

CMPT 308

Professor Labouseur

Part One:

1. I would reply that the information in the spreadsheet is relevant and helpful but needs to be organized and separated before a database can be designed for it.

PackageID	TagNumber	Install Date	SoftwareCostUSD
AC01	32808	9/13/2005	754.95
DB32	32808	12/3/2005	380
DB32	37691	6/15/2005	380
DB33	57772	5/27/2005	412.77
WP08	32808	1/12/2006	185
WP08	37691	6/15/2005	227.5

Part Two:

3. (PackageID, TagNumber)
- 4.

PackageID	PackageName	ComputerModel	TagNumber	InstallDate	SoftwareCostUSD
AC01	Zork	IBM	32808	9/13/2005	754.95
DB32	Portal	Asus	32808	12/3/2005	380
DB32	Portal	Asus	37691	6/15/2005	380
DB33	Haskell	Lenovo	57772	5/27/2005	412.77
WP08	Call of Duty	Apple	32808	1/12/2006	185
WP08	Call of Duty	Apple	37691	6/15/2005	227.5
WP08	Call of Duty	Apple	57222	5/27/2005	170.24
WP09	Java	Acer	59836	10/30/2005	35
WP09	Java	Acer	77740	5/27/2005	35

5. (PackageID, TagNumber) \rightarrow PackageName, ComputerModel, InstallDate, SoftwareCostUSD

PackageID \rightarrow PackageName

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6. The table is not in third normal form because it is not in second normal form (it contains partial key dependencies)

Part Three:

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

PackageID	PackageName
AC01	Zork
DB32	Portal
DB33	Haskell
WP08	Call of Duty
WP09	Java

7. Top table primary key: (PackageID, TagNumber)

Bottom table primary key: PackageID

8. Top table functional dependencies: (PackageID, TagNumber) \rightarrow ComputerModel, InstallDate, SoftwareCostUSD

Bottom table functional dependencies: PackageID \rightarrow PackageName

9. Because the tables are in 2NF and only have the primary key as a candidate key.

10.

