

1.

a) Good job with the table so far, but there are some improvements that we need to make.

b)

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	170.23
WP09	59536	10-30-2005	35.00
WP09	77740	05-27-2005	35.00

c) The primary key is a composite key of PackageID and the TagNumber.

2.

a)

PackageID	TagNumber	InstallDate	SoftwareCostUSD	SoftwarePackage	ComputerModel
AC01	32808	09-13-2005	754.95	Adobe Suite	Lenovo
DB32	32808	12-03-2005	380.00	Windows Server 2012	Lenovo
DB32	37691	06-15-2005	380.00	Windows Server 2012	Lenovo
DB33	57772	05-27-2005	412.77	Microsoft Visio	Apple
WP08	32808	01-12-2006	185.00	Microsoft Office	Asus
WP08	37691	06-15-2005	227.50	Microsoft Office	Apple
WP08	57222	05-27-2005	170.23	Microsoft Office	Asus
WP09	59536	10-30-2005	35.00	Portal	IBM
WP09	77740	05-27-2005	35.00	Zork	IBM

b) (PackageID, TagNumber) -> InstallDate, SoftwareCostUSD, SoftwarePackage, ComputerModel

c) This table is not in third normal form because the functional identity is made up of two composite keys, which violates second normal form. Since it is not in second normal form, it is not in third normal form.

3.

PackageID(PK)	SoftwarePackage
AC01	Adobe Suite
DB32	Windows Server 2012
DB33	Microsoft Visio
WP08	Microsoft Office
WP09	Portal

TagNumber(PK)	ComputerModel
37691	Lenovo
32808	Apple
57222	Asus

b)

Table 1: (PackageID) -> TagNumber, InstallDate, SoftwareCostUSD, SoftwarePackage, ComputerModel

Table2: (TagNumber) -> PackageID, InstallDate, SoftwareCostUSD, SoftwarePackage, ComputerModel

c)

It is third normal form because the tables are in second normal form, and there are no transitive dependencies.

d)

