## 

## 2.3. Source Design

## 

## 2.3.3 Car Sales Module

***Data Model:***

**Suppliers:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Table name** | Supplier | **Database name** | Cars Parts Suppliers |
| **Description** | This will provide information regarding supplier of cars parts | | |
| **Attributes** | Supplier\_id, supplier\_details | | |
| **Primary keys** | Supplier\_id | | |
| **Foreign keys** | - | | |

|  |  |  |  |
| --- | --- | --- | --- |
| Supplier\_id | It is the unique supplier SSN or CNIC | DECIMAL(10) | PK |
| Supplier\_details | It will tell more about supplier | CHAR(30) | - |

# Ref\_Part\_Types:

|  |  |  |  |
| --- | --- | --- | --- |
| **Table name** | Ref\_part\_types | **Database name** | Cars parts supplier |
| **Description** | This will provide information regarding parts of cars | | |
| **Attributes** | Part\_type\_code, part\_type\_description e.g Engine | | |
| **Primary keys** | Part\_type\_code | | |
| **Foreign keys** | - | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name** | **Description** | **Data type** | **Domain Constraint** |
| Part\_type\_code | It will uniquely store the part type | DECIMAL(10) | PK |
| Part\_type\_description | provides the information regarding part type. | CHAR(18) | - |

**Cars:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Table name** | Cars | **Database name** | Cars parts module |
| **Description** | This will provide information regarding cars. | | |
| **Attributes** | Cars\_id, car\_manufacturer\_code, car\_year\_of\_mafnufacture, model, other\_car\_details | | |
| **Primary keys** | Car\_id | | |
| **Foreign keys** | Car\_manufactureer\_code | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name** | **Description** | **Data type** | **Domain Constraint** |
| Car\_id | It will uniquely store cars | DECIMAL(10) | PK |
| Car\_manufacturer\_Code | Provides information of car manufacturer | DECIMAL(10) | FK |
| Car\_year\_of\_manufacture | Provides informantion of year of manufacture | CHAR(4) | - |
| Model | Information of model | CHAR(18) | - |
| Other\_car\_details | Other specific details of car | CHAR(180) | - |

**Parts:**

# 

|  |  |  |  |
| --- | --- | --- | --- |
| **Table name** | Parts | **Database name** | Cars Parts Module |
| **Description** | This will provide information regarding Parts use for that car.. | | |
| **Attributes** | Part\_id, car\_id, parent\_part\_id, part\_level\_code, part\_manufacturere\_code, part\_type\_code, supplier\_id, part\_name, weight, condition, mileage\_donor\_vehicle, othwer\_parts\_details | | |
| **Primary keys** | Part\_id | | |
| **Foreign keys** | Car\_id, parent\_part\_id, parent\_level\_code, part\_manufacturer\_code, part\_type\_code, supplier\_id | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name** | **Description** | **Data type** | **Domain Constraint** |
| Part\_id | Uniquely identifies part of car | DECIMAL(10) | PK |
| Car\_id | Id of car | DECIMAL(10) | FK |
| Parent\_part\_id | id of parent of part | DECIMAL(10) | FK |
| Part\_level\_code | Id of part level of reference | DECIMAL(10) | FK |
| Part\_manufacturer\_code | Information of part manufacturer | DECIMAL(10) | FK |
| Part\_type\_code | Information of part type | DECIMAL(10) | FK |
| Supplier\_id | Id of supplier | DECIMAL(10) | FK |
| Part\_name | Name of part | CHAR(50) | - |
| Weight | Weight of part | CHAR(50) | - |
| Condition | Current condition of part | CHAR(50) | - |
| Mileage)donor\_vehicle | Mileage of donor vehicle | CHAR(50) | - |
| Other part details | Other all details | CHAR(50) | - |

**Reference Car Manufacturers**

|  |  |  |  |
| --- | --- | --- | --- |
| **Table name** | Ref\_car\_manufacturers | **Database name** | Cars parts module |
| **Description** | This will provide information regarding car parts manufacturers | | |
| **Attributes** | Car\_manufacturer\_code, car\_manufacturer\_name | | |
| **Primary keys** | Car\_manufacture\_code | | |
| **Foreign keys** | - | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name** | **Description** | **Data type** | **Domain Constraint** |
| Car manufacturer code | It will uniquely store the car manufacturer | DECIMAL(10) | PK |
| Car manucturere name | provides the information regarding car manufacturer name e.g volvo | CHAR(20) | - |

