Group # 7

Assignment 2

--Group#7--
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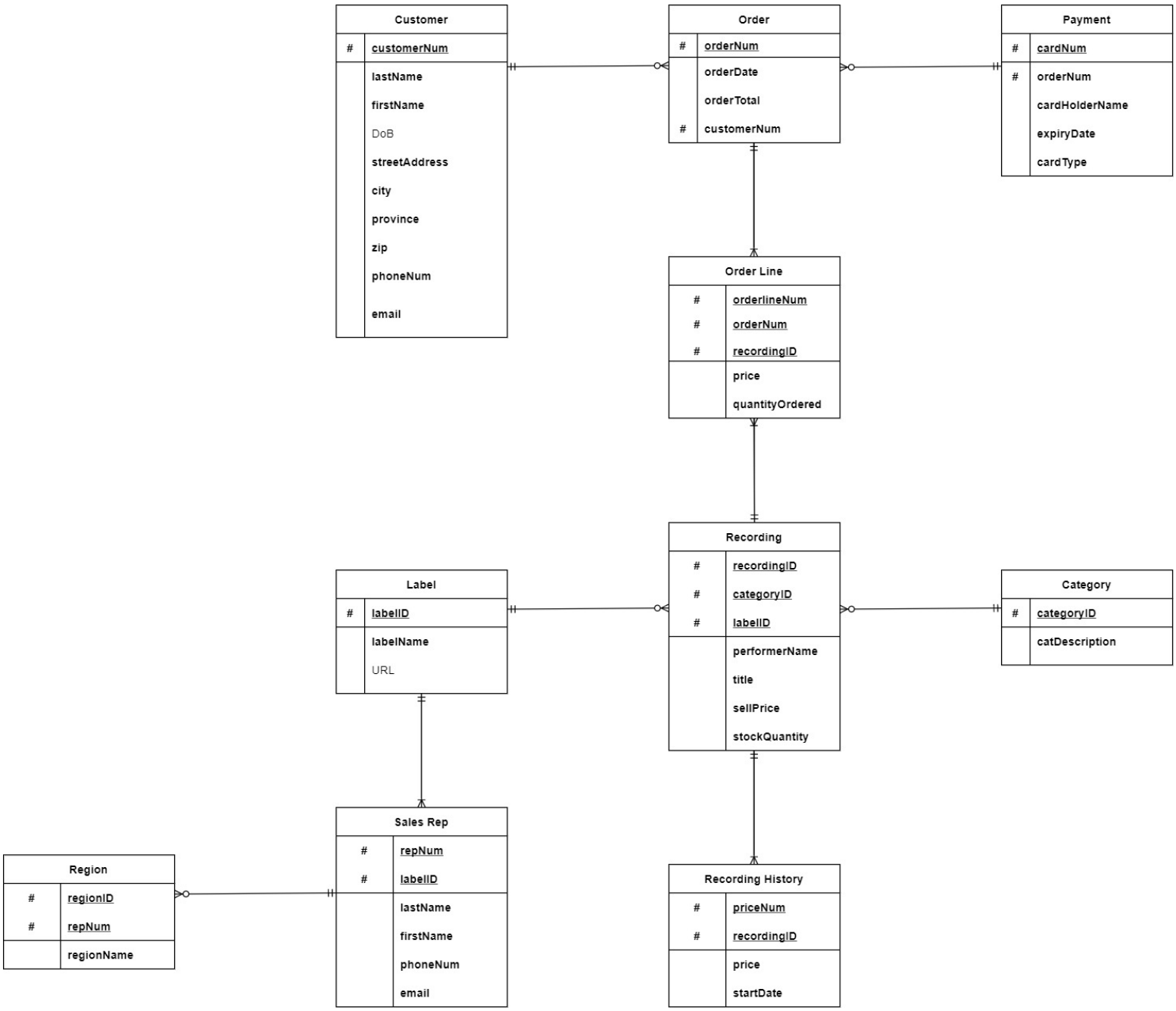
ERD and Table Breakdown



