Tyler Cavera
Lab 7

1. "It's a good starting point, but improvements can be made."

2. Below is the data in 1NF:

OrderID	PackID	TagNum	InstallDate	SoftwareCost
01	AC01	32808	09-13-1995	754.95
02	DB32	32808	12-03-1995	380.00
03	DB32	37691	06-15-1995	380.00
04	DB33	57772	05-27-1995	412.77
05	WP08	32808	01-12-1996	185.00
06	WP08	37691	06-15-1995	227.50
07	WP08	57222	05-27-1995	170.24
08	WP09	69836	10-30-1995	35.00
09	WP09	77740	05-27-1995	35.00

3. The primary key is OrderID.

4. Below is the new table:

PackName	PackID	CompModel	TagNum	InstallDate	SoftwareCost
Minecraft	AC01	Lenovo	32808	09-13-1995	754.95
Doom	DB32	Lenovo	32808	12-03-1995	380.00
Doom	DB32	DELL	37691	06-15-1995	380.00
Doom 2	DB33	ASUS	57772	05-27-1995	412.77
Portal	WP08	Lenovo	32808	01-12-1996	185.00
Portal	WP08	DELL	37691	06-15-1995	227.50
Portal	WP08	Apple	57222	05-27-1995	170.24
Portal 2	WP09	Sony	59836	10-30-1995	35.00
Portal 2	WP09	SAMSUNG	77740	05-27-1995	35.00

5. PackID is functionally dependent on PackName. CompModel is functionally dependent on PackID and PackName. TagNum is functionally dependent on CompModel, PackID, and PackName.

6. This table is not in 3NF because there are transitive, or multiple functional dependencies.

7. Below are the 3NF tables:

OrderID	SoftwareCost
001	754.95
002	380.00
003	380.00
004	412.77
005	185.00
006	227.50
007	170.24
008	35.00
009	35.00

Order ID	InstallDate
1	09/13/95
2	12/03/95
3	06/15/95
4	05/27/95
5	01/12/96
6	06/15/95
7	05/27/95
8	10/30/95
9	05/27/95

OrderID	PackID	TagNum
001	AC01	32808
002	DB32	32808
003	DB32	37691
004	DB33	57772
005	WP08	32808
006	WP08	37691
007	WP08	57222
008	WP09	69836
009	WP09	77740

The primary key is OrderID for all of the tables.

8. InstallDate is functionally dependent on OrderID.

   PackID is functionally dependent on OrderID, TagNum is functionally dependent on OrderID, and SoftwareCost is functionally dependent on OrderID.

9. These new tables are in third normal form because there are no partial dependencies, no multiple dependencies, and nonkey attributes depend on primary keys.

10. Below is my beautiful E/R Diagram: