

Part One:

1. *"I tell him that it is the worst table I have ever seen, and now please excuse me as I go wipe this bloody tear!"* It is NOT in first normal form, therefore not in second or third. There are blank spaces in the table and no primary key has been specified, and a good primary key does not even exist. He should have had better design ideas than two composite keys, PackageID and TagNumber. There is a lot of redundancy and tag number, install date, and software cost all have multiple entities.

2. We just need to fill in the cell

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

3. Both PackageID and TagNumber, the two composite keys, is the primary key.

4.

PackageID	TagNumber	InstallDate	SoftwareCostUSD	PackageName	CPUModel
AC01	32808	09-13-2005	754.95	Skywalker	Apple
DB32	32808	12-03-2005	380.00	Romulan	Apple
DB32	37691	06-15-2005	380.00	Romulan	IBM
DB33	57772	05-27-2005	412.77	Shrek	Lenovo
WP08	32808	01-12-2006	185.00	Afgoo	Apple
WP08	37691	06-15-2005	227.50	Afgoo	IBM
WP08	57222	05-27-2005	170.24	Afgoo	ASUS
WP09	59836	10-30-2005	35.00	Flo	Google
WP09	77740	05-27-2005	35.00	Flo	HP

5. TagNumber - Computer Model

PackageID and TagNumber - Install Date and SoftwareCostUSD

PackageID - PackageName

6. There are multiple key dependencies.

7. Table	Primary Key
Software	PackageID
ComputerModel	TagNumber
Installations	PackageID, TagNumber (composite keys)

8. Software: PackageID -> SoftwarePackage

ComputerModels: TagNumber -> CompModel

Installations: PackageID, TagNumber -> InstallDate

PackageID, TagNumber -> SoftwareCostUSD

9. It is in second normal form, by removing partial key dependencies and no multi key dependencies. Each non-key is dependent only on the primary key.

10.

