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Part One

This is a great and informative table Mr. Meservy but there is room for improvement. I will implement them now (because the check cleared).

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

The primary key would be (PackageID, TagNumber).

Part Two

PackageID	PackageName	TagNumber	Model	InstallDate	SoftwareCostUSD
AC01	Arrow	32808	HP	09-13-2005	754.95
DB32	Zork	32808	HP	12-03-2005	380.00
DB32	Zork	37691	Dell	06-15-2005	380.00
DB33	Portal	57772	Apple	05-27-2005	412.77
WP08	Word	32808	HP	01-12-2006	185.00
WP08	Word	37691	Dell	06-15-2005	227.50
WP08	Word	57222	IBM	05-27-2005	170.24
WP09	Excel	59836	Asus	10-30-2005	35.00
WP09	Excel	77740	Msi	05-27-2005	35.00

Functional Dependencies:

TagNumber → Model

PackageID → PackageName

(PackageID, TagNumber) → InstallDate

(PackageID, TagNumber) → SoftwareCostUSD

This table is not in third normal form for a few reasons. There is room for anomalies in this table. We cannot insert new software or a new computer unless we have an install date and cost as well. If we were to delete the row (WP09, 57222, 05-27-2005) we would lose IBM completely. Also PackageName and Model do not need to be in this table.

Part Three

Software

PackageID	PackageName
AC01	Arrow
DB32	Zork
DB33	Portal
WP08	Word
WP09	Excel

Primary Key would be PackageID.

Functional Dependencies:

PackageID → PackageName

Computers

TagNumber	Model
32808	HP
37691	Dell
57772	Apple
57222	IBM
59836	Asus
77740	MSi

Primary Key would be TagNumber.

Functional Dependencies:

TagNumber → Model

Installations

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 would be (PackageID, TagNumber). Foreign Keys would be PackageID and TagNumber.

Functional Dependencies:

(PackageID, TagNumber) → InstallDate

(PackageID, TagNumber) → SoftwareCostUSD

These tables are in 3NF because they are free of all anomalies. You can delete rows from Installations without fear of losing a package or computer forever.

E/R Diagram

