DROP DATABASE IF EXISTS SemiConductor\_SupplyChain;

CREATE DATABASE SemiConductor\_SupplyChain;

USE SemiConductor\_SupplyChain;

CREATE TABLE Foundry (

Foundry\_ID VARCHAR(255) PRIMARY KEY,

Name VARCHAR(255)

);

INSERT INTO Foundry (Foundry\_ID, Name) VALUES ('FND001', 'Alpha Semiconductor');

INSERT INTO Foundry (Foundry\_ID, Name) VALUES ('FND002', 'Beta Fabrications');

INSERT INTO Foundry (Foundry\_ID, Name) VALUES ('FND003', 'Gamma Foundry');

INSERT INTO Foundry (Foundry\_ID, Name) VALUES ('FND004', 'Delta Chips');

INSERT INTO Foundry (Foundry\_ID, Name) VALUES ('FND005', 'Epsilon Electronics');

CREATE TABLE Foundry\_Tech (

Foundry\_ID VARCHAR(255),

Technology VARCHAR(255),

PRIMARY KEY (Foundry\_ID, Technology),

FOREIGN KEY (Foundry\_ID) REFERENCES Foundry(Foundry\_ID)

);

INSERT INTO Foundry\_Tech (Foundry\_ID, Technology) VALUES ('FND001', '5nm, 10nm, 3nm');

INSERT INTO Foundry\_Tech (Foundry\_ID, Technology) VALUES ('FND002', '7nm, 8nm, 5nm');

INSERT INTO Foundry\_Tech (Foundry\_ID, Technology) VALUES ('FND003', '3nm, 10nm, 7nm');

INSERT INTO Foundry\_Tech (Foundry\_ID, Technology) VALUES ('FND004', '5nm, 3nm, 8nm');

INSERT INTO Foundry\_Tech (Foundry\_ID, Technology) VALUES ('FND005', '7nm, 10nm, 8nm');

CREATE TABLE Foundry\_Loc (

Foundry\_ID VARCHAR(255),

Location VARCHAR(255),

PRIMARY KEY (Foundry\_ID, Location),

FOREIGN KEY (Foundry\_ID) REFERENCES Foundry(Foundry\_ID)

);

INSERT INTO Foundry\_Loc (Foundry\_ID, Location) VALUES ('FND001', 'Taiwan, Japan, USA');

INSERT INTO Foundry\_Loc (Foundry\_ID, Location) VALUES ('FND002', 'Taiwan, China, Germany');

INSERT INTO Foundry\_Loc (Foundry\_ID, Location) VALUES ('FND003', 'Japan, China, USA');

INSERT INTO Foundry\_Loc (Foundry\_ID, Location) VALUES ('FND004', 'China, Germany, Taiwan, USA');

INSERT INTO Foundry\_Loc (Foundry\_ID, Location) VALUES ('FND005', 'Germany, Japan, Taiwan, USA');

CREATE TABLE Testing (

Testing\_ID VARCHAR(255) PRIMARY KEY,

Wafer\_Testing VARCHAR(255),

Functional\_Testing VARCHAR(255),

Visual\_Inspection VARCHAR(255),

ATE VARCHAR(255),

Foundry\_ID VARCHAR(255),

FOREIGN KEY (Foundry\_ID) REFERENCES Foundry(Foundry\_ID)

);

