

Question 1

Happy Supplies Parts Warehouse					
Customer Name:	Jeff Peterson	Date:	7/1/2024		
Customer Number:	HG54587	Time:	10:30 am		
Customer Type:	Consumer	Employee:	D. Harrison		
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.

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.

Assume that one pat can be treated by one therapistName depends on staffNo, patName depends on patNo.

therapistName depends on staffNo, and appointmentDate

and appointmentTime

depends on staffNo

therapistName depends on staffNo

branchNo depends on staffNo (which depends on the three primary keys)

and appointmentDate

and appointmentTime

depends on staffNo

branchNo depends on staffNo