Rafael Marmol

Lab #7

1. *Wow. You've done a great job so far*. But, I can see a few areas where I can add a lot of potential to this.
2.

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

3. The primary key is the composite (PackageID, TagNumber)
4.

PackageID	TagNumber	InstallDate	SoftwareCostUSD	PackageName	CPUModel
AC01	32808	09-13-2005	754.95	Zork	IBM
DB32	32808	12-03-2005	380.00	Portal	IBM
DB32	37691	06-15-2005	380.00	Portal	HP
DB33	57772	05-27-2005	412.77	Funky	ASUS
WP08	32808	01-12-2006	185.00	Groovy	IBM
WP08	37691	06-15-2005	227.50	Groovy	HP
WP08	57222	05-27-2005	170.24	Groovy	ASUS
WP09	59836	10-30-2005	35.00	Spooky	Apple
WP09	77740	05-27-2005	35.00	Spooky	Google

5. (PackageID, TagNumber) -> InstallDate
   (PackageID, TagNumber) -> SoftwareCostUSD
   TagNumber -> CPUModel
   PackageID -> PackageName
6. This new table is not in 3NF because there are multiple key dependencies.
7. The primary keys for Software table is PackageID, Link table is (PackageID, TagNumber), and Tag table is TagNumber.
8. Software Table
   PackageID -> PackageName
   Link Table
   (PackageID, TagNUmber) -> SoftwareCostUSD, InstallDate
   Tag Table
   TagNumber -> CPUModel
9. They are in 3NF because they are in 1NF (all intersections of rows and columns are atomic) and 2NF (no partial key dependencies) and there are no multiple key dependencies.

Software

PackageID	TagNumber
AC01	32808
DB32	32808
DB32	37691
DB33	57772
WP08	32808
WP08	37691
WP08	57222
WP09	59836
WP09	77740

Link

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

Tag

PackageName	CPUModel
Zork	IBM
Portal	IBM
Portal	HP
Funky	ASUS
Groovy	IBM
Groovy	HP
Groovy	ASUS
Spooky	Apple
Spooky	Google