**Ref\_Part\_Manufacturers**

|  |  |  |  |
| --- | --- | --- | --- |
| **Table name** | Ref\_part\_manufcturers | **Database name** | Cars parts module |
| **Description** | This will provide information regarding cars parts manufacturer | | |
| **Attributes** | Part\_manufacturer\_code. Part\_manufucturer\_name | | |
| **Primary keys** | Part\_manufcturere\_code | | |
| **Foreign keys** | - | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name** | **Description** | **Data type** | **Domain Constraint** |
| Part\_manufturer\_code | It will uniquely store the car part manufacturer | DECIMAL(10) | PK |
| Part\_manufcturer\_name | provides the information regarding car part manufacturer. | CHAR(50) | - |

**Ref\_part\_levels**

|  |  |  |  |
| --- | --- | --- | --- |
| **Table name** | Ref\_Part\_Levels | **Database name** | Cars parts module |
| **Description** | This will provide information regarding part levels | | |
| **Attributes** | Part\_level\_code, part\_level\_description | | |
| **Primary keys** | Part\_level\_code | | |
| **Foreign keys** | - | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name** | **Description** | **Data type** | **Domain Constraint** |
| Part\_level\_code | It will uniquely store the part level | DECIMAL(10) | PK |
| Part\_level\_description | provides the information regarding part level | CHAR(40) | - |

# Data Marts Design

## Data Mart 3 – Cars Parts Module

**Logical Model**

(STAR SCHEMA DIMENSIONS)

Part Manufacturer Dimension

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Description** | **Sample Values** |
| Part\_manufactuere\_key | It uniquely idenstifies each part manufacturer | 8876655 |
| Part\_manufacturer\_Name | Keeps manufacturer name | Sadiq Sons |

Car Manufacturer Dimension

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Description** | **Sample Values** |
| Car\_manufacturer\_id | Keeps car manufacturer’s PK | 7236776 |
| Car\_manufacturer\_name | It has car manufacturer name | Toyota |

Time Dimension

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Description** | **Sample Values** |
| Time\_key | Uniquely identifies time entity i.e PK | 767552 |
| Day\_of\_month | It keeps day number | 23 |
| Month\_id | It keeps id of the month related to that day i.e FK | 87867 |
| Day name | Stores name of day of week | Monday |
| Off day flag | Stores flag of off days of week | True |
| Half day flag | Stores flag of half day of week if existed | False |
| Month name | Stores month name | June |
| Quarter Name | Stores quarter name | 1st Quarter |
| Total no. of days in month | Stores total days of that specific month | 28 |
| Year | Stores year part of date | 2012 |
| Leap\_year\_flag | Stores leap year flag | FALSE |

Supplier Dimension

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Description** | **Sample Values** |
| Supplier\_id | Keeps specific value PK to identify each supplier | 763765 |
| Supplier\_details | Keeps details of supplier | Jalal Sons, Lahore |

Car Part Dimension

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Description** | **Sample Values** |
| Part\_id | Keeps PK of part | 77676 |
| Parent\_part\_id | Keeps PK of parent part id as FK | 76755 |
| Part\_level | Keeps level in hierarchy of that part | Component |
| Part\_manufacturer\_key | Keeps PK of part manufacturer as FK | 23223 |
| Part\_name | Name of part | Engine’s screw |
| Weight | Keeps weight in grams | 23 |
| Condition | Keeps usage condition | Used |
| Mileage Donor\_vehicle | Keeps mileage of donor vehicle | 7km/L |
| price | Keeps price of part in USD | 2.1 |
| Car id | Keeps FK of Car | 12121 |
| Part\_type | Keeps part type | Engine part |

Car Dimension

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Description** | **Sample Values** |
| Car\_id | Keeps PK of car | 656565 |
| Car\_model | Keeps model of car | Civic |
| Car year of manufacture | Keeps manufacture year | 2019 |
| Other car details | Keeps cars remaiinig details e.g price mileage | Honda Civic, 70km/L, 12000 |

# Fact Table for 3rd Module (Cars Parts Module)

Cars Parts Fact Table (BASE FACT TABLE) :

|  |  |  |
| --- | --- | --- |
| **Fact Name** | **Description** | **Default Aggregation rule** |
| Time\_key | Tell about date of part sale | One way agg |
| Supplier id | Tell about supplier who sales that part | One way agg |
| Part id | Tell about part Key | One way agg |
| Car manufacturer id | Tells about specific car manufacturer to whom car, that part will be used | One way agg |
| Car id | Keeps specific key of each car | One way agg |
| Part\_manufacturer\_key | Keeps part manufacturer key to identify them uniquely | One way agg |