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST001', 'Passed', 'Passed', 'Passed', 'Advanced', 'FND002');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST002', 'Passed', 'Failed', 'Passed', 'Basic', 'FND004');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST003', 'Failed', 'N/A', 'Failed', 'None', 'FND001');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST004', 'Passed', 'Passed', 'Passed', 'Intermediate', 'FND005');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST005', 'Passed', 'Failed', 'Passed', 'Advanced', 'FND003');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST006', 'Passed', 'Passed', 'Failed', 'Basic', 'FND001');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST007', 'Failed', 'N/A', 'Failed', 'None', 'FND005');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST008', 'Passed', 'Passed', 'Passed', 'Advanced', 'FND003');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST009', 'Passed', 'Failed', 'Passed', 'Intermediate', 'FND002');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST010', 'Passed', 'Passed', 'Failed', 'Basic', 'FND004');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST011', 'Failed', 'N/A', 'Failed', 'None', 'FND001');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST012', 'Passed', 'Passed', 'Passed', 'Advanced', 'FND002');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST013', 'Passed', 'Failed', 'Passed', 'Intermediate', 'FND004');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST014', 'Passed', 'Passed', 'Failed', 'Basic', 'FND005');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST015', 'Failed', 'N/A', 'Failed', 'None', 'FND003');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST016', 'Passed', 'Passed', 'Failed', 'Basic', 'FND005');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST017', 'Passed', 'Failed', 'Passed', 'Intermediate', 'FND002');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST018', 'Failed', 'Failed', 'Failed', 'None', 'FND004');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST019', 'Passed', 'Passed', 'Passed', 'Advanced', 'FND003');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST020', 'Passed', 'Failed', 'Failed', 'Basic', 'FND001');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST021', 'Failed', 'N/A', 'Passed', 'None', 'FND002');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST022', 'Passed', 'Passed', 'Passed', 'Intermediate', 'FND001');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST023', 'Passed', 'Failed', 'Passed', 'Advanced', 'FND003');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST024', 'Passed', 'Passed', 'Failed', 'Basic', 'FND005');

INSERT INTO Testing (Testing\_ID, Wafer\_Testing, Functional\_Testing, Visual\_Inspection, ATE, Foundry\_ID) VALUES ('TEST025', 'Failed', 'N/A', 'Failed', 'None', 'FND004');

CREATE TABLE WaferBatch (

Batch\_ID VARCHAR(255) PRIMARY KEY,

Start\_Date DATE,

End\_Date DATE,

Quantity INT

);

INSERT INTO WaferBatch (Batch\_ID, Start\_Date, End\_Date, Quantity) VALUES ('WB001', '2023-01-12', '2023-01-17', '5');

INSERT INTO WaferBatch (Batch\_ID, Start\_Date, End\_Date, Quantity) VALUES ('WB002', '2023-01-17', '2023-01-25', '7');

INSERT INTO WaferBatch (Batch\_ID, Start\_Date, End\_Date, Quantity) VALUES ('WB003', '2023-01-26', '2023-01-28', '6');

INSERT INTO WaferBatch (Batch\_ID, Start\_Date, End\_Date, Quantity) VALUES ('WB004', '2023-02-07', '2023-02-08', '4');

INSERT INTO WaferBatch (Batch\_ID, Start\_Date, End\_Date, Quantity) VALUES ('WB005', '2023-02-13', '2023-02-18', '3');

CREATE TABLE Clock\_Speed (

CS\_ID VARCHAR(255) PRIMARY KEY,

Clock\_Speed VARCHAR(50),

Cost DECIMAL(10, 2)

);

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS001', '2.0 GHz', '125');

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS002', '2.4 GHz', '135');

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS003', '3.0 GHz', '150');

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS004', '3.4 GHz', '160');

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS005', '4.0 GHz', '175');

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS006', '4.2 GHz', '180');

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS007', '4.8 GHz', '195');

INSERT INTO Clock\_Speed (CS\_ID, Clock\_Speed, Cost) VALUES ('CS008', '5.0 GHz', '200');

CREATE TABLE Technology (

Tech\_ID VARCHAR(255) PRIMARY KEY,

Technology\_Used VARCHAR(255),

Cost DECIMAL(10, 2)

);

INSERT INTO Technology (Tech\_ID, Technology\_Used, Cost) VALUES ('TECH001', '7nm FinFET', '2000');

INSERT INTO Technology (Tech\_ID, Technology\_Used, Cost) VALUES ('TECH002', '5nm EUV Lithography', '3000');

INSERT INTO Technology (Tech\_ID, Technology\_Used, Cost) VALUES ('TECH003', '10nm SuperFin', '1800');

