

Lab 7

1a. Mr. Johnson, the spreadsheet you've created is good, but it may cause a few problems down the road. I will help reorganize your data so you will be able to add future listings without having database issues. I will also organize your data in a clearer format, making it easier to read.

1b

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	59536	10-30-2005	35.00
WP09	77740	05-27-2005	35.00

1c. The primary key for this 1nf table would be {PackageID, TagNumber}

2a

PackageID	TagNumber	InstallDate	SoftwareCostUSD	Software Package	Model
AC01	32808	09-13-2005	754.95	Zork	IBM
DB32	32808	12-03-2005	380.00	Portal	Apple
DB32	37691	06-15-2005	380.00	Zork	IBM
DB33	57772	05-27-2005	412.77	Zork	IBM
WP08	32808	01-12-2006	185.00	Portal	Apple
WP08	37691	06-15-2005	227.50	Portal	Apple
WP08	57222	05-27-2005	170.24	Zork	IBM
WP09	59536	10-30-2005	35.00	Portal	Apple
WP09	77740	05-27-2005	35.00	Zork	IBM

2b. The functional dependencies consist of:

{PackageID, TagNumber} -> {InstallDate}
{PackageID, TagNumber} -> {SoftwareCostUSD}
{PackageID, TagNumber} -> {Software Package}
{PackageID, TagNumber} -> {Model}

2c. This table is not in third normal form because it is not in 2NF and it has a transitive dependency.

3a.

Packages

PackageID	TagNumber	InstallDate
AC01	32808	09-13-2005
DB32	32808	12-03-2005
DB32	37691	06-15-2005
DB33	57772	05-27-2005
WP08	32808	01-12-2006
WP08	37691	06-15-2005
WP08	57222	05-27-2005
WP09	59536	10-30-2005
WP09	77740	05-27-2005

Software

Package ID	TagNumber	Software Package	Model	SoftwareCostUSD
AC01	32808	Zork	IBM	754.95
DB32	32808	Portal	Apple	380.00
DB32	37691	Zork	IBM	380.00
DB33	57772	Zork	IBM	412.77
WP08	37808	Portal	Apple	185.00
WP08	37691	Portal	Apple	227.50
WP08	57222	Zork	IBM	170.24
WP09	59536	Portal	Apple	35.00
WP09	77740	Zork	IBM	35.00

3b.

TABLE 1

{PackageID, TagNumber} -> Install Date

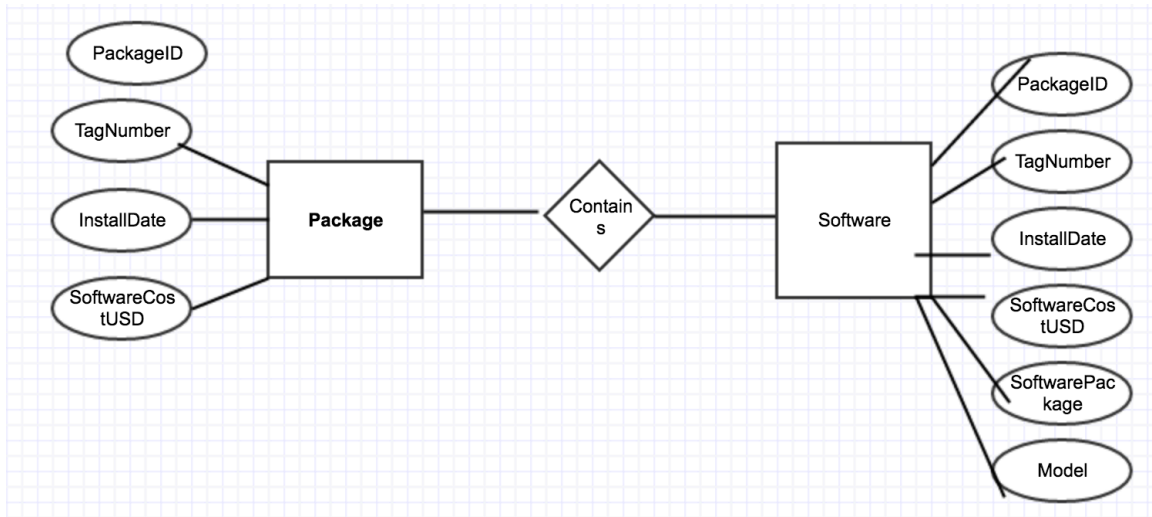
TABLE 2

PackageID, TagNumber} -> Software Package

PackageID, TagNumber} ->Model

PackageID, TagNumber} ->SoftwareCostUSD

3c. The new tables are in third normal form because there are no repeating groups, a primary key, no partial dependencies, and no transitive dependencies.



Primary Key: {PackageID, TagNumber}
Foreign Key:{ PackageID, TagNumber}