Customer	
PK	CustomerNum
NN	lastName, firstName, streetAddress, city, province, zip, phoneNum, email
UK	email

Customer(0,N) Order(1,1)

Order	
PK	orderNum
FK	customerNum
NN	orderDate, orderTotal
Constraint	orderTotal > 0

Order(1,1) Payment(0,N)

Payment	
PK	cardNum
FK	orderNum
NN	cardHolderName, expiryDate, cardType

Order Line(1,1) Order(1,N)

Order Line	
PK	orderlineNum
FK	orderNum, recordingID
NN	price, quantityOrdered
Constraint	0 < price < 1000, quantityOrdered >= 0

Order Line(1,1) Recording(1,N)

Recording	
PK	recordingID
FK	categoryid, labelID
NN	performerName, title, sellprice, stockQuantity

Label(0,N) Recording(1,1)

Label	
PK	labelID
NN	labelName

Category(0,N) Recording(1,1)

Category	
PK	categoryID
Constraint	catDescription is one of the following: ‘R&B’, ‘Jazz’, ‘Metal Rock’, ‘Alt Rock’, ‘Easy Rock’, ‘Classic Rock’, ‘Hip-Hop’

Recording(1, N) Recording History(1,1)

Recording History	
PK	priceNum
FK	recordingID
NN	Price, startDate
Constraint	0 < price < 1000

Sales Rep(1,1) Label(1,N)

Sales Rep	
PK	repNum
FK	labelID
NN	lastName, firstName, phoneNum
UK	email

Region(1,1) Sales Rep(0,N)

Region	
PK	regionID
FK	repNum
NN	regionName

Table Data and Description

A2_ORDER

```
SELECT *
FROM a2_order;
```

Script Output | Query Result

SQL | All Rows Fetched: 5 in 0.159 seconds

	ORDERNUM	CUSTOMERNUM	ORDERDATE	ORDERTOTAL
1	1	1	01-JAN-16	10
2	2	2	02-FEB-17	20
3	3	3	03-MAR-18	30
4	4	4	04-APR-19	40
5	5	5	05-MAY-20	50

```
DESCRIBE A2_Order;
```

Script Output

Task completed in 0.021 seconds

```
Name          Null     Type
------------ -------- ------------
ORDERNUM      NOT NULL NUMBER(38)
CUSTOMERNUM            NUMBER(38)
ORDERDATE     NOT NULL DATE
ORDERTOTAL    NOT NULL NUMBER(5,2)
```

Customer

```
SELECT *
FROM customer;
```

Script Output × Query Result ×

SQL | All Rows Fetched: 5 in 0.084 seconds

	CUSTOMERNUM	LASTNAME	FIRSTNAME	DOB	STREETADDRESS	CITY	PROVINCE	ZIP	PHONENUM	EMAIL
1	1	Sanghwa	Suh	07-JUN-91	12 ad	Toronto	Ontario	1A1	516-111-2222	sanghwa@gmail.com
2	2	Adam	Springett	07-JUN-92	34 cd	York	Ontario	2B2	616-222-3333	adam@gmail.com
3	3	Nozomi	Tuschiya	17-SEP-93	56 ef	Peel	Ontario	3C3	716-333-4444	nozomi@gmail.com
4	4	Yihsun	Lee	17-JUN-94	78 gh	Muskoka	Ontario	4D4	816-444-5555	yihsun@gmail.com
5	5	Chirs	OOP	13-JAN-95	90 ij	Niagara	Ontario	5E5	916-555-6666	chris@gmail.com

```
DESCRIBE Customer;
```

Script Output ×

Task completed in 1.409 seconds

```
Name            Null     Type
--------------- -------- ------------
CUSTOMERNUM     NOT NULL NUMBER(38)
LASTNAME        NOT NULL VARCHAR2(50)
FIRSTNAME       NOT NULL VARCHAR2(50)
DOB                      DATE
STREETADDRESS   NOT NULL VARCHAR2(50)
CITY            NOT NULL VARCHAR2(50)
PROVINCE        NOT NULL VARCHAR2(50)
ZIP             NOT NULL VARCHAR2(50)
PHONENUM        NOT NULL VARCHAR2(50)
EMAIL           NOT NULL VARCHAR2(50)
```

Payment

```
1 SELECT *
2 FROM payment;
```

Script Output × | Query Result ×

SQL | All Rows Fetched: 5 in 0.234 seconds

	CARDNUM	ORDERNUM	CARDHOLDERNAME	EXPIRYDATE	CARDTYPE
1	100	1	Leon	20-JUN-25	VISA
2	200	2	Chris	21-JUL-26	MAST
3	300	3	Claire	22-AUG-27	VISA
4	400	4	Jill	23-SEP-28	MAST
5	500	5	Ada	24-OCT-29	AMEX

```
DESCRIBE Payment;
```

Script Output ×

Task completed in 0.032 seconds

```
Name            Null     Type
--------------- -------- ------------
CARDNUM         NOT NULL NUMBER(38)
ORDERNUM                 NUMBER(38)
CARDHOLDERNAME  NOT NULL VARCHAR2(50)
EXPIRYDATE      NOT NULL DATE
CARDTYPE        NOT NULL VARCHAR2(50)
```

Label

```
1 SELECT *
2 FROM label;
```

Script Output | Query Result

SQL | All Rows Fetched: 5 in 0.072 seconds

	LABELID	LABELNAME	URL
1	1	Sony	www.sonymusic.com
2	2	Warner	www.warnermusic.com
3	3	Universal	www.universalmusic.com
4	4	EMI	www.emimusic.com
5	5	BMG	www.bmgmusic.com

```
DESCRIBE Label;
```

Script Output

Task completed in 0.023 seconds

```
Name        Null     Type
---------   -------- ------------
LABELID     NOT NULL NUMBER(38)
LABELNAME   NOT NULL VARCHAR2(25)
URL                  VARCHAR2(50)
```

Category

```
SELECT *
FROM category;
```

Script Output | Query Result

SQL | All Rows Fetched: 7 in 0.082 seconds

	CATEGORYID	CATDESCRIPTION
1	10	R&B
2	20	Jazz
3	30	Metal Rock
4	40	Alt Rock
5	50	Easy Rock
6	60	Classic Rock
7	70	Hip-Hop

```
DESCRIBE Category;
```

Script Output

Task completed in 0.026 seconds

```
Name            Null     Type
--------------- -------- ------------
CATEGORYID      NOT NULL NUMBER(38)
CATDESCRIPTION           VARCHAR2(25)
```

Recording

```
SELECT *
FROM recording;
```

Script Output × Query Result ×

SQL | All Rows Fetched: 5 in 0.087 seconds

	RECORDINGID	CATEGORYID	LABELID	PERFORMERNAME	TITLE	SELLPRICE	STOCKQUANTITY
1	1	70	5	Beyonce	Lemonade	25	150
2	2	10	4	Emotional Oranges	The Juicebox	20.5	60
3	3	40	3	LANY	I loved you	20.5	80
4	4	10	2	Lauv	Without you	15.85	100
5	5	30	1	Bazzi	Cosmic	20.5	75

```
DESCRIBE Recording;
```

Script Output ×

Task completed in 0.022 seconds

```
Name           Null     Type
-------------- -------- ------------
RECORDINGID    NOT NULL NUMBER(38)
CATEGORYID              NUMBER(38)
LABELID                 NUMBER(38)
PERFORMERNAME  NOT NULL VARCHAR2(25)
TITLE          NOT NULL VARCHAR2(25)
SELLPRICE      NOT NULL NUMBER
STOCKQUANTITY  NOT NULL NUMBER(38)
```

OrderLine

```
SELECT *
FROM orderline;
```

Script Output | Query Result

SQL | All Rows Fetched: 5 in 0.078 seconds

	ORDERLINENUM	ORDERNUM	RECORDINGID	PRICE	QUANTITYORDERED
1	101	1	1	25	10
2	102	2	2	20.5	20
3	103	3	3	20.5	30
4	104	4	4	15.85	40
5	105	5	5	20.5	50

```
DESCRIBE OrderLine;
```

Script Output

Task completed in 0.024 seconds

```
Name             Null     Type
---------------- -------- -----------
ORDERLINENUM     NOT NULL NUMBER(38)
ORDERNUM                  NUMBER(38)
RECORDINGID               NUMBER(38)
PRICE            NOT NULL NUMBER(5,2)
QUANTITYORDERED  NOT NULL NUMBER
```

Recording_History

```
SELECT *
FROM recording_history;
```

Script Output | Query Result

SQL | All Rows Fetched: 5 in 0.05 seconds

	PRICENUM	RECORDINGID	PRICE	STARTDATE
1	1	1	11.25	01-JAN-20
2	2	2	12.5	01-FEB-20
3	3	3	13.75	01-MAR-20
4	4	4	14	01-APR-20
5	5	5	15.15	01-MAY-20

```
DESCRIBE Recording_History;
```

Script Output

Task completed in 0.019 seconds

```
Name         Null     Type
-----------  -------- -----------
PRICENUM     NOT NULL NUMBER
RECORDINGID           NUMBER(38)
PRICE        NOT NULL NUMBER(5,2)
STARTDATE    NOT NULL DATE
```

Sales_Rep

```
SELECT *
FROM sales_rep;
```

Script Output | Query Result

SQL | All Rows Fetched: 5 in 0.055 seconds

	REPNUM	LABELID	LASTNAME	FIRSTNAME	PHONENUM	EMAIL
1	101	1	Leon	Kennedy	416-111-2222	l.kennedy@gmail.com
2	102	2	Chris	Redfield	416-222-3333	c.redfield@gmail.com
3	103	3	Claire	Redfield	416-333-4444	claire.r@gmail.com
4	104	4	Jill	Valentine	416-444-5555	j.valentine@gmail.com
5	105	5	Ada	Wong	416-555-6666	a.wong@gmail.com

```
DESCRIBE Sales_Rep;
```

Script Output

Task completed in 0.017 seconds

```
Name       Null     Type
---------- -------- ------------
REPNUM     NOT NULL NUMBER
LABELID             NUMBER(38)
LASTNAME   NOT NULL VARCHAR2(30)
FIRSTNAME  NOT NULL VARCHAR2(30)
PHONENUM   NOT NULL VARCHAR2(10)
EMAIL      NOT NULL VARCHAR2(50)
```

Region

```
1 SELECT *
2 FROM region;
```

Script Output | Query Result

SQL | All Rows Fetched: 5 in 0.052 seconds

	REGIONID	REPNUM	REGIONNAME
1	1111	101	Toronto
2	2222	102	York
3	3333	103	Peel
4	4444	104	Muskoka
5	5555	105	Niagara

```
DESCRIBE Region;
```

Script Output

Task completed in 0.027 seconds

```
Name        Null     Type
----------- -------- ------------
REGIONID    NOT NULL NUMBER(38)
REPNUM               NUMBER
REGIONNAME  NOT NULL VARCHAR2(30)
```

Run Procedure Script

```
@C:\Users\aspri\Desktop\aspringett\Semester-3\DBS311\Assignment2\Group7_Assignment2_Scripts.sql
```