INSERT INTO Technology (Tech\_ID, Technology\_Used, Cost) VALUES ('TECH004', '3nm Advanced FinFET', '4000');

INSERT INTO Technology (Tech\_ID, Technology\_Used, Cost) VALUES ('TECH005', '8nm Low Power Plus', '1900');

CREATE TABLE Num\_Core (

Core\_ID VARCHAR(255) PRIMARY KEY,

Number\_of\_Cores INT,

Cost DECIMAL(10, 2)

);

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE001', '8', '150');

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE002', '12', '220');

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE003', '16', '290');

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE004', '20', '360');

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE005', '24', '430');

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE006', '32', '500');

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE007', '36', '570');

INSERT INTO Num\_Core (Core\_ID, Number\_of\_Cores, Cost) VALUES ('CORE008', '40', '640');

CREATE TABLE Cache\_Memory (

Cache\_ID VARCHAR(255) PRIMARY KEY,

Cache\_Memory VARCHAR(100),

Cost DECIMAL(10, 2)

);

INSERT INTO Cache\_Memory (Cache\_ID, Cache\_Memory, Cost) VALUES ('CACHE001', '8 MB', '20');

INSERT INTO Cache\_Memory (Cache\_ID, Cache\_Memory, Cost) VALUES ('CACHE002', '16 MB', '35');

INSERT INTO Cache\_Memory (Cache\_ID, Cache\_Memory, Cost) VALUES ('CACHE003', '32 MB', '50');

INSERT INTO Cache\_Memory (Cache\_ID, Cache\_Memory, Cost) VALUES ('CACHE004', '64 MB', '80');

INSERT INTO Cache\_Memory (Cache\_ID, Cache\_Memory, Cost) VALUES ('CACHE005', '128 MB', '120');

INSERT INTO Cache\_Memory (Cache\_ID, Cache\_Memory, Cost) VALUES ('CACHE006', '256 MB', '200');

CREATE TABLE Power (

Power\_ID VARCHAR(255) PRIMARY KEY,

Power VARCHAR(100),

Cost DECIMAL(10, 2)

);

INSERT INTO Power (Power\_ID, Power, Cost) VALUES ('PWR001', '5 W', '10');

INSERT INTO Power (Power\_ID, Power, Cost) VALUES ('PWR002', '10 W', '20');

INSERT INTO Power (Power\_ID, Power, Cost) VALUES ('PWR003', '15 W', '30');

INSERT INTO Power (Power\_ID, Power, Cost) VALUES ('PWR004', '20 W', '40');

INSERT INTO Power (Power\_ID, Power, Cost) VALUES ('PWR005', '25 W', '50');

INSERT INTO Power (Power\_ID, Power, Cost) VALUES ('PWR006', '30 W', '60');

CREATE TABLE Design (

Design\_ID VARCHAR(255) PRIMARY KEY,

CS\_ID VARCHAR(255),

Tech\_ID VARCHAR(255),

Core\_ID VARCHAR(255),

Cache\_ID VARCHAR(255),

Power\_ID VARCHAR(255),

FOREIGN KEY (CS\_ID) REFERENCES Clock\_Speed(CS\_ID),

FOREIGN KEY (Tech\_ID) REFERENCES Technology(Tech\_ID),

FOREIGN KEY (Core\_ID) REFERENCES Num\_Core(Core\_ID),

FOREIGN KEY (Cache\_ID) REFERENCES Cache\_Memory(Cache\_ID),

FOREIGN KEY (Power\_ID) REFERENCES Power(Power\_ID)

);

