Part One

1. *As he shows you the spreadsheet, having just signed your consulting agreement, he asks what you think of it. How do you reply?*
   This spreadsheet has some good iformation on it that could easily be reworked into useable and correct data for a database, but it does need to be reworked.

2. *Put his data in 1NF and display it. (Show me the table; no SQL.)*

PackageID	TagNumber	InstallDate	SoftwardCostUSD
AC01	32808	9/13/2005	754.95
DB32	32808	12/2/2005	380.00
DB32	37691	6/15/2005	380.00
DB33	57772	5/27/2005	412.77
WP08	32808	1/12/2006	185.00
WP08	37691	6/15/2005	227.50
WP08	57222	5/27/2005	170.24
WP09	59836	10/30/2005	35.00
WP09	77740	5/27/2005	35.00

3. *What is the primary key?*
   In the case of this table, the PK is a composite of PackageID and TagNumber

Part Two

4. *Display the new table.*

PackageID	TagNumber	InstallDate	SoftwareCostUSD	SoftPackName	CompModel
AC01	32808	9/13/2005	754.95	Microsoft Office Suite	Dell
DB32	32808	12/2/2005	380.00	Microsoft 365 - Student	Dell
DB32	37691	6/15/2005	380.00	Microsoft 365 - Student	Dell
DB33	57772	5/27/2005	412.77	Unity	Lenovo
WP08	32808	1/12/2006	185.00	iTunes	Lenovo
WP08	37691	6/15/2005	227.50	Steam	Acer
WP08	57222	5/27/2005	170.24	Unity	Acer
WP09	59836	10/30/2005	35.00	iTunes	Macintosh
WP09	77740	5/27/2005	35.00	iTunes	Macintosh

5. *Identify and document all functional dependencies*
   PackageID -> SoftPackname
   TagNumber -> CompModel
   PackageID,TagNumber, -> SoftwareCostUSD, InstallDate

6. *Explain why this new table is not in third normal form.*
   This new table is not in third normal form, as the fact that aspects of the table are dependent of each other, and can have the same information dependent on multiple keys

(Both SoftPackName and SoftwareCostUSD are dependent on PackageID and CompModel and SoftwareCostUSD are dependent on TagNumber)

Part Three

7. Packages Table Primary Key - > PackageID,TagNumber
   Software Table Primary Key - > PackageID
   Computers Table Primary Key - > TagNumber
8.
   Packages Table
   PackageID, TagNumber -> InstallDate, SoftwareCostUSD

   Software Table
   PackageID -> SoftwareID

   Computers Table
   TagNumber - > CompModel
9. This group of table is in third normal form because it limits the replication of data
10.

PackageID	SoftPackName
AC01	Microsoft Office Suite
DB32	Microsoft 365 - Student
DB33	Microsoft 365 - Commercial
WP08	iTunes
WP09	Unity

TagNumber	CompModel
32808	Dell
37691	Lenovo
57222	Acer
59836	Apple
77740	MSI

PackageID	TagNumber	InstallDate	SoftwareCostUSD
AC01	32808	38608	754.95
DB32	32808	38688	380
DB32	37691	38518	380
DB33	57772	38499	412.77
WP08	32808	38729	185
WP08	37691	38518	227.5
WP08	57222	38499	170.24
WP09	59836	38655	35
WP09	77740	38499	35