Part Demand by Car Model Wise Aggregate Fact Table :

|  |  |  |
| --- | --- | --- |
| **Fact Name** | **Description** | **Default Aggregation rule** |
| Car model key | Keeps car model PK | Two way agg |
| Part\_id | Keep part’s unique PK | Two way agg |

Supplier Wise Aggregate Fact Table :

|  |  |  |
| --- | --- | --- |
| **Fact Name** | **Description** | **Default Aggregation rule** |
| Supplier\_id | It stores PK of Supplier | One way agg |
| Part\_id | It stores PK of a part | One way agg |

**Physical Model:**

### **Data Dictionary**

**Time Dimension**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Time | Model name | Cars Parts Model |
| Description | It will keep the time information. | | |
| Attributes | Time\_key, Day, off day flag, half day flag, week\_id, | | |
| Primary keys | Time\_key | | |
| Foreign keys | Week\_id | | |
| Associated Fact Tables | Car Part sales Fact Table | | |

**Week**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Week | Model name | Cars Parts Model |
| Description | It will keep the week information. | | |
| Attributes | Week\_id, month\_id | | |
| Primary keys | Week\_id | | |
| Foreign keys | Month id | | |
| Associated Fact Tables | None | | |

**Month**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Month | Model name | Cars Parts Model |
| Description | It will keep the month information. | | |
| Attributes | Month\_id, quarter id, month name | | |
| Primary keys | Month\_id | | |
| Foreign keys | Quarter id | | |
| Associated Fact Tables | None | | |

**Quarter**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Quarter | Model name | Cars Parts Model |
| Description | It will keep the quarter information. | | |
| Attributes | Quarter key, year key, quarter name | | |
| Primary keys | Quarter key | | |
| Foreign keys | Year key | | |
| Associated Fact Tables | None | | |

**Year**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Year | Model name | Cars Parts Model |
| Description | It will keep the year information. | | |
| Attributes | Year\_key, year\_description | | |
| Primary keys | Year key | | |
| Foreign keys | None | | |
| Associated Fact Tables | None | | |

**Supplier**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Supplier | Model name | Cars Parts Model |
| Description | It will keep the supplier information. | | |
| Attributes | Supplier id, supplier details | | |
| Primary keys | Supplier id | | |
| Foreign keys | none | | |
| Associated Fact Tables | Car Part sales Fact Table, Supplier Wise Agg Fact Table | | |

**Car Part**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Car Part | Model name | Cars Parts Model |
| Description | It will keep the car part information. | | |
| Attributes | Part\_id, parent\_part id, part level id, part name, weight, condition, mileage donor vehicle, price, part type | | |
| Primary keys | Part id | | |
| Foreign keys | Parent part id, part level | | |
| Associated Fact Tables | Car Part sales Fact Table, Supplier Wise Agg Fact Table, Part demand by car model wise agg fact table | | |

**Part Level**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Part Level | Model name | Cars Parts Model |
| Description | It will keep the part level information. | | |
| Attributes | Part\_level\_id, part level description | | |
| Primary keys | Part\_level\_id | | |
| Foreign keys | None | | |
| Associated Fact Tables | Car Part Sales Fact Table | | |

**Part Types**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Part Types | Model name | Cars Parts Model |
| Description | It will keep the part types information. | | |
| Attributes | Part type id, part type description | | |
| Primary keys | Part type id | | |
| Foreign keys | None | | |
| Associated Fact Tables | Car Part Sales fact Table | | |

**Part Manufacturer**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Part Manufacturer | Model name | Cars Parts Model |
| Description | It will keep the part manufacturer information. | | |
| Attributes | Part manufacturer key, part manufacturer name | | |
| Primary keys | Part manufacturer key | | |
| Foreign keys | None | | |
| Associated Fact Tables | None | | |

**Car Manufacturer**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Car Manufacturer | Model name | Cars Parts Model |
| Description | It will keep the Car Manufacturer information. | | |
| Attributes | Car manufacturer id, car manufacturer name | | |
| Primary keys | Car manufacturer id | | |
| Foreign keys | None | | |
| Associated Fact Tables | Car Part Sales fact Table | | |

