Miles Welsh
Database Management
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Part One

1. Mr. Miles Meservey I like you because your name is Miles, and this table is a great starting place for my project, to make your business better.
2. See Table

Package ID	TagNumber	InstallDate	SoftwareCostUSD
AC01	32808	09/13/05	754.95
DB32	32808	12/03/05	380
DB32	37691	06/15/05	380
DB33	57772	05/27/05	412.77
WP08	32808	01/12/06	185
WP08	37691	06/15/05	227.5
WP08	57222	05/27/05	170.24
WP09	59836	10/30/05	35
WP09	77740	05/27/05	35

3. The Primary Key for this table is the Package ID combined with the Tag Number.

Part Two

1. See Table

Package ID	Software Name	TagNumber	Computer Model	SoftwareCostUSD	InstallDate
AC01	Super Mario Bros	32808	Dell	754.95	09/13/05
DB32	Pokemon Blue and Red	32808	Dell	380	12/03/05
DB32	Pokemon Blue and Red	37691	Acer	380	06/15/05
DB33	Tetris	57772	Apple	412.77	05/27/05
WP08	The Legend of Zelda	32808	Dell	185	01/12/06
WP08	The Legend of Zelda	37691	Acer	227.5	06/15/05
WP08	The Legend of Zelda	57222	Apple	170.24	05/27/05
WP09	WarioLand	59836	HP	35	10/30/05
WP09	WarioLand	77740	Lenovo	35	05/27/05

2. There is a functional dependency between Package ID and Software name and a functional dependency between Tag Number and Computer Model. There is also a functional dependency between Package ID/Tag Number and Software Cost USD

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

3. This is not 3NF because there are multiple key dependencies. For example it could be Package ID and Tag Number or it could be Computer Model and Software Name.

Part Three
1. The primary key for the Software table is the Package ID. The primary key for the Computer table is is the Tag Number. The primary key for the Installation table is Package ID and Tag Number
2. In the Software table there is a functional dependency between Package ID and Software name. In the computers table there is a functional dependency between the Tag Number and Model. In the installations table there is a functional dependency between Package ID/Tag Number and Software Cost USD.

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

3. These three tables are in 3NF because there are no multiple or partial key dependencies. With the Software table the Product ID is the primary key because Software names can be the same. The same for Computers because the Tag Number is unique. The installations table uses a composite key with Product ID and Tag Number, there are no partial key dependencies.
4. ER Diagram

Installations	Software
(PK,FK)Product ID (PK,FK)Tag Number Install Date Software Cost USD	(PK)Product ID Software Name

Computers
(PK)Tag Number Computer Model