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN001', 'CS001', 'TECH001', 'CORE001', 'CACHE001', 'PWR001');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN002', 'CS002', 'TECH002', 'CORE002', 'CACHE002', 'PWR002');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN003', 'CS003', 'TECH003', 'CORE003', 'CACHE003', 'PWR003');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN004', 'CS004', 'TECH004', 'CORE004', 'CACHE004', 'PWR004');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN005', 'CS005', 'TECH005', 'CORE005', 'CACHE005', 'PWR005');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN006', 'CS006', 'TECH001', 'CORE006', 'CACHE006', 'PWR006');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN007', 'CS007', 'TECH002', 'CORE007', 'CACHE001', 'PWR001');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN008', 'CS008', 'TECH003', 'CORE008', 'CACHE002', 'PWR002');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN009', 'CS001', 'TECH004', 'CORE001', 'CACHE003', 'PWR003');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN010', 'CS002', 'TECH005', 'CORE002', 'CACHE004', 'PWR004');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN011', 'CS003', 'TECH001', 'CORE003', 'CACHE005', 'PWR005');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN012', 'CS004', 'TECH002', 'CORE004', 'CACHE006', 'PWR006');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN013', 'CS005', 'TECH003', 'CORE005', 'CACHE001', 'PWR001');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN014', 'CS006', 'TECH004', 'CORE006', 'CACHE002', 'PWR002');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN015', 'CS007', 'TECH005', 'CORE007', 'CACHE003', 'PWR003');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN016', 'CS008', 'TECH001', 'CORE008', 'CACHE004', 'PWR004');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN017', 'CS001', 'TECH002', 'CORE001', 'CACHE005', 'PWR005');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN018', 'CS002', 'TECH003', 'CORE002', 'CACHE006', 'PWR006');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN019', 'CS003', 'TECH004', 'CORE003', 'CACHE001', 'PWR001');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN020', 'CS004', 'TECH005', 'CORE004', 'CACHE002', 'PWR002');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN021', 'CS005', 'TECH001', 'CORE005', 'CACHE003', 'PWR003');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN022', 'CS006', 'TECH002', 'CORE006', 'CACHE004', 'PWR004');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN023', 'CS007', 'TECH003', 'CORE007', 'CACHE005', 'PWR005');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN024', 'CS008', 'TECH004', 'CORE008', 'CACHE006', 'PWR006');

INSERT INTO Design (Design\_ID, CS\_ID, Tech\_ID, Core\_ID, Cache\_ID, Power\_ID) VALUES ('DSN025', 'CS001', 'TECH005', 'CORE001', 'CACHE001', 'PWR001');

CREATE TABLE Customer (

Customer\_ID VARCHAR(255) PRIMARY KEY,

Name VARCHAR(255)

);

INSERT INTO Customer (Customer\_ID, Name) VALUES ('CUST001', 'Intel Corporation');

INSERT INTO Customer (Customer\_ID, Name) VALUES ('CUST002', 'Samsung Electronics');

INSERT INTO Customer (Customer\_ID, Name) VALUES ('CUST003', 'Texas Instruments');

INSERT INTO Customer (Customer\_ID, Name) VALUES ('CUST004', 'NVIDIA Corporation');

INSERT INTO Customer (Customer\_ID, Name) VALUES ('CUST005', 'Qualcomm Inc');

INSERT INTO Customer (Customer\_ID, Name) VALUES ('CUST006', 'Micron Technology');

CREATE TABLE Cust\_Loc (

Customer\_ID VARCHAR(255),

Location VARCHAR(255),

PRIMARY KEY (Customer\_ID, Location),

FOREIGN KEY (Customer\_ID) REFERENCES Customer(Customer\_ID)

);

INSERT INTO Cust\_Loc (Customer\_ID, Location) VALUES ('CUST001', 'USA, Germany');

INSERT INTO Cust\_Loc (Customer\_ID, Location) VALUES ('CUST002', 'South Korea, China');

INSERT INTO Cust\_Loc (Customer\_ID, Location) VALUES ('CUST003', 'Taiwan, USA');

INSERT INTO Cust\_Loc (Customer\_ID, Location) VALUES ('CUST004', 'USA, Japan');

INSERT INTO Cust\_Loc (Customer\_ID, Location) VALUES ('CUST005', 'USA, India');

INSERT INTO Cust\_Loc (Customer\_ID, Location) VALUES ('CUST006', 'USA, Singapore');

