

Database

Lesson 5



Name

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Class

1i

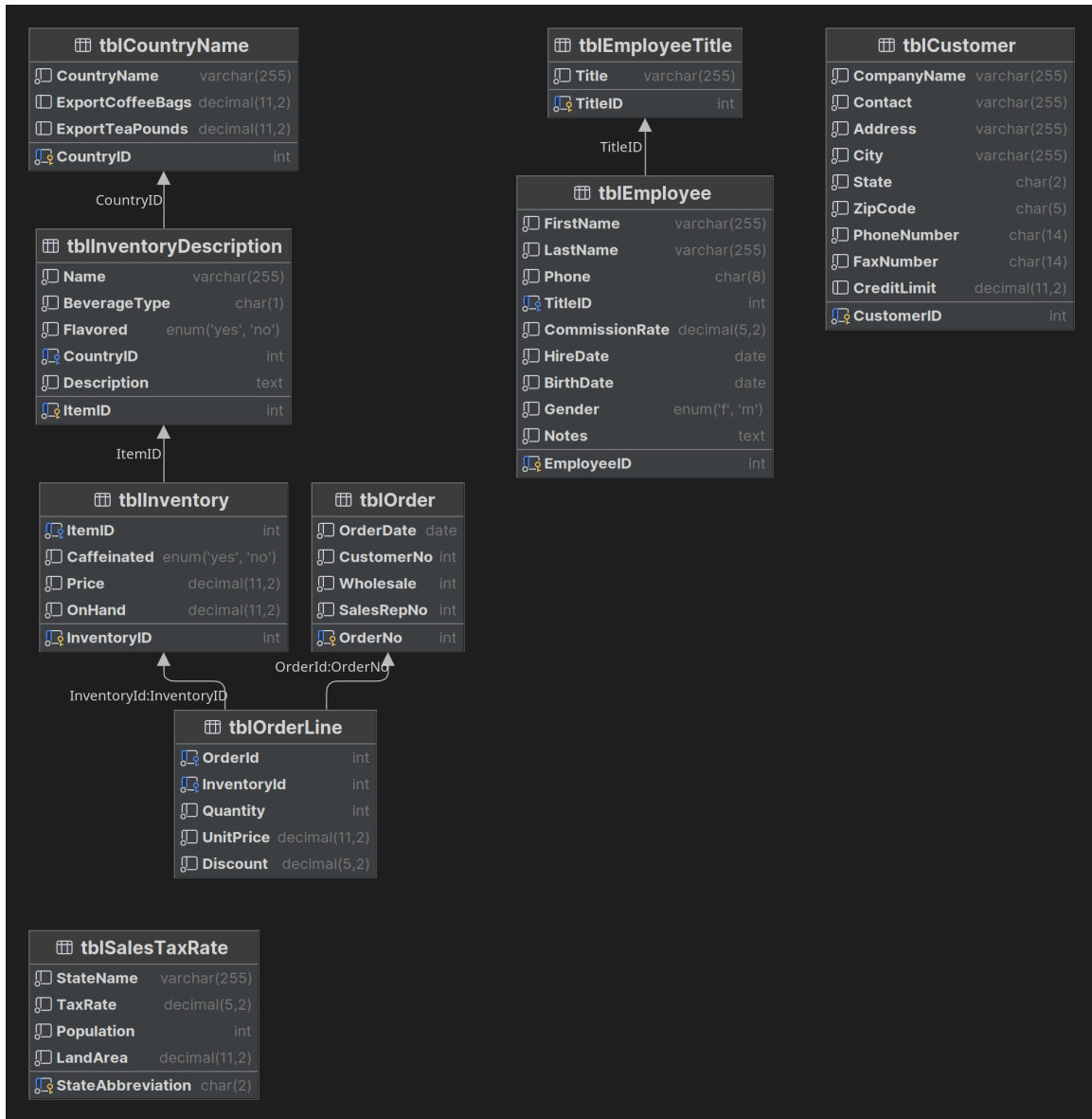
Department

Information Technology

Study Program

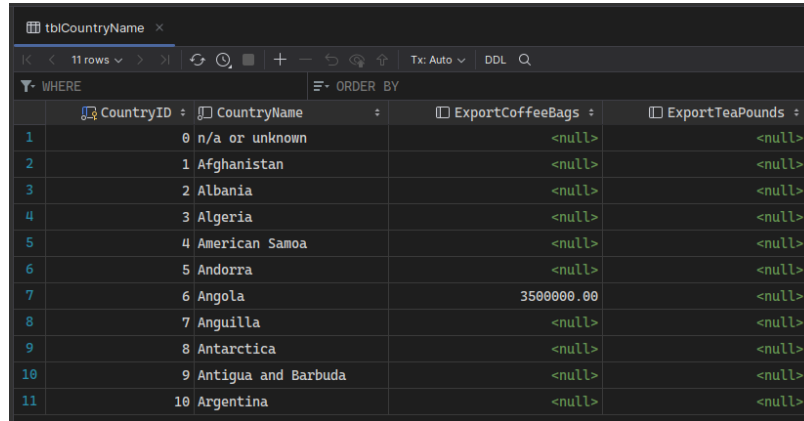
D4 Informatics Engineering

1 Database Diagram



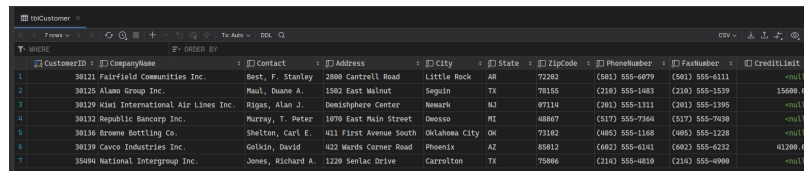
2 Table Result

- tblCountryName



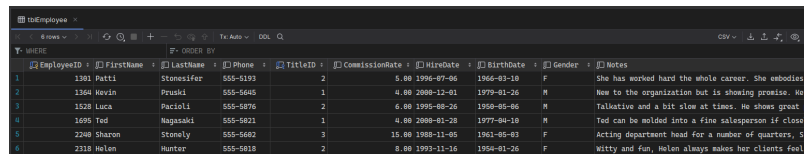
	CountryID	CountryName	ExportCoffeeBags	ExportTeaPounds
1	0	n/a or unknown	<null>	<null>
2	1	Afghanistan	<null>	<null>
3	2	Albania	<null>	<null>
4	3	Algeria	<null>	<null>
5	4	American Samoa	<null>	<null>
6	5	Andorra	<null>	<null>
7	6	Angola	3500000.00	<null>
8	7	Anguilla	<null>	<null>
9	8	Antarctica	<null>	<null>
10	9	Antigua and Barbuda	<null>	<null>
11	10	Argentina	<null>	<null>

- tblCustomer



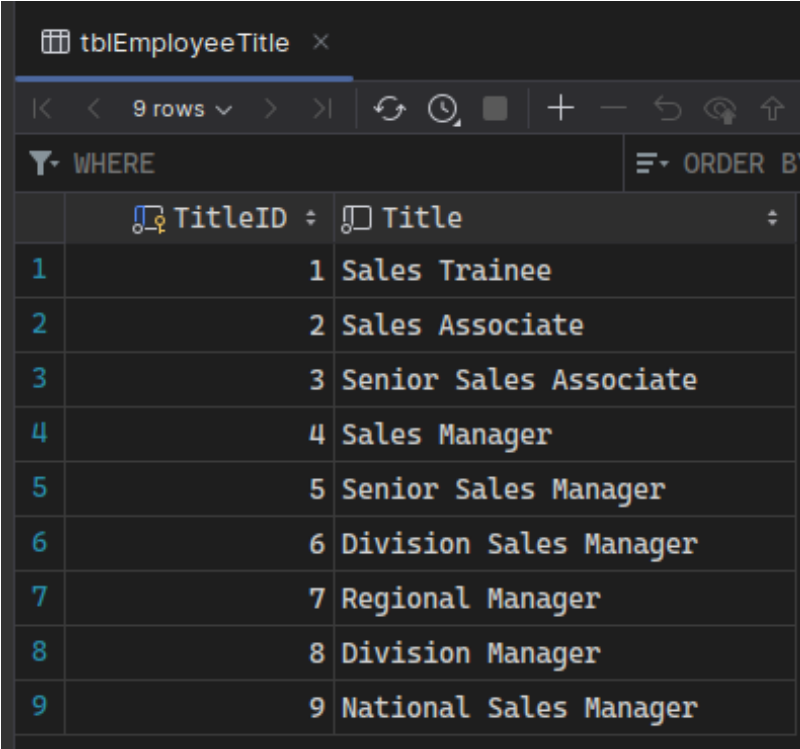
	CustomerID	CompanyName	Contact	Address	City	State	ZipCode	PhoneNumber	FaxNumber	CreditLimit
1	30121	Fairfield Communities Inc.	Best, F. Stanley	2800 Cantrell Road	Little Rock	AR	72202	(501) 555-6879	(501) 555-6111	<null>
2	30125	Alamo Group Inc.	Mull, Duane A.	1502 East Walnut	Seguin	TX	78155	(210) 555-1483	(210) 555-1539	15000.00
3	30129	Kiki International Air Lines Inc.	Riggs, Alan J.	Demisphere Center	Newark	NJ	07114	(201) 555-1311	(201) 555-1395	<null>
4	30130	Republic Rencorp Inc.	Murray, T. Peter	1070 East Main Street	Orem	UT	84057	(801) 555-7766	(801) 555-7650	<null>
5	30136	Bonnie Betting Co.	Shelton, Carl E.	411 First Avenue South	Oklahoma City	OK	73102	(405) 555-1168	(405) 555-1128	<null>
6	30139	Casco Industries Inc.	Golski, David	422 Wards Corner Road	Phoenix	AZ	85012	(602) 555-6101	(602) 555-6232	41200.00
7	35094	National Intergroup Inc.	Jones, Richard A.	1220 Senlac Drive	Carrollton	TX	75006	(214) 555-4810	(214) 555-0900	<null>

- tblEmployee



	EmployeeID	FirstName	LastName	Phone	TitleID	CommissionRate	HireDate	BirthDate	Gender	Notes
1	1301	Patti	Stonesifer	555-1193	2	5.00	1996-07-06	1966-03-18	F	She has worked hard the whole career. She embodies a
2	1304	Heidi	Probst	555-5603	1	4.00	2000-12-01	1979-01-26	M	New to the organization but is showing promise. Needs
3	1520	Luca	Pacelli	555-5876	2	4.00	1996-08-26	1950-05-06	M	Talkative and a bit slow at times. He shows great pot
4	1695	Ted	Nagasaki	555-5921	1	4.00	2000-01-28	1977-04-18	M	Ted can be molded into a fine salesperson if closely
5	2240	Sharon	Stonely	555-5682	3	15.00	1980-11-05	1961-05-03	F	Acting department head for a number of quarters, Sha
6	2318	Helen	Hunter	555-5018	2	8.00	1993-11-16	1954-01-26	F	Witty and fun, Helen always makes her clients feel co

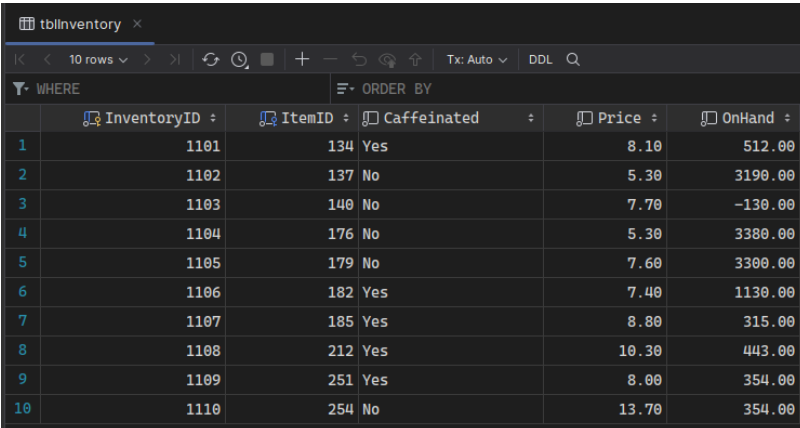
- tblEmployeeTitle



The screenshot shows a database viewer window titled 'tblEmployeeTitle'. It displays a table with 9 rows. The columns are 'TitleID' and 'Title'. The data is as follows:

	TitleID	Title
1	1	Sales Trainee
2	2	Sales Associate
3	3	Senior Sales Associate
4	4	Sales Manager
5	5	Senior Sales Manager
6	6	Division Sales Manager
7	7	Regional Manager
8	8	Division Manager
9	9	National Sales Manager

- tblInventory



The screenshot shows a database viewer window titled 'tblInventory'. It displays a table with 10 rows. The columns are 'InventoryID', 'ItemID', 'Caffeinated', 'Price', and 'OnHand'. The data is as follows:

