

Table 1

The PK for this table is customerNo, partNo, date, and time. There are no repeating fields so the table is in 1NF. However, there are multiple partial dependencies such as customerName + customerType (only depend on custNo), all the part attributes (only depend on partNo), and employee (doesn't depend on partNo), so the table is not in 2NF. Creating new tables results in:

customer	part	order	part_order
<u>customerNo</u>	<u>partNo</u>	<u>customerNo</u>	<u>customerNo</u>
customerName	partName	<u>date</u>	<u>partNo</u>
customerType	partType	<u>time</u>	<u>date</u>
	cageCode	employee	<u>time</u>
	unitPrice		quantity

The customer and part tables are in 2NF since only 1 field makes up the PK. In the order table, employee is dependent on all fields that comprise the PK, since a different employee may serve a different customer at any date and time; the order table is in 2NF. Similarly in the part_order table, quantity is dependent upon which customer orders which part at which time so the table is in 2NF as well.

Lastly, there are no transitive dependencies in any of the tables so they are all in 3NF.

customer	part	order	part_order
<u>customerNo</u>	<u>partNo</u>	<u>customerNo</u>	<u>customerNo</u>
customerName	partName	<u>date</u>	<u>partNo</u>
customerType	partType	<u>time</u>	<u>date</u>
	cageCode	employee	<u>time</u>
	unitPrice		quantity

Table 2

(This is assuming that the appointment date and time is broken into two fields and not just a singular dateTime field).

The PK for this table is staffNo, appDate, and appTime. There are no repeating fields, so this table is in 1NF. therapistName is only dependent on staffNo and branchNo is independent of appTime, so the table is not in 2NF. Creating new tables results in:

therapist	appointment	branch_assignment
<u>staffNo</u>	<u>staffNo</u>	<u>staffNo</u>
therapistName	<u>appDate</u>	<u>appDate</u>
	<u>appTime</u>	branchNo
	patNo	
	patName	

All tables are now in 2NF. The therapist and branch_assignment tables are also in 3NF since there is only 1 attribute. However, there is a partial dependency between patNo and patName so that the appointment table is not in 3NF. To fix this, a new patient table is created.

therapist	appointment	branch_assignment	patient
<u>staffNo</u>	<u>staffNo</u>	<u>staffNo</u>	<u>patNo</u>
therapistName	<u>appDate</u>	<u>appDate</u>	patName
	<u>appTime</u>	branchNo	
	<i>patNo</i>		

Table 3

(This is assuming that one employee can only have one contract per event)

The PK for this table is eNo and contractNo. There are no repeating fields, so this table is in 1NF. The eName does not depend on the contractNo, nor does the eventNo/eventLoc depend on the eNo. Therefore, this table is not in 2NF.

employee	contract	event_contract
<u>eNo</u>	<u>eNo</u>	<u>contractNo</u>
eName	<u>contractNo</u>	eventNo
	hours	eventLoc

The employee and event_contract tables are both in 2NF since the PK in each table consists of only 1 attribute. The contract table is also in 2NF since hours depends on both the employee and the contract. However, eventLoc is dependent upon eventNo so the event_contract table is not in 3NF. To fix this, a new event table is created.

employee	contract	event_contract	event
<u>eNo</u>	<u>eNo</u>	<u>contractNo</u>	<u>eventNo</u>
eName	<u>contractNo</u>	eventNo	eventLoc
	hours		

All tables are now in 3NF.