**Car**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Car | Model name | Cars Parts Model |
| Description | It will keep the car information. | | |
| Attributes | Car id, price, car model key, car year of manufacture, other car details | | |
| Primary keys | Car id | | |
| Foreign keys | car model key | | |
| Associated Fact Tables | Car Part Sales Fact Table | | |

**Car Model**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension name | Car Model | Model name | Cars Parts Model |
| Description | It will keep the car model information. | | |
| Attributes | Car model key, model name, description | | |
| Primary keys | Car model key | | |
| Foreign keys | None | | |
| Associated Fact Tables | Car Part Sales fact Table, Part Demand by car model wise agg Fact Table | | |

| **Attribute(s) of " Time" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Time key | PK of time dimension | Decimal(10) | Yes | No |
| Day | Name of day | Char(10) | No | No |
| Off day flag | Flag for holiday IN WEEK | Boolean | No | No |
| Week id | Week’s PK from its table | Integer(10) | No | yes |

| **Attribute(s) of " Week" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Week id | Pk of week dimension | Decimal(10) | Yes | No |
| Month id | PK of month dimension | Decimal(10) | No | Yes |

| **Attribute(s) of " Month" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Month id | Keeps PK of month table | Decimal(10) | Yes | No |
| Month name | Month name | Char(16) | No | No |
| Quarter id | Pk of quarter dimension | Decimal(10) | No | Yes |

| **Attribute(s) of " Quarter" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Quarter key | Keeps PK of quarter dimension | Decimal(10) | Yes | No |
| Quarter name | Name of quarter | Char(20) | No | No |
| Year key | PK of year dimension | Decimal(10) | No | yes |

| **Attribute(s) of " Year" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Year key | PK of Year dimension | Decimal(10) | Yes | No |
| Year description | Year’s value e.g 2019 | Decimal(10) | No | no |

| **Attribute(s) of " Supplier" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Supplier id | PK of supplier dimension | Decimal(10) | Yes | No |
| Supplier details | Details of supplier of parts | Varchar(1000) | No | no |

| **Attribute(s) of " Car Part" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Part id | PK of PART dimension | Decimal(10) | Yes | No |
| Parent part id | FK of parent of that part | Decimal(10) | No | Yes |
| Part level id | Pk of PART LEVEL dimension | Decimal(10) | No | Yes |
| Part manufacturer key | PK of part manufacturer | Decimal(10) | No | Yes |
| Part name | Name of part | Char(30) | No | No |
| Weight | Weight of part in grams | Float | No | No |
| Condition | Consition of part | Varchar(12) | No | No |
| Mileage donor vehicle | Mileage of donor vehicle km/L | Integer | No | No |
| Price | Price in US dollars | Float | No | No |
| Part type | Category under which part falls | Char(20) | No | no |

| **Attribute(s) of " Part Level" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Part level id | PK of part level | Decimal(10) | Yes | No |
| Part level description | Description of part level | Varchar(100) | No | no |

| **Attribute(s) of "Part Type " Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Part type id | PK of part type | Decimal(10) | Yes | No |
| Part type description | Description of part type | varchar(100) | No | No |

| **Attribute(s) of " Part Manufacturer" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Part manufacturer key | PK of part manufacturer | Decimal(10) | Yes | No |
| Part manufacturer name | Name of part manufacturer | Varchar(50) | No | no |

| **Attribute(s) of " Car Manufacturer" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Car manufacturer id | PK of car manufacturer | Decimal(10) | Yes | No |
| Car manufacturer name | Name of car manufacturer | Char(50) | No | no |

| **Attribute(s) of "Car " Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Car id | PK of car dimension | Decimal(10) | Yes | No |
| Price | Price in US dollars | Float | No | No |
| Car model key | PK of car model | Decimal(10) | No | Yes |
| Car year of manufacture | Year of manufacture of car | Int | No | No |
| Other car detais | Other specific car details | Varchar(100) | No | No |

| **Attribute(s) of " Car Model" Dimension** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Car model key | PK of car model | Decimal(10) | Yes | No |
| Car model name | Name of car model | Char(20) | No | No |
| Description | Description of car model | Varchar(100) | No | no |

