

All Entities Details

Design Name	Project
Version Date	06.03.2019 06:39:10
Version Comment	
Model Name	Logical

SubViews

SubView	Description	Notes	Object
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Entity Name	Bill
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.Bill

Description	
Notes	

Number Of Attributes	8
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	billID	P		Y	NUMERIC (7)	LT				
2	orderID		F	Y	NUMERIC (7)	LT				
3	employeeID		F	Y	NUMERIC (7)	LT				
4	dateCreated			Y	Date	LT				
5	dateDue			Y	Date	LT				
6	datePaid				Date	LT				
7	lateFee				NUMERIC (10)	DOM	BILLAMOUNT	0		
8	totalBill			Y	NUMERIC (10)	DOM	BILLAMOUNT	0		

Attributes Comments

No	Attribute Name	Description	Notes
1	billID	ID of each bill	
2	orderID	IF of the order for which the bill is made	
3	employeeID	Unique customer ID	
4	dateCreated	Date on whcih the bill was created	

No	Attribute Name	Description	Notes
5	dateDue	Date on which the bill is due	
6	datePaid	Date on which the bill was paid	

Constraints

Type	Attribute / Constraint Name	Details	
Attribute Level	lateFee	Check Constraints	
		Text	DB Type
		%column% > 0	Oracle Database 11g
	totalBill	Check Constraints	
		Text	DB Type
		%column% > 0	Oracle Database 11g

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Bill PK	Y	billID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Order	is for	has		1..1:1..1			Y

Entity Name	Contract
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.Contract

Number Of Attributes	14
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	contractID	P		Y	NUMERIC (7)	LT				
2	signedDate			Y	Date	LT				
3	serviceStartDate			Y	Date	LT				
4	serviceEndDate			Y	Date	LT				
5	customerID		F	Y	NUMERIC (7)	LT				
6	employeeID		F	Y	NUMERIC (7)	LT				
7	billingStreet			Y	VARCHAR (40)	DOM	STREET			
8	billingCity			Y	VARCHAR (20)	DOM	CITY			
9	billingZip			Y	VARCHAR (5)	DOM	ZIPCODE			
10	billingState			Y	VARCHAR (2)	DOM	STATE			
11	deposit				NUMERIC (7,2)	LT				
12	methodOfPayment				VARCHAR (50)	LT				
13	lastUpdated			Y	Date	LT				
14	frequency			Y	VARCHAR (20)	DOM	FRQUENCY OF CONTRACT			

Attributes Comments

No	Attribute Name	Description	Notes
1	contractID	Unique ID of each contract	

No	Attribute Name	Description	Notes
2	signedDate	Date when the contract was signed	
3	serviceStartDate	Date when the service starts	
4	serviceEndDate	Date when the service ends	
5	customerID	ID of the customer who signs the document	
6	employeeID	ID of the employee who prepared the document	
7	billingStreet	Bill Street Address	
8	billingCity	Billing city address	
9	billingZip	Billing zipcode	
10	billingState	Billing State Address	
11	deposit	Intial deposit paid if any	
12	methodOfPayment	Method of payment chosen by the customer	
13	lastUpdated	When the contract was last updated by the employee	

Constraints

Type	Attribute / Constraint Name	Details	
Attribute Level	billingZip	Check Constraints	
		Text	DB Type
		REGEXP_LIKE(%column%, '^[[[:digit:]]{9}\$')	Oracle Database 11g
	frequency	Values List	
		Value	Description
		daily	
		monthly	
		on-demand	
		weekly	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Contract PK	Y	contractID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Customer	is signed by	signs		1..1:1..1			Y
Employee	is handled by	handles		1..*:1..1			Y

Entity Name	Customer
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.Customer

