

Raymond Mattingly

Professor Alan Labouseur

Database Management

1 November 2016

1. The format in which he has the table set up leaves rows without PackageIDs (to be filled in through assumption), which is an opening for data misinterpretation.

Related to this, the data is not in 1NF, and consequently not in 2NF or 3NF.

- 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

Raymond Mattingly

Professor Alan Labouseur

Database Management

1 November 2016

3. The primary key is the combination of PackageID and TagNumber which creates a unique identifier.

4.

PackageID	TagNumber	InstallDate	SoftwareCostUSD	SoftwareName	ComputerModel
AC01	32808	09-13-2005	754.95	Word	Asus
DB32	32808	12-03-2005	380.00	Excel	Asus
DB32	37691	06-15-2005	380.00	Excel	Dell
DB33	57772	05-27-2005	412.77	Powerpoint	HP
WP08	32808	01-12-2006	185.00	Outlook	Asus
WP08	37691	06-15-2005	227.50	Outlook	Dell

Raymond Mattingly

Professor Alan Labouseur

Database Management

1 November 2016

WP08	57222	05-27-200 5	170.24	Outlook	Toshiba
WP09	59836	10-30-200 5	35.00	Firefox	Acer
WP09	77740	05-27-200 5	35.00	Firefox	Lenovo

5. SoftwareName is dependent on PackageID. ComputerModel is dependent on TagNumber. InstallDate and SoftwareCostUSD are dependent on the combination of PackageID and TagNumber.
6. This data has partial key dependencies, which indicates that it is not 2NF. By not being in 2NF, it is consequently not in 3NF.

Raymond Mattingly

Professor Alan Labouseur

Database Management

1 November 2016

TagNumber	ComputerModel
32808	Asus
37691	Dell
57772	HP
57222	Toshiba
59836	Acer
77740	Lenovo

Raymond Mattingly

Professor Alan Labouseur

Database Management

1 November 2016

PackageID	PackageName
AC01	Word
DB32	Excel
DB33	Powerpoint
WP08	Outlook
WP09	Firefox

PackageID	TagNumber	SoftwareCostUSD	InstallDate
AC01	32808	754.95	09-13-2005
DB32	32808	380.00	12-03-2005
DB32	37691	380.00	06-15-2005
DB33	57772	412.77	05-27-2005
WP08	32808	185.00	01-12-2006
WP08	37691	227.50	06-15-2005
WP08	57222	170.24	05-27-2007
WP09	59836	35.00	13-30-2005
WP09	77740	35.00	05-27-2005

7. The primary keys for tables are TagNumber, PackageID, and the combination of TagNumber and PackageID, respectively.
8. The first table has a functional dependency from ComputerModel on TagNumber. The second table has a functional dependency from PackageName on PackageID. The third table has a functional dependency from SoftwareCostUSD

Raymond Mattingly

Professor Alan Labouseur

Database Management

1 November 2016

on the combination of PackageID and TagNumber. It also has a functional dependency from InstallDate on said combination.

9. These tables are all 3NF because they are 1NF, 2NF, and 3NF. They only have functional dependencies on the primary keys, all partial key dependencies have been eliminated.

Raymond Mattingly

Professor Alan Labouseur

Database Management

1 November 2016

10.

