

```
CREATE TABLE BUSINESS
(
  ID INT,
  PHONE INT,
  SHIPPING_ADDRESS VARCHAR2(200),
  WEB_ADDRESS VARCHAR2(200),
  ADDRESS VARCHAR2(200),
  CONTACT_INFO VARCHAR2(200),
  PRIMARY KEY(ID)
);
```

```
CREATE TABLE CUSTOMER
(
  ID INT,
  PRIMARY KEY(ID),
  FOREIGN KEY(ID) REFERENCES BUSINESS(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE MANUFACTURER
(
  ID INT,
  PRIMARY KEY(ID),
  FOREIGN KEY(ID) REFERENCES BUSINESS(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE SUPPLIER
(
  ID INT,
  PRIMARY KEY(ID),
  FOREIGN KEY(ID) REFERENCES BUSINESS(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE SHIPPER
(
  ID INT,
  PRIMARY KEY(ID),
  FOREIGN KEY(ID) REFERENCES BUSINESS(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE ITEM
```

```
(  
  ID INT,  
  WEIGHT NUMBER,  
  PRIMARY KEY(ID)  
);
```

```
CREATE TABLE MATERIAL
```

```
(  
  ID INT,  
  WEIGHT NUMBER,  
  NAME VARCHAR2(30),  
  PRIMARY KEY(ID),  
  FOREIGN KEY(ID) REFERENCES ITEM(ID) ON DELETE CASCADE  
);
```

```
CREATE TABLE PRODUCT
```

```
(  
  ID INT,  
  WEIGHT NUMBER,  
  NAME VARCHAR2(30),  
  PRIMARY KEY(ID),  
  FOREIGN KEY(ID) REFERENCES ITEM(ID) ON DELETE CASCADE  
);
```

```
CREATE TABLE PRODUCT_REQUIRES
```

```
(  
  PRODUCT_ID INT,  
  MATERIAL_ID INT,  
  QUANTITY NUMBER,  
  PRIMARY KEY(PRODUCT_ID,MATERIAL_ID),  
  FOREIGN KEY(PRODUCT_ID) REFERENCES PRODUCT(ID),  
  FOREIGN KEY(MATERIAL_ID) REFERENCES MATERIAL(ID)  
);
```

```
CREATE TABLE MANUFACTURER_PRODUCES
(
MANUFACTURER_ID INT,
PRODUCT_ID INT,
SETUP_COST NUMBER,
PRODUCT_COST_PER_UNIT NUMBER,
PRIMARY KEY(MANUFACTURER_ID,PRODUCT_ID),
FOREIGN KEY(MANUFACTURER_ID) REFERENCES MANUFACTURER(ID),
FOREIGN KEY(PRODUCT_ID) REFERENCES PRODUCT(ID)
);
```

```
CREATE TABLE DEMAND
(
CUSTOMER_ID INT,
ITEM_ID INT,
QUANTITY NUMBER,
PRIMARY KEY(CUSTOMER_ID,ITEM_ID),
FOREIGN KEY(CUSTOMER_ID) REFERENCES CUSTOMER(ID),
FOREIGN KEY(ITEM_ID) REFERENCES ITEM(ID)
);
```

```
CREATE TABLE SUPPLY_CUSTOMER
(
SUPPLIER_ID INT,
CUSTOMER_ID INT,
MATERIAL_ID INT,
PRICE_PER_UNIT NUMBER,
PRIMARY KEY(SUPPLIER_ID,MATERIAL_ID,CUSTOMER_ID),
FOREIGN KEY(SUPPLIER_ID) REFERENCES SUPPLIER(ID),
FOREIGN KEY(CUSTOMER_ID) REFERENCES CUSTOMER(ID),
FOREIGN KEY(MATERIAL_ID) REFERENCES MATERIAL(ID)
);
```

```
CREATE TABLE SUPPLY_MANUFACTURER
(
  SUPPLIER_ID INT,
  MANUFACTURER_ID INT,
  MATERIAL_ID INT,
  PRICE_PER_UNIT NUMBER,
