Jesse Opitz
Lab 7: Normalization One

Part One

1. I would reply by giving some encouragement saying they collected some very useful data (to get some brownie points) and then proceed to tell them the data needs to be made into a table, in order, to be analyzed as information.

2.

| 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 | 170.24 |
| WP09 | 59836 | 10-30-2005 | 35.00 |
| WP09 | 77740 | 05-27-2005 | 35.00 |

3. The primary key is the composition of PackageID and TagNumber

Part Two

4.

| PackageID | TagNumber | InstallDate | SoftwareCostUSD | PackageName | Model |
|---|---|---|---|---|---|
| AC01 | 32808 | 09-13-2005 | 754.95 | Portal | Lenovo |
| DB32 | 32808 | 12-03-2005 | 380.00 | Word | Apple |
| DB32 | 37691 | 06-15-2005 | 380.00 | Word | Apple |
| DB33 | 57772 | 05-27-2005 | 412.77 | Powerpoint | Dell |
| WP08 | 32808 | 01-12-2006 | 185.00 | Chrome | HP |
| WP08 | 37691 | 06-15-2005 | 227.50 | Chrome | HP |
| WP08 | 57222 | 05-27-2005 | 170.24 | Chrome | HP |
| WP09 | 59836 | 10-30-2005 | 35.00 | CS:GO | ASUS |
| WP09 | 77740 | 05-27-2005 | 35.00 | CS:GO | ASUS |

5. Functional Dependencies:
(PackageID, TagNumber) → InstallDate, SoftwareCostUSD, PackageName, Model

6. This table is not in third normal form because PackageName is only dependent on PackageID and Model is only dependent on TagNumber.

Part Three

Primary Key is in bold

| Software | |
|---|---|
| **PackageID** | PackageName |

| Deploy | | | |
|---|---|---|---|
| **PackageID** | **TagNumber** | InstallDate | SoftwareCostUSD |

| Hardware | |
|---|---|
| **TagNumber** | Model |

8.
**Functional Dependencies:**
PackageID → PackageName
TagNumber → Model
(PackageID, TagNumber) → InstallDate, SoftwareCostUSD

9. The new tables are in third normal form because the primary key is the only candidate key for each table and they are in second normal form.

10.