CREATE TABLE Purchase\_Order (

Order\_ID VARCHAR(255) PRIMARY KEY,

Line\_item VARCHAR(255),

Date DATE,

Priority\_Status VARCHAR(50),

Customer\_ID VARCHAR(255),

Foundry\_ID VARCHAR(255),

FOREIGN KEY (Customer\_ID) REFERENCES Customer(Customer\_ID),

FOREIGN KEY (Foundry\_ID) REFERENCES Foundry(Foundry\_ID)

);

INSERT INTO Purchase\_Order (Order\_Id, Line\_item, Date, Priority\_Status, Customer\_Id, Foundry\_ID) VALUES ('ORD001', 'Semiconductor Chips - Model A', '2022-11-10', 'High', 'CUST001', 'FND002');

INSERT INTO Purchase\_Order (Order\_Id, Line\_item, Date, Priority\_Status, Customer\_Id, Foundry\_ID) VALUES ('ORD002', 'Microcontrollers - Type B', '2022-11-15', 'Medium', 'CUST002', 'FND004');

INSERT INTO Purchase\_Order (Order\_Id, Line\_item, Date, Priority\_Status, Customer\_Id, Foundry\_ID) VALUES ('ORD003', 'Wafer Fabrication Equipment', '2022-11-20', 'High', 'CUST003', 'FND001');

INSERT INTO Purchase\_Order (Order\_Id, Line\_item, Date, Priority\_Status, Customer\_Id, Foundry\_ID) VALUES ('ORD004', 'Integrated Circuits - Series C', '2022-12-05', 'Medium', 'CUST004', 'FND005');

INSERT INTO Purchase\_Order (Order\_Id, Line\_item, Date, Priority\_Status, Customer\_Id, Foundry\_ID) VALUES ('ORD005', 'Memory Modules - DDR4', '2022-12-12', 'Medium', 'CUST005', 'FND003');

INSERT INTO Purchase\_Order (Order\_Id, Line\_item, Date, Priority\_Status, Customer\_Id, Foundry\_ID) VALUES ('ORD006', 'Power Management ICs', '2022-12-20', 'Low', 'CUST006', 'FND001');

CREATE TABLE Chip (

Chip\_ID VARCHAR(255) PRIMARY KEY,

Batch\_ID VARCHAR(255),

Order\_ID VARCHAR(255),

Design\_ID VARCHAR(255),

FOREIGN KEY (Batch\_ID) REFERENCES WaferBatch(Batch\_ID),

FOREIGN KEY (Order\_ID) REFERENCES Purchase\_Order(Order\_Id),

FOREIGN KEY (Design\_ID) REFERENCES Design(Design\_ID)

);

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP001', 'ORD001', 'WB001', 'DSN001');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP002', 'ORD002', 'WB002', 'DSN002');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP003', 'ORD002', 'WB003', 'DSN003');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP004', 'ORD003', 'WB004', 'DSN004');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP005', 'ORD005', 'WB005', 'DSN005');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP006', 'ORD005', 'WB001', 'DSN006');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP007', 'ORD003', 'WB002', 'DSN007');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP008', 'ORD002', 'WB003', 'DSN008');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP009', 'ORD006', 'WB005', 'DSN009');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP010', 'ORD001', 'WB004', 'DSN010');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP011', 'ORD002', 'WB003', 'DSN011');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP012', 'ORD004', 'WB002', 'DSN012');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP013', 'ORD004', 'WB003', 'DSN013');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP014', 'ORD004', 'WB001', 'DSN014');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP015', 'ORD005', 'WB002', 'DSN015');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP016', 'ORD004', 'WB003', 'DSN016');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP017', 'ORD003', 'WB005', 'DSN017');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP018', 'ORD006', 'WB004', 'DSN018');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP019', 'ORD003', 'WB002', 'DSN019');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP020', 'ORD006', 'WB004', 'DSN020');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP021', 'ORD002', 'WB001', 'DSN021');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP022', 'ORD001', 'WB002', 'DSN022');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP023', 'ORD003', 'WB001', 'DSN023');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP024', 'ORD003', 'WB002', 'DSN024');