Description	
Notes	

Number Of Attributes	21
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	customerID	P		Y	NUMERIC (7)	LT				
2	customerName			Y	VARCHAR (40)	DOM	COMPANY NAME			
3	contactFName			Y	VARCHAR (40)	DOM	PERSON FNAME			
4	customerLName			Y	VARCHAR (40)	DOM	PERSON LNAME			
5	street			Y	VARCHAR (40)	DOM	STREET			
6	city			Y	VARCHAR (20)	DOM	CITY			
7	zip			Y	VARCHAR (5)	DOM	ZIPCODE			
8	state			Y	VARCHAR (2)	DOM	STATE			
9	phone			Y	VARCHAR (10)	DOM	PHONE			
10	email			Y	VARCHAR (40)	DOM	EMAIL			
11	isLead				Boolean (1)	LT				
12	numberOfEmployees				NUMERIC (3)	LT				
13	registeredDate			Y	Date	DOM	DATEREGISTERED	SYSDATE		
14	comment				VARCHAR (300)	DOM	COMMENTS			
15	customerType				VARCHAR (50)	DOM	TYPE OF BUSINESS			

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
16	dateReferred				Date	LT				
17	contractID		F	Y	NUMERIC (7)	LT				
18	locationID		F	Y	NUMERIC (7)	LT				
19	routeID		F	Y	NUMERIC (7)	LT				
20	customerID1		F		NUMERIC (7)	LT				
21	employeeID		F	Y	NUMERIC (7)	LT				

Attributes Comments

No	Attribute Name	Description	Notes
1	customerID	Unique customer ID	
2	customerName	Name of the customer	
3	contactFName	First name of the point of contact	
4	customerLName	Last name of the point of contact	
5	street	Street address	
6	city	City	
7	zip	Zipcode	
8	state	State	
9	phone	Phone number of the customer	
10	email	Email id of the customer	
11	isLead	To check if the customer in the table is a potential client	
12	numberOfEmployees	NUmber of employees in the organization	
13	registeredDate	Date the customer was registered	
14	comment	Comments by the driver, if any	
15	customerType	What type of customer is it	
16	dateReferred	Date when the customer was referred	
20	customerID1	Unique customer ID	

Constraints

Type	Attribute / Constraint Name	Details	
Attribute Level	zip	Check Constraints	
		Text	DB Type
		REGEXP_LIKE(%column%, '^[[[:digit:]]{9}\$')	Oracle Database 11g
	phone	Check Constraints	
		Text	DB Type
		REGEXP_LIKE(%column%, '[0-9]{10}')	Oracle Database 11g
	email		

Type	Attribute / Constraint Name	Details	
		Check Constraints	
		Text	DB Type
		REGEXP_LIKE('%column%', '@')	Oracle Database 11g
	customerType	Values List	
		Value	Description
		Department in new company	
		Department in same company	
		Large corporation	
		Service Organization	
		Small Business	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Customer PK	Y	customerID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Contract	is signed by	signs		1..1:1..1			Y
Customer	is referred by	refers		0..*:1..1			Y
Location	belongs to	has		1..1:1..1			Y
Driver	is noted by	notes		0..*:1..1			Y
Order	is returned by	returns		1..*:1..1			Y
Order	is placed by	places		1..*:1..1		Y	Y

Entity Name	DeliverySchedule
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.DeliverySchedule

Number Of Attributes	7
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	deliveryID	P		Y	NUMERIC (7)	LT				
2	serviceDate			Y	Date	LT				
3	routeID		F	Y	NUMERIC (7)	LT				
4	timeArrived			Y	Datetime	LT				
5	timeDeparted			Y	Datetime	LT				
6	customerComments				VARCHAR (300)	DOM	COMMENTS			
7	driverComments				VARCHAR (300)	DOM	COMMENTS			

Attributes Comments

No	Attribute Name	Description	Notes
1	deliveryID	ID of the delivery schedule	
2	serviceDate	Date of the delivery	
3	routeID	Unique ID of the route	
4	timeArrived	Time the delivery schedule was completed	
5	timeDeparted	Time the delivery schedule was started	
6	customerComments	Comments from customer	
7	driverComments	Comments from driver	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Delivery PK	Y	deliveryID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Order	is on	is for		1..*:1..1			Y
Route	has	is on		1..1:1..1			Y

Entity Name	Driver
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	Employee
Synonyms	

Mapped Tables

Table Name
Relational_1.Driver

Number Of Attributes	3
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	employeeID	P	F	Y	NUMERIC (7)	LT				
2	licenseNo			Y	VARCHAR (13)	DOM	LICENSENO			
3	routeID		F	Y	NUMERIC (7)	LT				

