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Lab 7 Questions

Part One:

1. I would tell the CEO that the spreadsheet is incorrect. For the 1NF, the columns should only have single value data and the correct 1NF is displayed in the second question by splitting up the rows that have multiple values and display it in the 1NF. Also primary keys cannot be used twice so there is a dash to differentiate them from one another to allow the primary key be the primary key.

PackageID	TagNumber	InstallDate	SoftwareCostUSD
AC01	32808	09-13-2005	754.95
DB32-0	32808	12-03-2005	380.00
DB32-1	37691	06-15-2005	380.00
DB33	57772	05-27-2005	412.77
WP08-0	32808	01-12-2006	185.00
WP08-1	37691	06-15-2005	227.50
WP08-2	57222	05-27-2005	170.24
WP09-0	59836	10-30-2005	35.00
WP09-1	77740	05-27-2005	35.00

- 2.
3. The primary key is the PackageID.

Part Two:

PackageID	TagNumber	InstallDate	SoftwareCostUSD	SoftwarePackageName	ComputerModel
AC01	32808	09-13-2005	754.95	Portal	Lenovo
DB32-0	32808	12-03-2005	380.00	Portal	Lenovo
DB32-1	37691	06-15-2005	380.00	Zork	IBM
DB33	57772	05-27-2005	412.77	Adobe Cloud	Apple
WP08-0	32808	01-12-2006	185.00	Portal	Lenovo
WP08-1	37691	06-15-2005	227.50	Zork	IBM
WP08-2	57222	05-27-2005	170.24	Microsoft Office	Microsoft
WP09-0	59836	10-30-2005	35.00	Google Chrome	HP
WP09-1	77740	05-27-2005	35.00	Adobe Reader	Vaio

- 4.
5. The InstallDate, SoftwareCostUSD, SoftwarePackageName depend on the PackageID and the ComputerModel depends on the TagNumber. The InstallDate does not depend on anything.
6. This table does not follow the rules of the third normal form because if the computer model were to change, the tag number would also have to change.

Part Three:

PackageID	InstallDate	SoftwareCostUSD	SoftwarePackageName
AC01	09-13-2005	754.95	Portal
DB32-0	12-03-2005	380.00	Portal
DB32-1	06-15-2005	380.00	Zork
DB33	05-27-2005	412.77	Adobe Cloud
WP08-0	01-12-2006	185.00	Portal
WP08-1	06-15-2005	227.50	Zork
WP08-2	05-27-2005	170.24	Microsoft Office
WP09-0	10-30-2005	35.00	Google Chrome
WP09-1	05-27-2005	35.00	Adobe Reader

7.

TagNumber	ComputerModel
32808	Lenovo
32808	Lenovo
37691	IBM
57772	Apple
32808	Lenovo
37691	IBM
57222	Microsoft
59836	HP
77740	Vaio

8. The primary key PackageID has three fields that depend on it: InstallDate, SoftwareCostUSD, and SoftwarePackageName. Likewise, ComputerModel depends on the primary key TagNumber.
9. The tables are in the third normal form because the items and fields are related to the primary after splitting up the larger table into two smaller ones. The primary key is changed to the TagNumber in the Computer table because it is related to the ComputerModel.

Software	
PK	PackageID
	InstallDate
	SoftwareCostUSD
	SoftwarePackageName

Computer	
PK	TagNumber
	ComputerModel

10.