Script Output × | Query Result ×

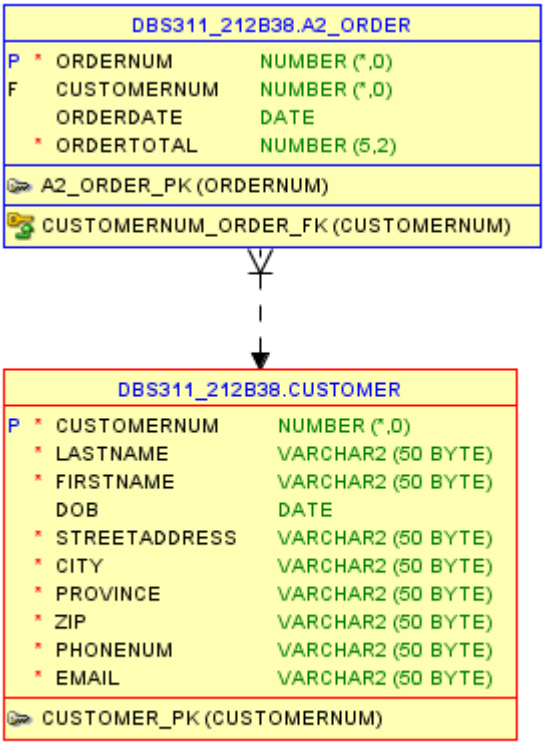
Task completed in 10.809 seconds

```
Procedure RECORDING_SELLING_PRICE_REPORT compiled

Total of High Recordings: 1
Total of Low Recordings: 1
Total of Recordings Equal to Average: 3


PL/SQL procedure successfully completed.
```

Collections and Sample JSON




```
CUSTOMER & A2_ORDER
{
    "lastName": String,
    "firstName": String,
    "Dob": Date,
    "streetAddress": String,
    "city": String,
    "province": String,
    "zip": String,
    "phoneNum": String,
    "email": String,
    "customerNum":[
        {
            "orderNum": ObjectID,
            "orderDate": Date,
            "orderTotal": Number,
        }
    ]
}
```

```
CUSTOMER & A2_ORDER
{
    "lastName": "Sanghwa",
    "firstName": "Suh",
    "Dob": "07-JUN-91",
    "streetAddress": "12 ad",
    "city": "Toronto",
    "province": "Ontario",
    "zip": "1A1",
    "phoneNum": "516-111-2222",
    "email": "sanghwa@gmail.com",
    "customerNum":[
        {
            "orderNum": 1,
            "orderDate": "01-JAN-16",
            "orderTotal": 10,
        },
        {
            "orderNum": 5,
            "orderDate": "05-MAY-20",
            "orderTotal": 50,
        }
    ]
}
```


CUSTOMER & A2_ORDER

{

"lastName": "Sanghwa",

"firstName": "Suh",

"Dob": "07-JUN-91",

"streetAddress": "12 ad",

"city": "Toronto",

"province": "Ontario",

"zip": "1A1",

"phoneNum": "516-111-2222",

"email": "sanghwa@gmail.com",

"customerNum":[

{

"orderNum": 1,

"orderDate": "01-JAN-16",

"orderTotal": 10,

},

{

"orderNum": 5,

"orderDate": "05-MAY-20",

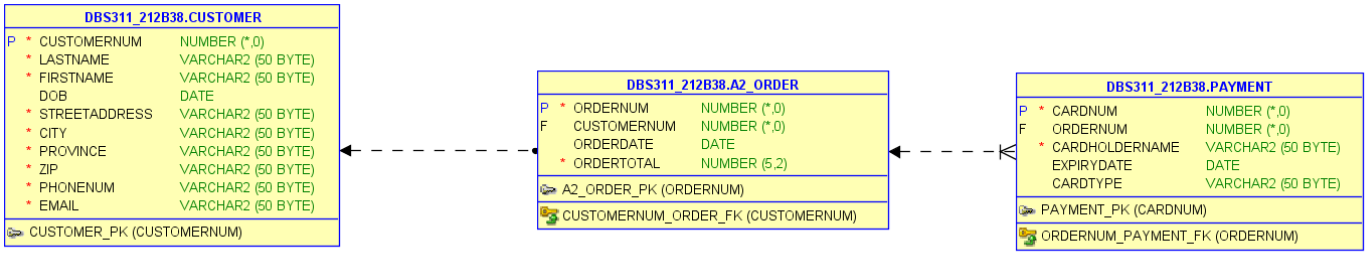
"orderTotal": 50,

}

```
    ]
}
```

Array Of References

```
{
    customerNum: 1,
    lastName: "Sanghwa",
    firstName: "Suh",
    Dob: "07-JUN-91",
    streetAddress: "12 ad",
    city: "Toronto",
    province: "Ontario",
    zip: "1A1",
    phoneNum: "516-111-2222",
    email: "sanghwa@gmail.com"
}
{
    orderNum: 1,
    customerNum: 1,
    orderDate: "01-JAN-16",
    orderTotal: 10
}
{
    orderNum: 5,
    customerNum: 1,
    orderDate: "05-MAY-20",
    orderTotal: 50
}
```



