

Question 1

Happy Supplies Parts Warehouse					
Customer Name:	Jeff Peterson	Date:	7/1/2024		
Customer Number:	HG54587	Time:	10:30 am		
Employee:	D. Harrison				
Customer Type:	Consumer				
Part Number	Name	Type	Cage Code	Quantity Ordered	Unit Price
10654	Float Control	Plumbing	G413	4	12
10456	Modulator	Electrical	H433	3	7
10776	Hose Assembly	Plumbing	G413	7	9
10657	Float Assembly	Plumbing	G413	5	10

Assume that each order can only order one type of part in the warehouse.

1 NF

order									
partNumber(PK)	name	type	cageCode	quantityOrdered	unitPrice	customerName	customerNumber(PK)	customerType	date(PK)
10654	Float Control	Plumbing	G413	4	12	Jeff Peterson	HG54587	Consumer	7/1/2024
10456	Modulator	Electrical	H433	3	7	Jeff Peterson	HG54587	Consumer	7/1/2024
10776	Hose Assembly	Plumbing	G413	7	9	Jeff Peterson	HG54587	Consumer	7/1/2024
10657	Float Assembly	Plumbing	G413	5	10	Jeff Peterson	HG54587	Consumer	7/1/2024

customer name, customer type depends on customer number.

name, cage code, unit price depends on part number

employee depends on part number, customer number, date and time

2 NF

order				
partNumber	customerNumber	date	time	quantityOrdered
10654	HG54587	7/1/2024	10:30 am	4
10456	HG54587	7/1/2024	10:30 am	3
10776	HG54587	7/1/2024	10:30 am	7
10657	HG54587	7/1/2024	10:30 am	5

part				
partNumber(PK)	name	type	cageCode	unitPrice
10654	Float Control	Plumbing	G413	12
10456	Modulator	Electrical	H433	7
10776	Hose Assembly	Plumbing	G413	9
10657	Float Assembly	Plumbing	G413	10

type depends on cage code (Assume that each cage stores one type of part.)

order_information			
customerNumber	date	time	employee
HG54587	7/1/2024	10:30am	D.Harrison

customer		
customerNumber(PK)	customerName	customerType
HG54587	Jeff Peterson	Consumer

3 NF

order				
partNumber	customerNumber	date	time	quantityOrdered
10654	HG54587	7/1/2024	10:30 am	4
10456	HG54587	7/1/2024	10:30 am	3
10776	HG54587	7/1/2024	10:30 am	7
10657	HG54587	7/1/2024	10:30 am	5

part			
partNumber	name	unitPrice	cageCode
10654	Float Control	12	G413
10456	Modulator	7	H433
10776	Hose Assembly	9	G413
10657	Float Assembly	10	G413

cage_category	
cageCode	portType
G413	Plumbing
H433	Electrical

order_information			
customerNumber	date	time	employee
HG54587	7/1/2024	10:30am	D.Harrison

customer		
customerNumber	customerName	customerTypeId
HG54587	Jeff Peterson	1

customer_type	
customerTypeId	customerType
1	Consumer

Question 2

1 NF

appointment						
staffNo	therapistName	patNo(PK)	patName	appointmentDate(PK)	appointTime(PK)	branchNo
S1011	Fred Smith	P100	Lily White	9/12/2022	10:00	M15
S1011	Fred Smith	P105	Jill Baker	9/12/2022	12:00	M15
S1024	Heidi Pierce	P108	Andy MacKee	9/12/2022	10:00	Q10
S1024	Heidi Pierce	P108	Richard Levin	9/14/2022	14:00	Q10
S1032	Richard Levin	P105	Jill Baker	9/14/2022	16:30	M15
S1032	Richard Levin	P110	Jimmy Winter	9/15/2022	18:00	B13

The original form are naturally in 1NF.

therapistName depends on staffNo, patName depends on patNo.

Assume that one pat can be treated by one therapist in one branch at a single time

2 NF

pat	
patNo(PK)	patName
P100	Lily White
P105	Jill Baker
P108	Andy MacKee
P110	Jimmy Winter

therapist	
staffNo	therapistName
S1011	Fred Smith
S1032	Richard Levin
S1024	Heidi Pierce