## Chris Maher

### Part 1:

1. It looks good Mr. Cosmo Kramer, but why are the costs for software package WP08 different for each computer tag number. If it is the same software package, shouldn't they cost the same?

# 2. 1NF

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 composite primary key is **PackageID**, **TagNumber**, **and InstallDate**. InstallDate if the program needs to be reinstalled on a computer.

### Part 2:

# 1.**1NF**

PackageID	TagNumber	InstallDate	SoftwareCostUSD	PName	CModel
AC01	32808	09-13-2005	754.95	Dog	Apple
DB32	32808	12-03-2005	380.00	Cat	Apple
DB32	37691	06-15-2005	380.00	Cat	Dell
DB33	57772	05-27-2005	412.77	Zebra	HP
WP08	32808	01-12-2006	185.00	Bison	Apple
WP08	37691	06-15-2005	227.50	Bison	Dell
WP08	57222	05-27-2005	170.24	Bison	Lenovo
WP09	59836	10-30-2005	35.00	Chicken	Apple
WP09	77740	05-27-2005	35.00	Chicken	Lenovo

2.

# TagNumber → CModel

PackageID → PName

## PackageID, TagNumber, and InstallDate→SoftwareCostUSD

3

Not all of the columns depend directly on the composite primary key. For example, PName is not dependent on TagNumber. So, It is not dependent on the key, the whole, and nothing but the key. Only dependent on part of the key, which is PackageID.

#### Part 3:

1.

## Primary Keys:

Packages: **PackageId**Computers: **TagNumber** 

Installations: Composite key of PackageID and TagNumber

2.

# TagNumber → CModel

PackageID → PName

### PackageID, TagNumber, InstallDate→SoftwareCostUSD

3.

The new tables are in third normal form because each table has only columns that are dependent on the key, the whole, and nothing but the key.

## 4. E.R Diagram:

### Packages

PackageID	PName							
AC01	Dog						Computers	
DB32	Cat					TagNumber	CModel	
DB33	Zebra					ragitamber	Olliodei	
WP08	Bison							
WP09	Chicken		Inctallati	one		32808	Apple	
			Installations				Dell	
		PackageID	TagNumber	InstallDate	Software	57772	HP	
			J		CostUSD	57222	Lenovo	
	/	AC01	32808	09-13-2005	754.95	59836	Apple	
	$\leftarrow$	DB32	32808	12-03-2005	380.00	77740	Lenovo	
		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			