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Normalization hw 1

1 I think what they have currently keeps track of all of the information they need, but it is not an efficient way to store data especially when you want to reference something quickly

2 Software

PackageID	TagNumber	SoftwareCostUSD	Installdate
AC01	32808	754.95	9/13/2005
DB32	32808	380	12/3/2005
DB32	37691	380	6/15/2005
DB33	57772	412.77	5/27/2005
WP08	32808	185	1/12/2006
WP08	37691	227.5	6/15/2005
WP08	57222	170.24	5/27/2005
WP09	59836	35	10/30/2005
WP09	77740	35	5/27/2005

3 The primary key is the combination between packageID and Tag Number

PackageID	PackageName	TagNumber	ComputerModel	SoftwareCostUSD	Installdate
AC01	Windows 7	32808	Microsoft	754.95	9/13/2005
DB32	Steam	32808	Microsoft	380	12/3/2005
DB32	Steam	37691	HP	380	6/15/2005
DB33	Itunes	57772	Dell	412.77	5/27/2005
WP08	Office	32808	Microsoft	185	1/12/2006
WP08	Office	37691	HP	227.5	6/15/2005
WP08	Office	57222	Toshiba	170.24	5/27/2005
WP09	OSX	59836	AlienWare	35	10/30/2005
WP09	OSX	77740	Asus	35	5/27/2005

	Is dependant on
PackageName	PackageID
SoftwareCostUSD	PackageID/Install Date
Computer Model	Tagnumber

3 This table is not in 3rd normal form because not all of the non-key attributes in the table are fully dependant of the primary keys. For example, SoftwarecostUSD does not depend on the package name or the tag of the computer

Packages

PackageID	PackageName
AC01	Windows 7
DB32	Steam
DB33	Itunes
WP08	Office
WP09	OSX

Computers

ComputerTag#	Computer Model
32808	Microsoft
32808	HP
37691	Asus
57772	Toshiba
32808	Dell
37691	Asus
57222	Asus
59836	Apple
77740	Apple

Installs

PackageID	InstallDate	SoftwareCostUSD
AC01	9/13/2005	754.95
DB32	12/3/2005	380
DB32	6/15/2005	380
DB33	5/27/2005	412.77
WP08	1/12/2006	185
WP08	6/15/2005	227.5
WP08	5/27/2005	170.24
WP09	10/30/2005	35
WP09	5/27/2005	35

Primary Key:PackageID

	Depends on:
Package Name	PackageID

Primary Key: ComputerTag#

	Depends on:
Computer Model	ComputerTag#

Primary Key: PackageID, Installdate

	Depends on:
SoftwareCost	PackageID,InstallDate

These tables are in 3rd normal form because all of the non-key attributes are fully dependant on the primary key(s)

ER Diagram

Packages

PackageID	PackageName
AC01	Windows 7
DB32	Steam
DB33	Itunes
WP08	Office
WP09	OSX

Installs

PackageID	InstallDate	SoftwareCostUSD
AC01	9/13/2005	754.95
DB32	12/3/2005	380
DB32	6/15/2005	380
DB33	5/27/2005	412.77
WP08	1/12/2006	185
WP08	6/15/2005	227.5
WP08	5/27/2005	170.24
WP09	10/30/2005	35
WP09	5/27/2005	35

Computers

ComputerTag#	Computer Model
32808	Microsoft
32808	HP
37691	Asus
57772	Toshiba
32808	Dell
37691	Asus
57222	Asus
59836	Apple
77740	Apple