

Part 1-

1. I would reply saying that this is a good start for collecting data, but it does not satisfy the 3 normal form rules that are necessary for a quality database. Now that you hired me, I will help make this database satisfy them.

2.

1NF			
Package ID	Tag Number	Install Date	SoftwareCostUSD
AC01	32808	9/13/05	754.95
DB32	32808	12/3/05	380.00
DB32	37691	6/15/05	380.00
DB33	57772	5/27/05	412.77
WP08	32808	1/12/06	185.00
WP08	37691	6/15/05	227.50
WP08	57222	5/27/05	170.24
WP09	59836	10/30/05	35.00
WP09	77740	5/27/05	35.00

3. The primary key in this table is a composite key consisting of Package ID and Tag Number. These are the two that must be used in order to stay consistent with their business model.

Part 2-

1.

Package ID	Tag Number	Install Date	SoftwareCostUSD	Package Name	Computer Model
AC01	32808	9/13/05	754.95	Package 1	Lenovo
DB32	32808	12/3/05	380.00	Package 2	Lenovo
DB32	37691	6/15/05	380.00	Package 2	Mac
DB33	57772	5/27/05	412.77	Package 3	IBM
WP08	32808	1/12/06	185.00	Package 4	HP
WP08	37691	6/15/05	227.50	Package 4	Mac
WP08	57222	5/27/05	170.24	Package 4	Acer
WP09	59836	10/30/05	35.00	Package 5	Toshiba
WP09	77740	5/27/05	35.00	Package 5	Samsung

2. Functional Dependencies
 - a. Package ID determines Package Name
 - b. Tag Number determines computer model
 - c. Package name and tag number together determine installation date and Cost
3. This table is not in third normal form because it is not in second normal form

Part 3-

1. Primary Keys
 - a. The primary key for the software table is Package ID
 - b. The primary key for the hardware table is Tag Number
 - c. The primary key for the Inventory table is a composite key of Package ID and Tag Number.
2. Table relationships
 - a. Software table has a one to many relationship with inventory
 - b. Hardware has a one to many relationship with inventory
3. The tables are in third normal form because they are in second normal form and all the attributes in a table are determined by only the candidate key of that table and not by any non-prime attributes.
4. Entity Relationship Diagram