  PRIMARY KEY (SUPPLIER_ID,MANUFACTURER_ID,MATERIAL_ID),
  FOREIGN KEY(SUPPLIER_ID) REFERENCES SUPPLIER(ID),
  FOREIGN KEY(MANUFACTURER_ID) REFERENCES MANUFACTURER(ID),
  FOREIGN KEY(MATERIAL_ID) REFERENCES MATERIAL(ID)
);
```

```
CREATE TABLE MANUFACTURER_SELLS
(
  MANUFACTURER_ID INT,
  CUSTOMER_ID INT,
  PRIMARY KEY(MANUFACTURER_ID,CUSTOMER_ID),
  FOREIGN KEY(MANUFACTURER_ID) REFERENCES MANUFACTURER(ID),
  FOREIGN KEY(CUSTOMER_ID) REFERENCES CUSTOMER(ID)
);
```

```
CREATE TABLE SHIPPING_SERVICE
(
  SHIPPER_ID INT,
  SOURCE_ID INT,
  DESTINATION_ID INT,
  SOURCE_ADDRESS VARCHAR2(200),
  DEST_ADDRESS VARCHAR2(200),
  PRICE NUMBER,
  PRIMARY KEY(SHIPPER_ID,SOURCE_ID,DESTINATION_ID),
  FOREIGN KEY(SHIPPER_ID) REFERENCES SHIPPER(ID) ON DELETE CASCADE,
  FOREIGN KEY(SOURCE_ID) REFERENCES BUSINESS(ID) ON DELETE CASCADE,
  FOREIGN KEY(DESTINATION_ID) REFERENCES BUSINESS(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE SUPPLIER_DISCOUNT
(
  SUPPLIER_ID INT,
  DISCOUNT NUMBER,
  PRICE_BOUND NUMBER,
  PRIMARY KEY(SUPPLIER_ID),
  FOREIGN KEY(SUPPLIER_ID) REFERENCES SUPPLIER(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE MANUFACTURER_DISCOUNT
(
  MANUFACTURER_ID INT,
  DISCOUNT NUMBER,
  PRICE_BOUND NUMBER,
  PRIMARY KEY(MANUFACTURER_ID),
  FOREIGN KEY(MANUFACTURER_ID) REFERENCES MANUFACTURER(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE SHIPPING_DISCOUNT
(
  SHIPPER_ID INT,
  DISCOUNT NUMBER,
  PRICE_BOUND NUMBER,
  PRIMARY KEY(SHIPPER_ID),
  FOREIGN KEY(SHIPPER_ID) REFERENCES SHIPPER(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE SUPPLY_ORDER
(
  ORDER_ID INT,
  SUPPLIER_ID INT,
  MATERIAL_ID INT,
  QUANTITY NUMBER,
  PRIMARY KEY(ORDER_ID),
  FOREIGN KEY(SUPPLIER_ID) REFERENCES SUPPLIER(ID) ON DELETE CASCADE,
  FOREIGN KEY(MATERIAL_ID) REFERENCES MATERIAL(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE MANUFACTURING_ORDER
(
ORDER_ID INT,
MANUFACTURER_ID INT,
PRODUCT_ID INT,
QUANTITY NUMBER,
PRIMARY KEY(ORDER_ID),
FOREIGN KEY(MANUFACTURER_ID) REFERENCES MANUFACTURER(ID) ON DELETE CASCADE,
FOREIGN KEY(PRODUCT_ID) REFERENCES PRODUCT(ID) ON DELETE CASCADE
);
```

```
CREATE TABLE SHIPPING_ORDER
(
ORDER_ID INT,
SENDER_ID INT,
RECEIVER_ID INT,
ITEM_ID INT,
PRICE_PER_LB NUMBER,
QUANTITY NUMBER,
PRIMARY KEY(ORDER_ID),
FOREIGN KEY(SENDER_ID) REFERENCES BUSINESS(ID),
FOREIGN KEY(RECEIVER_ID) REFERENCES BUSINESS(ID),
FOREIGN KEY(ITEM_ID) REFERENCES ITEM(ID)
);
```