INSERT INTO Chip (Chip\_ID, Order\_ID, Batch\_ID, Design\_ID) VALUES ('CHIP025', 'ORD002', 'WB003', 'DSN025');

CREATE TABLE Packaging (

Package\_ID VARCHAR(255) PRIMARY KEY,

Date DATE,

Type VARCHAR(255),

Chip\_ID VARCHAR(255),

FOREIGN KEY (Chip\_ID) REFERENCES Chip(Chip\_ID)

);

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG001', '2023-02-20', 'Standard Box', 'CHIP001');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG002', '2023-02-28', 'Antistatic Bag', 'CHIP002');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG003', '2023-03-01', 'Vacuum Seal', 'CHIP003');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG004', '2023-03-10', 'Reinforced Box', 'CHIP004');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG005', '2023-03-19', 'Antistatic Bag', 'CHIP005');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG006', '2023-03-28', 'Standard Box', 'CHIP006');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG007', '2023-04-01', 'Climate Controlled', 'CHIP007');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG008', '2023-04-03', 'Vacuum Seal', 'CHIP008');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG009', '2023-04-06', 'Antistatic Bag', 'CHIP009');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG010', '2023-04-08', 'Standard Box', 'CHIP010');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG011', '2023-04-17', 'Reinforced Box', 'CHIP011');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG012', '2023-04-18', 'Climate Controlled', 'CHIP012');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG013', '2023-04-24', 'Vacuum Seal', 'CHIP013');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG014', '2023-05-13', 'Antistatic Bag', 'CHIP014');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG015', '2023-05-19', 'Standard Box', 'CHIP015');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG016', '2023-05-23', 'Vacuum Seal', 'CHIP016');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG017', '2023-05-25', 'Antistatic Bag', 'CHIP017');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG018', '2023-06-05', 'Standard Box', 'CHIP018');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG019', '2023-06-09', 'Climate Controlled', 'CHIP019');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG020', '2023-06-10', 'Reinforced Box', 'CHIP020');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG021', '2023-06-23', 'Antistatic Bag', 'CHIP021');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG022', '2023-06-27', 'Vacuum Seal', 'CHIP022');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG023', '2023-07-03', 'Standard Box', 'CHIP023');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG024', '2023-07-05', 'Climate Controlled', 'CHIP024');

INSERT INTO Packaging (Package\_Id, Date, Type, Chip\_ID) VALUES ('PKG025', '2023-07-05', 'Reinforced Box', 'CHIP025');

CREATE TABLE Testing\_ON (

Testing\_ID VARCHAR(255),

Chip\_ID VARCHAR(255),

PRIMARY KEY (Testing\_ID, Chip\_ID),

FOREIGN KEY (Testing\_ID) REFERENCES Testing(Testing\_ID),

FOREIGN KEY (Chip\_ID) REFERENCES Chip(Chip\_ID)

);

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST001', 'CHIP001');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST002', 'CHIP002');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST003', 'CHIP003');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST004', 'CHIP004');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST005', 'CHIP005');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST006', 'CHIP006');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST007', 'CHIP007');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST008', 'CHIP008');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST009', 'CHIP009');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST010', 'CHIP010');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST011', 'CHIP011');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST012', 'CHIP012');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST013', 'CHIP013');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST014', 'CHIP014');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST015', 'CHIP015');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST016', 'CHIP016');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST017', 'CHIP017');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST018', 'CHIP018');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST019', 'CHIP019');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST020', 'CHIP020');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST021', 'CHIP021');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST022', 'CHIP022');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST023', 'CHIP023');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST024', 'CHIP024');

INSERT INTO Testing\_ON (Testing\_ID, Chip\_ID) VALUES ('TEST025', 'CHIP025');