	InventoryID	ItemID	Caffeinated	Price	OnHand
1	1101	134	Yes	8.10	512.00
2	1102	137	No	5.30	3190.00
3	1103	140	No	7.70	-130.00
4	1104	176	No	5.30	3380.00
5	1105	179	No	7.60	3300.00
6	1106	182	Yes	7.40	1130.00
7	1107	185	Yes	8.80	315.00
8	1108	212	Yes	10.30	443.00
9	1109	251	Yes	8.00	354.00
10	1110	254	No	13.70	354.00

- tblInventoryDescription

ItemID	Name	BeverageType	Flavored	CountryID	Description
134	China Yunnan	t	No	2	Black tea; tea from this province in southwestern China was first exp.
137	Darjeeling Muring	t	No	3	Black tea; Assam, known as Darjeeling. Darjeeling is grown in the foot.
140	Kalgar-India	t	No	1	Black tea;
146	Rocha	c	No	0	Bold, earthy, mild acidity. One of Arabia's oldest and best known coff.
176	New Zealand Sunnyslopes	t	No	4	Fruit blend Tisanes;
179	Passionfruit Fruit Blend	t	No	0	Fruit blend Tisanes;
182	Columbia Bucaramanga Especial	c	Yes	2	Full bodied, medium acidity, nutty undertones; a soft-bean coffee with.
185	Columbia Supremo	c	No	2	Full bodied; malnuty flavor. The top of the line for Colombian arabic.
212	Pan Fired Green	t	No	0	Green tea;
251	Lemon Grass	t	No	4	Herbal Tisanes; cut, sifted
254	Chamomile Blossom	t	No	2	Herbal Tisanes; whole flowers. Sweet and complex. Grown on the plains ..
257	Hibiscus	t	No	7	Herbal Tisanes; whole flowers
260	Espresso Roast	c	No	0	Intense, hearty, satisfying.
263	Mexican Coastpec	c	No	0	It has a fine acidity, delicate body, and pleasantly mellow flavor. FL.
264	Kona Extra Fancy	c	No	6	Mild, smooth, and delicately aromatic. A mellow roast. This coffee is ..
269	Passionfruit with Flowers	t	Yes	7	Natural flavored tea;

- tblOrder

OrderNo	OrderDate	CustomerNo	Wholesale	SalesRepNo
14606	2000-12-10	30473	1	1695
14607	2000-12-16	30581	1	1528
14608	2000-12-17	35249	1	1528
14609	2000-12-18	33974	2	3700
14610	2000-12-19	35201	1	4112
14611	2000-12-21	32350	2	4029
14612	2000-12-21	34666	2	4058
14613	2000-12-22	34458	2	4012
14614	2000-12-22	31932	2	3692
14615	2000-12-22	30744	2	3700

- tblOrderLine

tblOrderLine					
WHERE					
ORDER BY					
	OrderId	InventoryId	Quantity	UnitPrice	Discount
1	14606	1101	7	8.00	0.00
2	14607	1102	16	8.10	5.00
3	14608	1103	8	3.80	0.00
4	14608	1104	19	8.40	5.00
5	14608	1105	6	5.60	0.00
6	14609	1106	18	8.90	5.00
7	14609	1107	3	5.30	0.00
8	14609	1108	15	4.70	15.00
9	14609	1109	2	5.60	0.00
10	14610	1110	17	7.90	5.00
11	14610	1103	14	6.40	15.00
12	14610	1104	15	7.20	15.00
13	14610	1105	3	5.30	0.00
14	14610	1106	18	7.40	5.00
15	14611	1108	18	13.70	10.00
16	14611	1109	2	325.00	0.00

- tblSalesTaxRate

tblSalesTaxRate				
WHERE				
ORDER BY				
	StateAbbreviation	StateName	TaxRate	Population
1	AK	Alaska	0.00	524000
2	AL	Alabama	4.00	4102000
3	AR	Arkansas	4.50	2395000
4	AZ	Arizona	5.00	3489000
5	CA	California	7.25	28314000
6	CO	Colorado	3.00	3301000
7	CT	Connecticut	6.00	3233000
8	DE	Delaware	0.00	660000
9	FL	Florida	6.00	12335000
10	GA	Georgia	4.00	6342105
11	HI	Hawaii	4.00	1098000
12	IA	Iowa	5.00	2834000
13	ID	Idaho	5.00	1003000
14	IL	Illinois	6.25	11614000