Attributes Comments

No	Attribute Name	Description	Notes
3	routeID	LicenseNo of the driver	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Driver PK	Y	employeeID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Route	is handled by	is assigned		1..1:1..1			Y
Employee	appointed by	appoints		0..1:1..1		Y	Y
Customer	is noted by	notes		0..*:1..1			Y

Entity Name	Employee
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.Employee

Description	
Notes	

Number Of Attributes	16
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	employeeID	P		Y	NUMERIC (7)	LT				
2	fname			Y	VARCHAR (40)	DOM	PERSON FNAME			
3	lname			Y	VARCHAR (40)	DOM	PERSON LNAME			
4	phone			Y	VARCHAR (10)	DOM	PHONE			
5	fax				VARCHAR (10)	DOM	PHONE			
6	street				VARCHAR (40)	DOM	STREET			
7	city				VARCHAR (20)	DOM	CITY			
8	zip				VARCHAR (5)	DOM	ZIPCODE			
9	state				VARCHAR (2)	DOM	STATE			
10	hireDate			Y	Date	DOM	HIREDATE	SYSDATE		
11	endDate				Date	LT				
12	dob				Date	LT				
13	role			Y	VARCHAR (20)	LT				
14	gender			Y	VARCHAR (1)	DOM	GENDER			
15	email			Y	VARCHAR (40)	DOM	EMAIL			

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
16	evaluationScore				NUMERIC (2)	DOM	EVALUATIONSCORE			

Attributes Comments

No	Attribute Name	Description	Notes
1	employeeID	Unique ID of the employee	
2	fname	First name of the employee	
3	lname	Last name of the employee	
4	phone	Phone #	
5	fax	Fax #	
6	street	Street Address	
7	city	City	
8	zip	Zipcode	
9	state	State	
10	hireDate	Date the employee was hired	
12	dob	Date of Birth	
13	role	Designation of the employee	
14	gender	Gender	
15	email	Email Address	

Constraints

Type	Attribute / Constraint Name	Details	
Attribute Level	phone	Check Constraints	
		Text	DB Type
		REGEXP_LIKE(%column%, '[0-9]{10}')	Oracle Database 11g
	fax	Check Constraints	
		Text	DB Type
		REGEXP_LIKE(%column%, '[0-9]{10}')	Oracle Database 11g
	zip	Check Constraints	
		Text	DB Type
		REGEXP_LIKE(%column%, '^[[[:digit:]]{9}\$')	Oracle Database 11g
	gender	Values List	
		Value	Description
		F	Female
		M	Male
	email	Check Constraints	

Type	Attribute / Constraint Name	Details	
		Text	DB Type
		REGEXP_LIKE(%column%, '@')	Oracle Database 11g
	evaluationScore	Ranges	
		Begin Value	End Value
		0	10
		Description	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Employee PK	Y	employeeID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Route	is scheduled by	schedules		0..*:1..1			Y
Contract	is handled by	handles		1..*:1..1			Y
Driver	appointed by	appoints		0..1:1..1		Y	Y

Entity Name	Item
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables	Table Name
Relational_1.Item	

Number Of Attributes	4
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	itemID	P		Y	NUMERIC (7)	LT				
2	itemName				VARCHAR (40)	LT				
3	price			Y	NUMERIC (7,2)	DOM	PRICE			
4	quantityOnHand			Y	Integer	LT				

Attributes Comments

No	Attribute Name	Description	Notes
1	itemID	Unique ID of the driver	
2	itemName	Name/Description of the item	
3	price	Unit price of the item	
4	quantityOnHand	Inventory/Stock of a particular item	

Constraints

Type	Attribute / Constraint Name	Details	
Attribute Level	price	Check Constraints	
		Text	DB Type
		%column% >= 0	Oracle Database 11g

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Item PK	Y	itemID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
OrderDetails	has	is in		1..*:1..1		Y	Y

Entity Name	Location
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.Location

Number Of Attributes	4
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	locationID	P		Y	NUMERIC (7)	LT				
2	customerID		F	Y	NUMERIC (7)	LT				
3	locationName			Y	VARCHAR (40)	LT				
4	routeID	P	F	Y	NUMERIC (7)	LT				

Attributes Comments

No	Attribute Name	Description	Notes
1	locationID	Unique ID of the location	
2	customerID	ID of the customer whose location it is	
3	locationName	Name of the location	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Location PK	Y	locationID	A		
		routeID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Customer	belongs to	has		1..1:1..1			Y
Route	belongs to	has		1..*:1..1		Y	Y

