Part 1

1. I would say this spread sheet contains valuable information. However we can work on it to make a better one since some intersections of rows and columns of the old spread sheet has more than one data. I would also like to specify the kind of currency we are working with to prevent confusion in the data we have.

2. Data in 1NF

PackageID	TagNumber	InstallDate	SoftwareCost(USD)
AC01	32808	09-13-1995	754.95
DB32	32808	12-03-1995	380.00
DB32	37691	06-15-1995	380.00
DB33	57772	05-27-1995	412.77
WP08	32808	01-12-1996	185.00
WP08	37691	06-15-1995	227.50
WP08	57222	05-27-1995	170.24
WP09	59836	10-30-1995	35.00
WP09	77740	05-27-1995	35.00

3. The composite key of PackageID and TagNumber.

Part 2

4.

PackageID	TagNumber	PackageName	ComputerModel	InstallDate	SoftwareCost(USD)
AC01	32808	Cygwin	Lenovo	09-13-1995	754.95
DB32	32808	BlueJ	Lenovo	12-03-1995	380.00
DB32	37691	BlueJ	HP	06-15-1995	380.00
DB33	57772	HamSphere3	Samsung	05-27-1995	412.77
WP08	32808	Adobe	Lenovo	01-12-1996	185.00
WP08	37691	Adobe	HP	06-15-1995	227.50
WP08	57222	Adobe	Apple	05-27-1995	170.24
WP09	59836	HamSphere3	Dell	10-30-1995	35.00
WP09	77740	HamSphere3	IBM	05-27-1995	35.00

5. a. PackageName depends on PackageID

   b. ComputerModel depends on TagNumber

   c. InstallDate depends on PackageID and TagNumber

   d. SoftwareCost(USD) depends on PackageID and Tagnumber

6. The new table is not in third normal form because some keys in different columns do not depend on the composite key, thus both PackageID and TagNumber. Example ComputerModel

depends only on TagNumber and PackageName depends only on PackageID. This, therefore violates third normal form rule because there are partial key dependencies in the table.

Part 3

7. **a. Software Table**

PackageID	PackageName
AC01	Cygwin
DB32	BlueJ
DB33	HamSphere3
WP08	Adobe
WP09	HamSphere3

Primary Key: PackageID
PackageName depends on PackageID

b. Computer Model Table

TagNumber	ComputerModel
32808	Lenovo
37691	HP
57772	Samsung
57222	Apple
59836	Dell
77740	IBM

Primary Key: TagNumber
ComputerModel depends on TagNumber

c. Installation Table

PackageID	TagNumber	InstallDate	SoftwareCost(USD)
AC01	32808	09-13-1995	754.95
DB32	32808	12-03-1995	380.00
DB32	37691	06-15-1995	380.00
DB33	57772	05-27-1995	412.77
WP08	32808	01-12-1996	185.00
WP08	37691	06-15-1995	227.50
WP08	57222	05-27-1995	170.24
WP09	59836	10-30-1995	35.00
WP09	77740	05-27-1995	35.00

Primary Key: Composite key of PackageID and TagNumber
InstallDate depends on PackageID and TagNumber
SoftwareCost(USD) depends on PackageID and TagNumber

9) The new tables are in third normal form because there are no multiple key dependencies inside the tables. Also, all elements in the individual tables are dependent on that table's primary key.

Software Table

PK : PackageID
PackageName

Installation Table

PK : PackageID
PK: TagNumber
InstallDate
SoftwareCost(USD)

Computer Model Table

PK : TagNumber
ComputerModel