**Mobile Accessories Retailer Shop**

Database model documentation

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# 1. Model details

**Model name:**Mobile Accessories Retailer Shop

**Version:**2.4

**Database engine:**Oracle Database

# 2. Tables

## 2.1. Table MOBILES

2.1.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| mobileID | integer | PK |  |
| mobileName | varchar2(25) |  |  |
| mobileType | varchar2(25) |  |  |
| mobileVersion | integer |  |  |
| mobileSerial | varchar2(25) |  |  |
| Accessories\_accessID | integer |  |  |
| Suppliers\_supplierID | integer |  |  |

## 2.2. Table Accessories

2.2.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| accessID | integer | PK |  |
| accessName | varchar2(25) |  |  |
| fixed | varchar2(25) |  |  |
| detachable | varchar2(25) |  |  |

## 2.3. Table Suppliers

2.3.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| supplierID | integer | PK |  |
| supplierName | varchar2(25) |  |  |
| supplierType | varchar2(25) |  |  |
| supplierLocation | varchar2(25) |  |  |
| Contract | varchar2(25) |  |  |
| Regular | varchar2(25) |  |  |

## 2.4. Table Customers

2.4.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| custID | integer | PK |  |
| custName | varchar2(25) |  |  |
| custContact | integer |  |  |
| mobileType | varchar2(25) |  |  |
| mobileSerial | varchar2(25) |  |  |
| MOBILES\_mobileID | integer |  |  |

## 2.5. Table Billing

2.5.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| billID | integer | PK |  |
| billDate | date |  |  |
| billUnits | integer |  |  |
| ratePerUnit | integer |  |  |
| subTotal | integer |  |  |
| grandTotal | integer |  |  |
| Customers\_custID | integer |  |  |

# 3. References

## 3.1. Reference Billing\_Customers

|  |  |  |
| --- | --- | --- |
| **Customers** | **0..\*** | **Billing** |
| custID | <-> | Customers\_custID |

## 3.2. Reference Customers\_MOBILES

|  |  |  |
| --- | --- | --- |
| **MOBILES** | **0..\*** | **Customers** |
| mobileID | <-> | MOBILES\_mobileID |

## 3.3. Reference MOBILES\_Accessories

|  |  |  |
| --- | --- | --- |
| **Accessories** | **0..\*** | **MOBILES** |
| accessID | <-> | Accessories\_accessID |

## 3.4. Reference MOBILES\_Suppliers

|  |  |  |
| --- | --- | --- |
| **Suppliers** | **0..\*** | **MOBILES** |
| supplierID | <-> | Suppliers\_supplierID |

# 4. Sequences

|  |  |  |
| --- | --- | --- |
| **Sequence name** | **Starts with** | **Description** |
| MOBILES\_seq | 1 |  |
| Accessories\_seq | 1 |  |
| Suppliers\_seq | 1 |  |
| Customers\_seq | 1 |  |
| Billing\_seq | 1 |  |

**Mobile Accessories Retailer Shop**

Introduction to concept: One mobile accessories retailer shop is getting established whose business objective is to render services with replacement/ add-on accessories to mobiles for increased performance. Any walk-in who comes with his/her faulty or ‘need for upgradation’ devices, perform necessary hardware or software repairs/ replacements has to takes place and return the products.

During its operations end-to-end tracking of services were monitored at each entity with respective ID.

For example: All the walk-ins are tagged with a custID, mobiles with mobileID, suppliers with supplierID, accessories with accessoriesID etc., at last every service that was taken place at the shop was chargeable and such invoices are being tracked with billID.

Redundancy was eliminated by assigning separate ID number to key attribute at each entity thus making the database normalized. In general, the problems caused due to redundancy are: Insertion anomaly, Deletion anomaly, and Updation anomaly.

**Insertion anomaly:** If an accessory detail has to be inserted whose mobile is not being decided yet then insertion will not be possible till the time mobile is decided.

**Deletion anomaly:** If the details of mobile from the table are deleted then the details of accessories will also get deleted which should not occur by common sense.   
This anomaly happens when deletion of a data record results in losing some unrelated information that was stored as part of the record that was deleted from a table.    
It is not possible to delete some information without losing some other information in the table as well.

**Updation anomaly:**

Suppose if the supplier of the accessory changes then changes will have to be all over the database which will be time-consuming and computationally costly.