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Database Systems

Lab 7: Normalization 1

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Part One:

1. I would say it sucks. It does not have all the information we are looking for. Essentially it is useless at this point.

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 TagNumber.

Part Two:

4.

PackageID	TagNumber	InstallDate	SoftwareCostUSD	PackName	CompModel
AC01	32808	09-13-2005	754.95	Zork	IBM
DB32	32808	12-03-2005	380.00	Portal	Apple
DB32	37691	06-15-2005	380.00	Office	Dell
DB33	57772	05-27-2005	412.77	Norton	Acer
WP08	32808	01-12-2006	185.00	Portal	HP
WP08	37691	06-15-2005	227.50	TurboTax	Dell
WP08	57222	05-27-2005	170.24	Photoshop	Apple
WP09	59836	10-30-2005	35.00	Spotify	Lenovo
WP09	77740	05-27-2005	35.00	Zork	Toshiba

- 5. TagNumber is dependent on CompModel and PackageID is dependent on PackName.
- 6. It is not in 2NF thus not in 3NF. They are dependent on a more than one key. Tables should only rely on one key.
- $7. \ \ \, \text{There should be three tables: Packages, Computer Models, and Software.}$

Primary Keys:

Packages: PackageID

ComputerModel: TagNumber

Software: PackageID and TagNumber

8. Packages: <u>PackageID</u>:PackName

ComputerModel: <u>TagNumber</u>: CompModel

Software: PackageID, TagNumber: InstallDate, SoftwareCostUSD

9. They are in 3NF because they are in 2NF and 1NF. 1NF has all atomic data and 2NF does not have more than one key dependency.

10.

