

Part one:

1. I would say that it is a good start for a spreadsheet, however we can introduce normalization to the data. This would better organize the data which would increase the readability and reduce the redundancy of the data.

2.

Package ID	Tag Number	Install Date	Software Cost USD
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	01-12-2005	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 actually both the Package ID and the Tag Number, this is called a composite key. A composite key is necessary here because you cannot uniquely describe the data without both.

Part Two:

1.

Package ID	Tag Number	Install Date	Software Cost USD	Software Package Name	Computer Model
AC01	32808	09-13-2005	754.95	Zork	Apple
DB32	32808	12-03-2005	380.00	Portal	Apple
DB32	37691	06-15-2005	380.00	Portal	Lenovo
DB33	57772	05-27-2005	412.77	GTA 5	HP
WP08	32808	01-12-2005	185.00	Battlefield 4	Dell
WP08	37691	06-15-2005	227.50	Battlefield 4	Lenovo
WP08	57222	05-27-2005	170.24	Battlefield 4	Samsung
WP09	59836	10-30-2005	35.00	Fallout 3	Alienware
WP09	77740	05-27-2005	35.00	Fallout 3	Gateway

2. The functional dependencies for this information are as seen above,

Computer Model	DEPENDS	Tag Number
Software Package Name	DEPENDS	Package ID
Install Date	DEPENDS	Package ID and Tag Number
Software Cost USD	DEPENDS	Package ID, Tag Number, and Install Date

3. Since this table has a composite key as its primary key, It cannot be label as a 3NF because in a 3NF all fields need to depend on the primary key and as stated above certain fields do not need both parts of the composite key.

Third Part:

1. 4 tables are made, as seen below and primary keys/composite keys are highlighted

Tag Number	Computer Model
32808	Apple
32808	Apple
37691	Lenovo
57772	HP
32808	Dell
37691	Lenovo
57222	Samsung
59836	Alienware
77740	Gateway

Package ID	Tag Number	Install Date
AC01	32808	09-13-2005
DB32	32808	12-03-2005
DB32	37691	06-15-2005
DB33	57772	05-27-2005
WP08	32808	01-12-2005
WP08	37691	06-15-2005
WP08	57222	05-27-2005
WP09	59836	10-30-2005
WP09	77740	05-27-2005

Package ID	Tag Number	Install Date	Software Cost USD
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DB32	32808	12-03-2005	380.00
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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

Package ID	Software Package Name
AC01	Zork
DB32	Portal
DB32	Portal
DB33	GTA 5
WP08	Battlefield 4
WP08	Battlefield 4
WP08	Battlefield 4
WP09	Fallout 3
WP09	Fallout 3

2. Functional dependencies for all tables

Computer Model	DEPENDS	Tag Number
Software Package Name	DEPENDS	Package ID
Install Date	DEPENDS	Package ID and Tag Number
Software Cost USD	DEPENDS	Package ID, Tag Number, and Install Date

3. These tables count as 3NF because all the data in the 4 tables depends on the one primary or composite key for the table the data comes from.

4.