Entity Name	Order
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.Order

Description	
Notes	

Number Of Attributes	10
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	orderID	P		Y	NUMERIC (7)	LT				
2	billID		F	Y	NUMERIC (7)	LT				
3	deliveryID		F	Y	NUMERIC (7)	LT				
4	dateOrdered			Y	Date	DOM	DATEREGISTERED	SYSDATE		
5	placedBy	P	F	Y	NUMERIC (7)	LT				
6	dateReturned				Date	LT				
7	returnedBy		F	Y	NUMERIC (7)	LT				
8	description			Y	VARCHAR (50)	LT				
9	deposit				NUMERIC (7,2)	DOM	PRICE			
10	initialCharge				NUMERIC (10)	LT				

Attributes Comments

No	Attribute Name	Description	Notes
1	orderID	Unique ID of the order	
2	billID	ID of the bill	

No	Attribute Name	Description	Notes
3	deliveryID	ID of the delivery schedule assigned	
5	placedBy	Unique customer ID who placed the order	
7	returnedBy	Unique customer ID who returned the order	
8	description	Description/Comments of the order	
9	deposit	Deposit paid if any	
10	initialCharge	Initial charge taken if any	

Constraints

Type	Attribute / Constraint Name	Details	
Attribute Level	deposit	Check Constraints	
		Text	DB Type
		%column% >= 0	Oracle Database 11g

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Order PK	Y	orderID	A		
		placedBy	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
DeliverySchedule	is on	is for		1..*:1..1			Y
Customer	is returned by	returns		1..*:1..1			Y
Customer	is placed by	places		1..*:1..1		Y	Y
OrderDetails	are contained in	contains		1..*:1..1		Y	Y
Bill	is for	has		1..1:1..1			Y

Entity Name	OrderDetails
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.OrderDetails

Number Of Attributes	4
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	quantity				NUMERIC (5)	LT				
2	orderID	P	F	Y	NUMERIC (7)	LT				
3	itemID	P	F	Y	NUMERIC (7)	LT				
4	placedBy	P	F	Y	NUMERIC (7)	LT				

Attributes Comments

No	Attribute Name	Description	Notes
1	quantity	Quantity of each item in each order	
2	orderID	Unique order ID	
3	itemID	Item ID per order	
4	placedBy	Unique customer ID	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Item PK	Y	orderID	A		
		placedBy	A		
		itemID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
Item	has	is in		1..*:1..1		Y	Y
Order	are contained in	contains		1..*:1..1		Y	Y

Entity Name	Route
Preferred Abbreviation	
Classification Type Name	
Object Type Name	
Super Type	
Synonyms	

Mapped Tables

Table Name
Relational_1.Route

Number Of Attributes	5
Number Of Rows Min.	0
Number Of Rows Max.	9999999
Expected Number Of Rows	0
Expected Growth	0
Growth Interval	Year

Attributes

No	Attribute Name	PK	FK	M	Data Type	DT kind	Domain Name	Formula (Default Value)	Preferred Abbreviation	Synonyms
1	routeID	P		Y	NUMERIC (7)	LT				
2	routeName			Y	VARCHAR (20)	LT				
3	employeeID		F	Y	NUMERIC (7)	LT				
4	managerID		F	Y	NUMERIC (7)	LT				
5	deliveryID		F	Y	NUMERIC (7)	LT				

Attributes Comments

No	Attribute Name	Description	Notes
1	routeID	Unique ID of the route	
2	routeName	Name of the route	
3	employeeID	ID of the driver assigned to the route	
4	managerID	ID of the manager who schedules the routes	

Identifiers

Name	Primary Identifier	Element Name	Element Type	Source Label	Target Label
Route PK	Y	routeID	A		

Has Relationships With

Entity Name	Role	Other Role	In Arc	Cardinality	Dominant Role	Identifying	Transferable
DeliverySchedule	has	is on		1..1:1..1			Y
Driver	is handled by	is assigned		1..1:1..1			Y
Employee	is scheduled by	schedules		0..*:1..1			Y
Location	belongs to	has		1..*:1..1		Y	Y