

Lab #7: Normalization One

Part One:

1. I would first say thank you for the work he has put together and that all of the data that we need looks to be in the chart. The one aspect I would comment on would be how he organized the chart. There is a better way to do so that would make it easier in the long run in terms of referring back to this data. The biggest change would have to be creating separate rows for every repeating Package ID. Although it may seem fine to bunch them together it can cause problems.

PackageID ▼	TagNumber ▼	InstallDate ▼	SoftwareCostUSD ▼
AC01	32808	9/13/05	754.95
DB32	32808	12/3/05	380.00
DB32	37691	6/15/05	380.00
DB33	57772	5/27/05	412.77
WP08	32808	1/12/06	185.00
WP08	37691	6/15/05	227.50
WP08	57222	5/27/05	170.24
WP09	59836	10/30/05	35.00
WP09	77740	5/27/05	35.00

- 2.
3. The Primary key has to include both the PackageID and the TagNumber

Part Two:

PackageID ▼	TagNumber ▼	InstallDate ▼	SoftwareCostU ▼	SoftwarePac ▼	Computer Model ▼
AC01	32808	9/13/05	754.95	Zork	IBM
DB32	32808	12/3/05	380.00	Portal	IBM
DB32	37691	6/15/05	380.00	Portal	Apple
DB33	57772	5/27/05	412.77	Postgres	Acer
WP08	32808	1/12/06	185.00	Word	IBM
WP08	37691	6/15/05	227.50	Word	Apple
WP08	57222	5/27/05	170.24	Word	HP
WP09	59836	10/30/05	35.00	Chrome	Dell
WP09	77740	5/27/05	35.00	Chrome	Lenovo

- 4.
5. (PackageID, TagNumber) → InstallDate
(PackageID, TagNumber) → SoftwarePriceUSD
PackageID → SoftwarePackageName
TagNumber → ComputerModel
6. This table is not in third normal form because it has non-key attributes that are dependent on other non-key attributes. What this means is that SoftwarePackageID is

dependent on PackageID and ComputerModel is dependent on TagNumber. None of these are the primary key for the table since the primary key is a combination of both the PackageID and TagNumber.

Part Three:

PackageID ▼	TagNumber ▼	InstallDate ▼	SoftwareCostUSD ▼
AC01	32808	9/13/05	754.95
DB32	32808	12/3/05	380.00
DB32	37691	6/15/05	380.00
DB33	57772	5/27/05	412.77
WP08	32808	1/12/06	185.00
WP08	37691	6/15/05	227.50
WP08	57222	5/27/05	170.24
WP09	59836	10/30/05	35.00
WP09	77740	5/27/05	35.00

7.

Primary Key- (PackageID, TagNumber)

(PackageID, TagNumber) → InstallDate

(PackageID, TagNumber) → SoftwarePriceUSD

PackageID	SoftwarePackageName
AC01	Zork
DB32	Portal
DB33	Postgres
WP08	Word
WP09	Chrome

Primary Key – PackageID

PackageID → SoftwarePackageID

TagNumber	Computer Model
32808	IBM
37691	Apple
57772	Acer
57222	HP
59836	Dell
77740	Lenovo

Primary Key – TagNumber

TagNumber → ComputerModel

Ronald Cavaliere

These new tables were all put into third normal form after the non-key attributes that were dependent on other non-key attributes were moved into their own tables. Now each table is dependent on their primary key only.