CREATE TABLE Decides (

Customer\_ID VARCHAR(255),

Design\_ID VARCHAR(255),

PRIMARY KEY (Customer\_ID, Design\_ID),

FOREIGN KEY (Customer\_ID) REFERENCES Customer(Customer\_ID),

FOREIGN KEY (Design\_ID) REFERENCES Design(Design\_ID)

);

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST001', 'DSN001');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST001', 'DSN002');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST003', 'DSN003');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST006', 'DSN004');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST004', 'DSN005');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST004', 'DSN006');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST006', 'DSN007');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST004', 'DSN008');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST002', 'DSN009');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST001', 'DSN010');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST005', 'DSN011');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST001', 'DSN012');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST002', 'DSN013');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST003', 'DSN014');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST004', 'DSN015');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST005', 'DSN016');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST005', 'DSN017');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST003', 'DSN018');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST006', 'DSN019');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST006', 'DSN020');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST005', 'DSN021');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST001', 'DSN022');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST004', 'DSN023');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST003', 'DSN024');

INSERT INTO Decides (Customer\_ID, Design\_ID) VALUES ('CUST002', 'DSN025');

ALTER TABLE Customer ADD COLUMN Package\_ID VARCHAR(255);

ALTER TABLE Customer ADD FOREIGN KEY (Package\_ID) REFERENCES Packaging(Package\_ID);

UPDATE Customer SET Package\_ID = 'PKG001' WHERE Customer\_ID = 'CUST001';

UPDATE Customer SET Package\_ID = 'PKG002' WHERE Customer\_ID = 'CUST002';

UPDATE Customer SET Package\_ID = 'PKG003' WHERE Customer\_ID = 'CUST003';

UPDATE Customer SET Package\_ID = 'PKG004' WHERE Customer\_ID = 'CUST004';

UPDATE Customer SET Package\_ID = 'PKG005' WHERE Customer\_ID = 'CUST005';

UPDATE Customer SET Package\_ID = 'PKG006' WHERE Customer\_ID = 'CUST006';

UPDATE Customer SET Package\_ID = 'PKG007' WHERE Customer\_ID = 'CUST007';

UPDATE Customer SET Package\_ID = 'PKG008' WHERE Customer\_ID = 'CUST008';

UPDATE Customer SET Package\_ID = 'PKG009' WHERE Customer\_ID = 'CUST009';

UPDATE Customer SET Package\_ID = 'PKG010' WHERE Customer\_ID = 'CUST010';

UPDATE Customer SET Package\_ID = 'PKG011' WHERE Customer\_ID = 'CUST011';

UPDATE Customer SET Package\_ID = 'PKG012' WHERE Customer\_ID = 'CUST012';

UPDATE Customer SET Package\_ID = 'PKG013' WHERE Customer\_ID = 'CUST013';

UPDATE Customer SET Package\_ID = 'PKG014' WHERE Customer\_ID = 'CUST014';

UPDATE Customer SET Package\_ID = 'PKG015' WHERE Customer\_ID = 'CUST015';

UPDATE Customer SET Package\_ID = 'PKG016' WHERE Customer\_ID = 'CUST016';

UPDATE Customer SET Package\_ID = 'PKG017' WHERE Customer\_ID = 'CUST017';

UPDATE Customer SET Package\_ID = 'PKG018' WHERE Customer\_ID = 'CUST018';

UPDATE Customer SET Package\_ID = 'PKG019' WHERE Customer\_ID = 'CUST019';

UPDATE Customer SET Package\_ID = 'PKG020' WHERE Customer\_ID = 'CUST020';

UPDATE Customer SET Package\_ID = 'PKG021' WHERE Customer\_ID = 'CUST021';

UPDATE Customer SET Package\_ID = 'PKG022' WHERE Customer\_ID = 'CUST022';

UPDATE Customer SET Package\_ID = 'PKG023' WHERE Customer\_ID = 'CUST023';

UPDATE Customer SET Package\_ID = 'PKG024' WHERE Customer\_ID = 'CUST024';

UPDATE Customer SET Package\_ID = 'PKG025' WHERE Customer\_ID = 'CUST025';