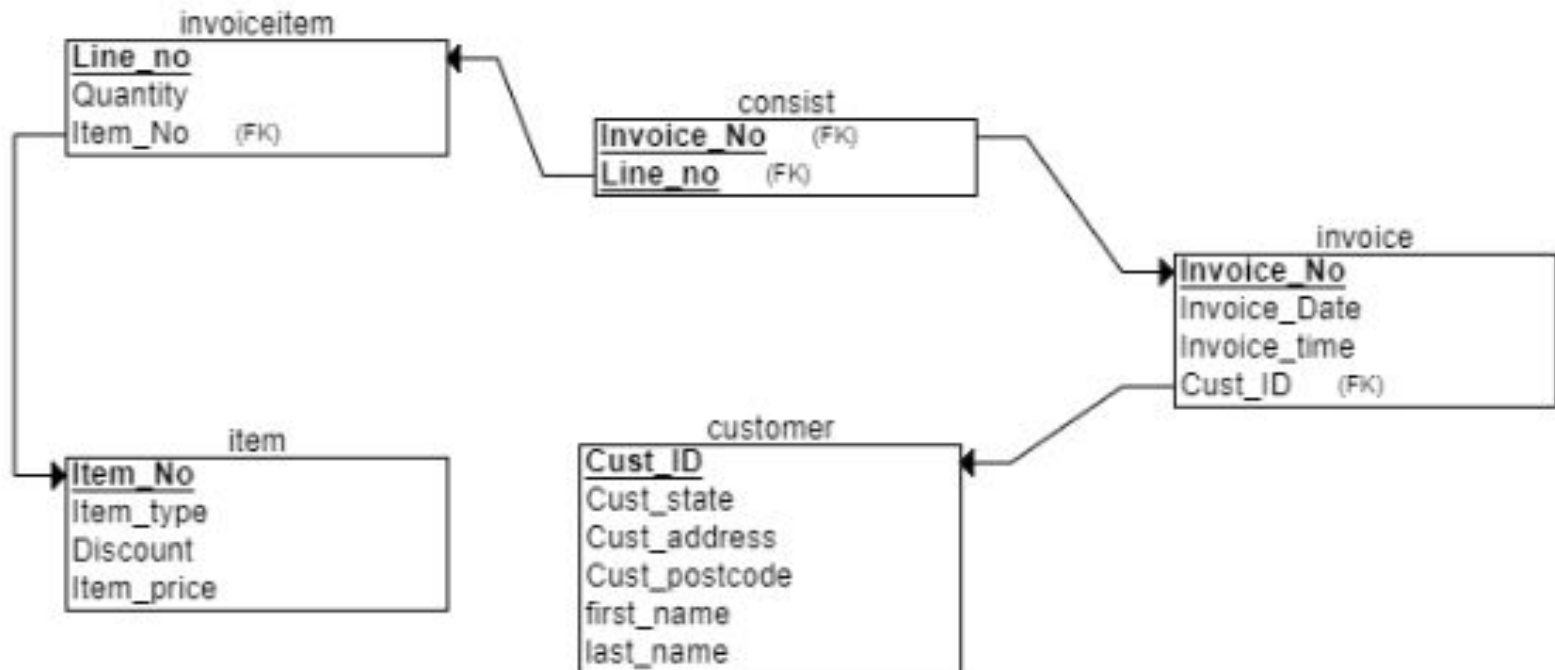

EARN
Rewards

Entity Relation Diagram

ER diagram is needed to understand the tables and their relationships with each other which can be in 3 different forms, 1:1, 1:M and M:M
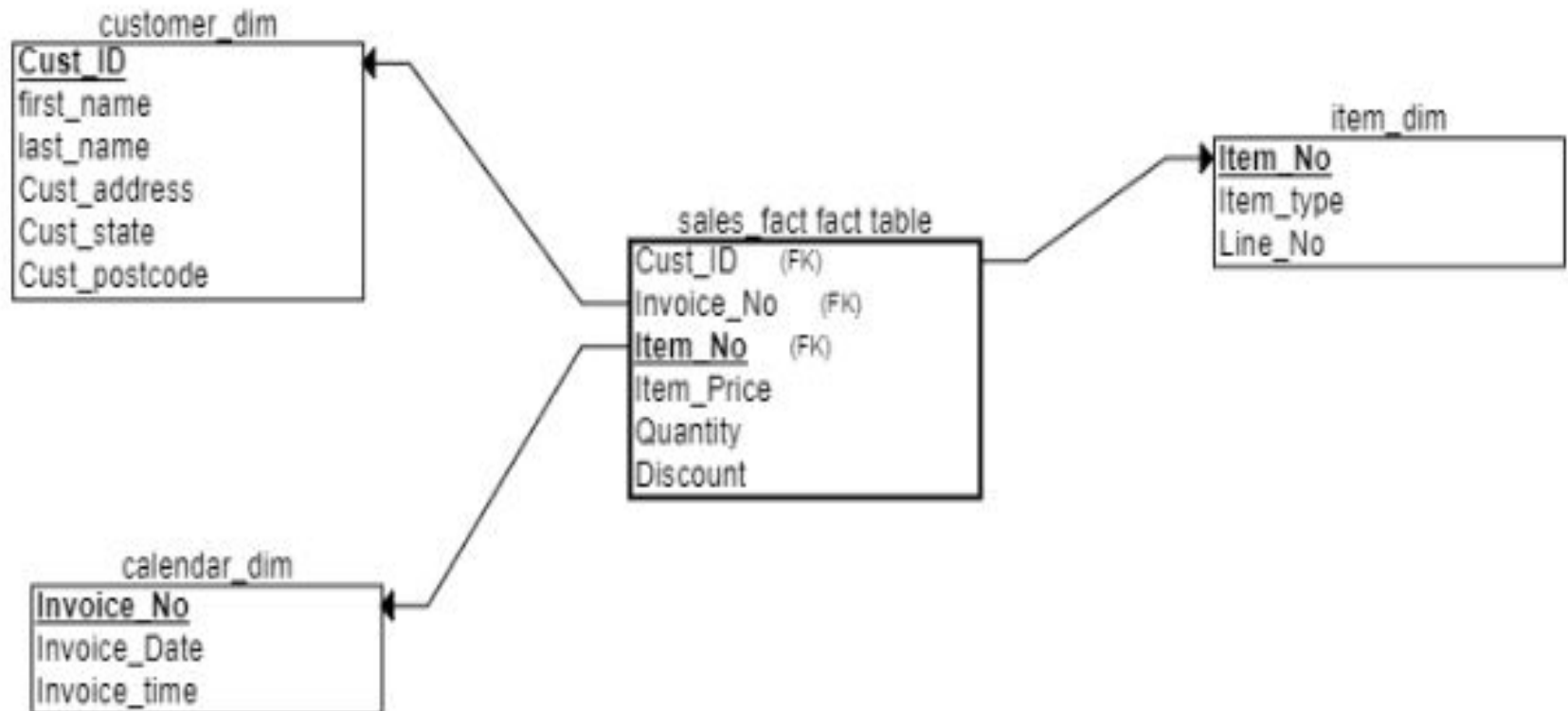
Relational Schema

Our relational schema shows the relationship between the different tables we have created and the foreign keys that are present in each table.

Star Schema

Our Star Schema shows the relationship between our sales fact table and the rest of the tables that were created on our analytical database

Customer Database management System

Customer Detail

Cust_ID

First_name

Last Name

Cust address

Cust state

Cust postcode

Item detail

Item_No

Item_type

Discount

Item_price

Invoice Item

Line_No

Quantity

Invoice

Invoice No

Invoice Date   1/1/00

Invoice Time   12:00 AM

ADD DATA	DELETE DATA	UPDATE DATA

THANKS!

Any questions?