3 DDL - Data Definition Language

3.1 Creating Database

```
CREATE TABLE tblCountryName
(
    CountryID          INT          NOT NULL PRIMARY KEY,
    CountryName        VARCHAR(255) NOT NULL,
    ExportCoffeeBags   DECIMAL(11, 2) NULL,
    ExportTeaPounds    DECIMAL(11, 2) NULL
);

CREATE TABLE tblInventory
(
    InventoryID INT          NOT NULL PRIMARY KEY AUTO_INCREMENT,
    ItemID      INT          NOT NULL,
    Caffeinated ENUM ('Yes', 'No') NOT NULL,
    Price       DECIMAL(11, 2) NOT NULL,
    OnHand      DECIMAL(11, 2) NOT NULL
);

CREATE TABLE tblOrder
(
    OrderNo      INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
    OrderDate    DATE NOT NULL,
    CustomerNo   INT NOT NULL,
    Wholesale    INT NOT NULL,
    SalesRepNo   INT NOT NULL
);

CREATE TABLE tblOrderLine
(
    OrderId      INT          NOT NULL,
    InventoryId  INT          NOT NULL,
    Quantity     INT          NOT NULL,
    UnitPrice    DECIMAL(11, 2) NOT NULL,
    Discount     DECIMAL(5, 2) NOT NULL
);

CREATE TABLE tblEmployeeTitle
(
    TitleID INT          NOT NULL PRIMARY KEY AUTO_INCREMENT,
    Title   VARCHAR(255) NOT NULL
);
```

```

CREATE TABLE tblSalesTaxRate
(
    StateAbbreviation CHAR(2)          NOT NULL PRIMARY KEY,
    StateName          VARCHAR(255)    NOT NULL,
    TaxRate             DECIMAL(5, 2)  NOT NULL,
    Population          INT             NOT NULL,
    LandArea            DECIMAL(11, 2) NOT NULL
);

CREATE TABLE tblCustomer
(
    CustomerID INT          NOT NULL PRIMARY KEY AUTO_INCREMENT,
    CompanyName VARCHAR(255) NOT NULL,
    Contact     VARCHAR(255) NOT NULL,
    Address     VARCHAR(255) NOT NULL,
    City        VARCHAR(255) NOT NULL,
    State       CHAR(2)      NOT NULL,
    ZipCode     CHAR(5)      NOT NULL,
    PhoneNumber CHAR(14)     NOT NULL,
    FaxNumber   CHAR(14)     NOT NULL,
    CreditLimit DECIMAL(11, 2) NULL
);

CREATE TABLE tblEmployee
(
    EmployeeID INT          NOT NULL PRIMARY KEY AUTO_INCREMENT,
    FirstName  VARCHAR(255) NOT NULL,
    LastName   VARCHAR(255) NOT NULL,
    Phone      CHAR(8)      NOT NULL,
    TitleID    INT          NOT NULL,
    CommissionRate DECIMAL(5, 2) NOT NULL,
    HireDate   DATE         NOT NULL,
    BirthDate  DATE         NOT NULL,
    Gender     ENUM ('F', 'M') NOT NULL,
    Notes      TEXT         NOT NULL
);

CREATE TABLE tblInventoryDescription
(
    ItemID INT          NOT NULL PRIMARY KEY,
    Name    VARCHAR(255) NOT NULL,
    BeverageType CHAR(1) NOT NULL,
    Flavored   ENUM ('Yes', 'No') NOT NULL,
    CountryID INT          NOT NULL,

```

```
        Description  TEXT                NOT NULL
);
```

4 DML - Data Manipulation Language

4.1 Adding Relationship

```
ALTER TABLE tblOrderLine
    ADD FOREIGN KEY (OrderId) REFERENCES tblOrder (OrderNo);
ALTER TABLE tblOrderLine
    ADD FOREIGN KEY (InventoryId) REFERENCES tblInventory (InventoryID);
ALTER TABLE tblEmployee
    ADD FOREIGN KEY (TitleID) REFERENCES tblEmployeeTitle (TitleID);
ALTER TABLE tblInventory
    ADD FOREIGN KEY (ItemID) REFERENCES tblInventoryDescription (ItemID);
ALTER TABLE tblInventoryDescription
    ADD FOREIGN KEY (CountryID) REFERENCES tblCountryName (CountryID);
```

5 Select Statement