

Part One

1. I would ask him, "Wouldn't you rather be a city planner than a CEO?" Then I would say the data organization needs to be changed a bit if its going in a database.

2.

| PackID | TagNum | InstallDate | SoftwareCost |
|--------|--------|-------------|--------------|
| AC01 | 32808 | 09-14-1995 | 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 | 57772 | 05-27-1995 | 170.24 |
| WP09 | 59836 | 10-30-1995 | 35.00 |
| WP09 | 77740 | 05-27-1995 | 35.00 |

3. The primary key would be the PackID and TagNum if the software is never reinstalled. If the software can be reinstalled it would be the PackID, TagNum, and InstallDate.

Part Two

4.

| PackID | TagNum | InstallDate | SoftwareCost | SoftwareName | ComputerModel |
|--------|--------|-------------|--------------|--------------|---------------|
| AC01 | 32808 | 09-14-1995 | 754.95 | Virus | Apple |
| DB32 | 32808 | 12-03-1995 | 380.00 | Great | Apple |
| DB32 | 37691 | 06-15-1995 | 380.00 | Great | Dell |
| DB33 | 57772 | 05-27-1995 | 412.77 | SoMI | Windows |
| WP08 | 32808 | 01-12-1996 | 185.00 | Boop | Apple |
| WP08 | 37691 | 06-15-1995 | 227.50 | Boop | Linux |
| WP08 | 57772 | 05-27-1995 | 170.24 | Boop | Windows |
| WP09 | 59836 | 10-30-1995 | 35.00 | Beep | Linux |
| WP09 | 77740 | 05-27-1995 | 35.00 | Beep | Dell |

5. SoftwareName is dependent on PackID
ComputerModel is dependent on TagNum
6. The table is not in third normal form because all the attributes in a table are not dependent on the primary key and only the primary key.

Part 3

Computer Systems

| ComputerModelID | ComputerModel |
|-----------------|---------------|
| Sys1 | Apple |
| Sys2 | Dell |
| Sys3 | Windows |
| Sys4 | Linux |

Software Packs

| PackID | SoftwareName |
|--------|--------------|
| AC01 | Virus |
| DB32 | Great |
| DB33 | SoMI |
| WP08 | Boop |
| WP09 | Beep |

Software Installs

| InstallID | PackID | TagNum | InstallDate | SoftwareCost |
|-----------|--------|--------|-------------|--------------|
| 1 | AC01 | 32808 | 09-14-1995 | 754.95 |
| 2 | DB32 | 32808 | 12-03-1995 | 380.00 |
| 3 | DB32 | 37691 | 06-15-1995 | 380.00 |
| 4 | DB33 | 57772 | 05-27-1995 | 412.77 |
| 5 | WP08 | 32808 | 01-12-1996 | 185.00 |
| 6 | WP08 | 37691 | 06-15-1995 | 227.50 |
| 7 | WP08 | 57772 | 05-27-1995 | 170.24 |
| 8 | WP09 | 59836 | 10-30-1995 | 35.00 |
| 9 | WP09 | 77740 | 05-27-1995 | 35.00 |

7. The primary key for Computer Systems is ComputerModelID. The primary key for Software Packs is PackID. The primary key for Software Installs is InstallID.
8. SoftwareName is dependent on PackID
ComputerModel is dependent on TagNum
InstallDate, PackID, TagNum, and SoftwareCost are dependent on InstallID
9. The new tables are in third normal form because all the attributes in a table are dependent on the primary key and only the primary key.
- 10.

