**Normalization Homework**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ItemNumber** | **EquipmentType** | **AcquisitionCost** | **RepairNumber** | **RepairDate** | **RepairCost** |
| 100 | Drill Press | 3500.00 | 2000 | 5/5/2015 | 375.00 |
| 200 | Lathe | 4750.00 | 2100 | 5/7/2015 | 255.00 |
| 100 | Drill Press | 3500.00 | 2200 | 6/19/2015 | 178.00 |
| 300 | Mill | 27300.00 | 2300 | 6/19/2015 | 1875.00 |
| 100 | Drill Press | 3500.00 | 2400 | 7/5/2015 | 0.00 |
| 100 | Drill Press | 3500.00 | 2500 | 8/17/2015 | 275.00 |

Identify the primary key and all meaningful functional dependencies. Then normalize the table above.

Hint: RepairNumber appears to be unique for all rows. There are only 2 meaningful dependencies.

1. Primary key: RepairNumber
2. RepairNumber🡪(itemNumber, EquipmentType, AcqusitionCost, RepairDate, RepairCost)

itemNumber🡪(EquipmentType, AcquisitionCost)

1. Normalize the table

Repair\_item

|  |  |  |  |
| --- | --- | --- | --- |
| **RepairNumber** | **ItemNumber** | **RepairDate** | **RepairCost** |
| 2000 | 100 | 5/5/2015 | 375.00 |
| 2100 | 200 | 5/7/2015 | 255.00 |
| 2200 | 100 | 6/19/2015 | 178.00 |
| 2300 | 300 | 6/19/2015 | 1875.00 |
| 2400 | 100 | 7/5/2015 | 0.00 |
| 2500 | 100 | 8/17/2015 | 275.00 |

Item

|  |  |  |
| --- | --- | --- |
| **ItemNumber** | **EquipmentType** | **AcquisitionCost** |
| 100 | Drill Press | 3500.00 |
| 200 | Lathe | 4750.00 |
| 300 | Mill | 27300.00 |