

Siting Wang  
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Database Management  
Lab 7- Normalization  
10/31/14

Part One:

1. The spreadsheet looks fine, but there should be a better format for the spreadsheet in order to update data.

2.

TagNum	PackID	InstallDate	SoftwareCost
32808	AC01	09-13-1995	754.95
32808	DB32	12-03-1995	380.00
37691	DB32	06-15-1995	380.00
57772	DB33	05-27-1995	412.77
32808	WP08	01-12-1996	185.00
37691	WP08	06-15-1995	227.50
57222	WP08	05-27-1995	170.24
59836	WP09	10-30-1995	35.00
77740	WP09	05-27-1995	35.00

3. TagNum and PackID will be the primary key.

Part Two:

4.

TagNum	PackID	InstallDate	SoftwareCost	SoftwarePackage	CmptModel
32808	AC01	09-13-1995	754.95	Zork	Apple
32808	DB32	12-03-1995	380.00	Adobe	Apple
37691	DB32	06-15-1995	380.00	Adobe	HP
57772	DB33	05-27-1995	412.77	Portal	Toshiba
32808	WP08	01-12-1996	185.00	Microsoft	Apple
37691	WP08	06-15-1995	227.50	Microsoft	Dell
57222	WP08	05-27-1995	170.24	Microsoft	Dell
59836	WP09	10-30-1995	35.00	Oracle	Sony
77740	WP09	05-27-1995	35.00	Oracle	Lenovo

5. TagNum ->CmptModel

PackID, TagNum->SoftwareCost

PackID->SoftwarePackage

6. This table is not in third normal form because it is not in second normal form. There is not all field is depend on primary key, for example, SoftwareCost and CmptModel are not depend on the primary key, so the table is not in third normal form.

Part Three:

Software

TagNum	PackID	InstallDate	SoftwareCost
32808	AC01	09-13-1995	754.95
32808	DB32	12-03-1995	380.00
37691	DB32	06-15-1995	380.00
57772	DB33	05-27-1995	412.77
32808	WP08	01-12-1996	185.00
37691	WP08	06-15-1995	227.50
57222	WP08	05-27-1995	170.24
59836	WP09	10-30-1995	35.00
77740	WP09	05-27-1995	35.00

Installations

PackID	SoftwarePackage
AC01	Zork
DB32	Adobe
DB33	Portal
WP08	Microsoft
WP09	Oracle

Computers

TagNum	CmptModel
32808	Apple
37691	HP
57772	Toshiba
59836	Sony
77740	Lenovo

## 7. Primary keys

Table 1: PackID, TagNum

Table two: PackID

Table three: TagNum

## 8. Functional dependencies:

Table 1: PackID → Packname, SoftwareCost

Table 2: PackID → Software Package

Table 3: TagNum → CmpptModel

9. The new tables are in the third normal form because functional dependencies of table has its own primary key, and do not rely on the primary key that are removed. Each table has a key that the table can rely on.

10.



