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Database Management Lab 7
11/01/16

Part One:

1) It's a good start if he plans on using small excel documents. However if we are going to transfer this to a database, some changes are going to have to be made.

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 both PackageID and TagNumber. None are unique, so a combination of both are needed.

Part Two:

4)

PackageID	TagNumber	InstallDate	SoftwareCostUSD	SoftwarePackageName	ComputerModel
AC01	32808	09-13-2005	754.95	Portal	Apple
DB32	32808	12-03-2005	380.00	Saiyan	Apple
DB32	37691	06-15-2005	380.00	Saiyan	IBM
DB33	57772	05-27-2005	412.77	Saiyan	Intel

WP08	32808	01-12-2006	185.00	Rubix	Apple
WP08	37691	06-15-2005	227.50	Rubix	IBM
WP08	57222	05-27-2005	170.24	Rubix	Linux
WP09	59836	10-30-2005	35.00	Cube	Dell
WP09	77740	05-27-2005	35.00	Cube	HP

5)   PackageID → SoftwarePackageName
          TagNumber → ComputerModel
          PackageID + InstallDate → SoftwareCostUSD (Tagnumber isn't needed. See WP09)

6) It is not in 3rd NF because there are transitive dependencies. None of the above depend <u>only on</u> the primary key, therefore its isnt in 3rd NF.

Part Three:

7) Package Table

PackageID	SoftwarePackageName
AC01	Portal
DB32	Saiyan
DB32	Saiyan
DB33	Saiyan
WP08	Rubix
WP08	Rubix
WP08	Rubix
WP09	Cube
WP09	Cube

Primary Key = PackageID

Computer Table

TagNumber	ComputerModel
32808	Apple
32808	Apple
37691	IBM
57772	Intel
32808	Apple
37691	IBM
57222	Linux
59836	Dell
77740	HP

Primary Key = TagNumber

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

Primary Key = PackageID & TagNumber

8)　　Package ID → PackageName
　　　TagNumber → ComputerModel
　　　PackageID + TagNumber → InstallDate, SoftwareCostUSD

9) They are in 3rd NF because there are no transitive dependencies. All the columns other than the primary key depend on the primary key, and nothing but the primary key.

10)

Package Table	
PK, FK	PackageID PackageName

Install Table	
PK, FK PK, FK	PackageID TagNumber InstallDate SoftwareCostUSD

Computer Table	
PK, FK	TagNumber ComputerModel