**Fact Tables:**

Car Part Fact Table (BASE Fact table)

|  |  |  |  |
| --- | --- | --- | --- |
| Fact Table name | Car Part Fact Table (BASE Fact table) | Model name | Car Parts Module |
| Description | It is base fact table and calculates part related facts like day wise part sales, etc | | |
| Attributes | Time key, supplier id, part id, car manufacturer id, car id, part manufacturer key  Price per unit, discount percentage, expected sales, actual sales, profit, no. of units sold, part name, supplier name, value of supplier by percentile | | |
| Primary keys | Time key, supplier id, part id, car manufacturer id, car id, part manufacturer key | | |
| Foreign keys | Time key, supplier id, part id, car manufacturer id, car id, part manufacturer key | | |
| Facts / Measures | Price per unit, discount percentage, expected sales, actual sales, profit, no. of units sold, part name, supplier name, value of supplier by percentile | | |
| Associated  Dimensions | Time, Supplier, Part, Car Manufacturer, Car , Part Manufacturer | | |

Part Demand by Car Model Wise Aggregate Fact Table

|  |  |  |  |
| --- | --- | --- | --- |
| Fact Table name | Part Demand by Car Model Wise Aggregate Fact Table | Model name | Car Parts Module |
| Description | It calculates facts by car model wise | | |
| Attributes | Car model key, part id  Expected sales, actual sales, profit, no. of units sold, model name | | |
| Primary keys | Car model key, part id | | |
| Foreign keys | Car model key, part id | | |
| Facts / Measures | Expected sales, actual sales, profit, no. of units sold, model name | | |
| Associated  Dimensions | Car Model, Part | | |

Supplier Wise Aggregate Fact Table

|  |  |  |  |
| --- | --- | --- | --- |
| Fact Table name | Supplier Wise Aggregate Fact Table | Model name | Car Parts Module |
| Description | It calculates fact supplier wise | | |
| Attributes | Supplier id, part id  Supplier name, actual sales, profit, no of units sold, model name | | |
| Primary keys | Supplier id, part id | | |
| Foreign keys | Supplier id, part id | | |
| Facts / Measures | Supplier name, actual sales, profit, no of units sold, model name | | |
| Associated  Dimensions | Supplier, Part | | |

| **Attribute(s) of "** Car Part Fact Table (BASE Fact table)**"** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Time key | PK of time dimension | Decimal(10) | Yes | Yes |
| Supplier id | PK of supplier dimension | Decimal(10) | Yes | Yes |
| Part id | PK of PART dimension | Decimal(10) | Yes | Yes |
| Car manufacturer id | PK of car manufacturer | Decimal(10) | Yes | Yes |
| Part manufacturer key | PK of part manufacturer | Decimal(10) | Yes | Yes |
| Car id | PK of CAR dimension | Decimal(10) | Yes | Yes |
| Price per unit | Price of part in US dollars | Float | No | No |
| Discount percentage | Discount on part sales | Float | No | No |
| Expected sales | Sales value expected on grain level of attributes | Float | No | No |
| Actual sales | Actual sales value | Float | No | No |
| Profit | Profit made | Float | No | No |
| No. of units sold | Total units sold on grain level of attrubutes | Integer | No | No |
| Part name | Part name | Char(30) | No | No |
| Supplier name | Supplier of part’s name | Char(30) | No | No |
| Value of supplier by percentile | Rank of supplier among all suppliers based on mathematical percentile | Integer | No | no |

| **Attribute(s) of "** Part Demand by Car Model Wise Aggregate Fact Table**"** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Car model key | PK of car model dimenaion | Decimal(10) | Yes | Yes |
| Part id | PK of part dimension | Decimal(10) | Yes | Yes |
| Expected sales | Sales expected by DW in US dollars | float | No | No |
| Actual sales | Actual sales of parts in US dollars | float | No | No |
| Profit | Profit made in US dollars | Float | No | No |
| No. of units sold | Total units sold | Integer | No | No |
| Model name | Model name of part | Char(30) | No | no |

| **Attribute(s) of "** Supplier Wise Aggregate Fact Table**"** | | | | |
| --- | --- | --- | --- | --- |
| ***Name*** | **Description** | ***Data Type*** | **(Domain Constraints )Is PK** | **Is FK** |
| Supplier id | PK of supplier | Decimal(10) | Yes | Yes |
| Part id | PK of part dimension | Decimal(10) | Yes | yes |
| Supplier name | Name of part supplier | Char(30) | No | no |
| Actual sales | Actual sales of parts in US dollars | float | No | No |
| Profit | Profit made in US dollars | Float | No | No |
| No. of units sold | Total units sold | Integer | No | No |
| Model name | Model name of part | Char(30) | No | no |

**##########################################################**