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Database Systems

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Lab #7

Part One:

1. The table not abide by 1NF. There are blank spaces in the table. No primary key is specified. It cannot be any single ID because there are multiple of the same instance in every column. There would have to be a composite key of both PackageID and TagNumber.

2.

	packageid character(4)	tagnumber character(5)	installdate text	softwarecostusd numeric(5,2)
1	AC01	32808	09-13-2005	754.95
2	DB32	32808	12-03-2005	380.00
3	DB32	37691	06-15-2005	380.00
4	DB33	57772	05-27-2005	412.77
5	WP08	32808	01-12-2006	185.00
6	WP08	37691	06-15-2005	227.50
7	WP08	57222	05-27-2005	170.24
8	WP09	59836	10-30-2005	35.00
9	WP09	77740	05-27-2005	35.00

3. Composite Key between PackageID and TagNumber

Part Two:

4.

	packageid character(4)	tagnumber character(5)	installdate text	softwarecostusd numeric(5,2)	packagename text	computermodel text
1	AC01	32808	09-13-2005	754.95	Green	IBM
2	DB32	32808	12-03-2005	380.00	Red	IBM
3	WP08	32808	01-12-2006	185.00	Blue	IBM
4	WP08	37691	06-15-2005	227.50	Blue	Apple
5	DB32	37691	06-15-2005	380.00	Red	Apple
6	DB33	57772	05-27-2005	412.77	Silver	Dell
7	WP08	57222	05-27-2005	170.24	Blue	Google
8	WP09	59836	10-30-2005	35.00	White	Alienware
9	WP09	77740	05-27-2005	35.00	White	Microsoft

5. TagNumber -> Computer Model
 PackageID and TagNumber -> InstallDate and SoftwareCostUSD
 PackageID -> PackageName

6. The new table is not in third normal form because there are multiple functional dependencies in one table.

Part Three:

7. The primary key in the first table is TagNumber, the primary key in the second table is a composite key of PackageID and TagNumber, and the primary key of the third table is PackageID.
8. The functional dependency of the first table is TagNumber -> Computer Model, the functional dependency of the second table is PackageID and TagNumber -> InstallDate and SoftwareCostUSD and the functional dependency of the third table is PackageID -> PackageName.
9. The new tables are in third normal form because they all only have one functional dependency.

10.