CUSTOMER & A2_ORDER & Payment

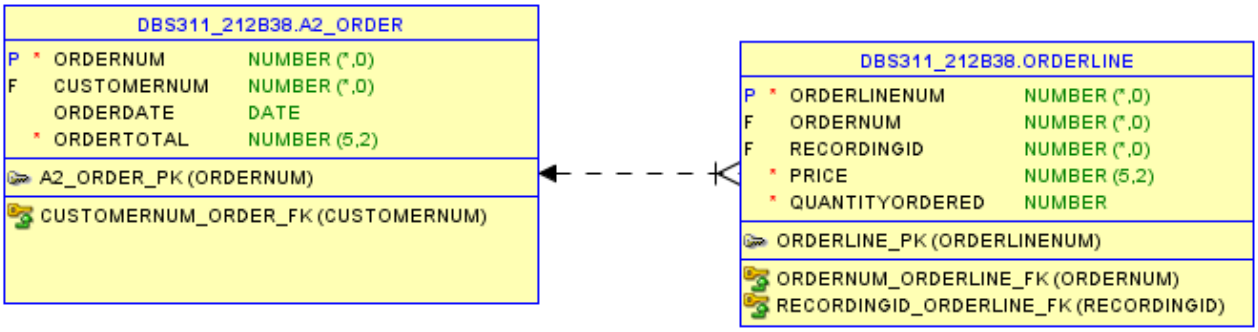
```
{
    "lastName": "Sanghwa",
    "firstName": "Suh",
    "Dob": "07-JUN-91",
    "streetAddress": "12 ad",
    "city": "Toronto",
    "province": "Ontario",
    "zip": "1A1",
    "phoneNum": "516-111-2222",
    "email": "sanghwa@gmail.com",
    "customerNum":[
        {
            "orderNum":[
                "cardNum": 100,
                "cardHolderName": Sanghwa,
                "expiryDate": 20-JUN-25,
                "cardType": VISA
            ],
            "orderDate": "01-JAN-16",
            "orderTotal": 10,
        },
        {
            "orderNum":[
                "cardNum": 500,
                "cardHolderName": Sanghwa,
                "expiryDate": 24-OCT-29,
                "cardType": AMEX
            ],
            "orderDate": "05-MAY-20",
            "orderTotal": 50,
        }
    ]
}
```

CUSTOMER & A2_ORDER & Payment

```
{
    "lastName": String,
    "firstName": String,
    "Dob": Date,
    "streetAddress": String,
    "city": String,
    "province": String,
    "zip": String,
    "phoneNum": String,
    "email": String,
    "customerNum":[
        {
            "orderNum":[
                "cardNum": INT,
                "cardHolderName": String,
                "expiryDate": Data,
                "cardType": String
            ],
            "orderDate": Date,
            "orderTotal": Number,
        }
    ]
}
```

1-M relationship	Data

CUSTOMER & A2_ORDER & Payment
{
"lastName": String,
"firstName": String,
"Dob": Date,
"streetAddress": String,
"city": String,
"province": String,
"zip": String,
"phoneNum": String,
"email": String,
"customerNum":[
{
"orderNum":[
"cardNum": INT,
"cardHolderName": String,
"expiryDate": Data,
"cardType": String
],
"orderDate": Date,
"orderTotal": Number,
}
]
}
	CUSTOMER & A2_ORDER & Payment
	{
	"lastName": "Sanghwa",
	"firstName": "Suh",
	"Dob": "07-JUN-91",
	"streetAddress": "12 ad",
	"city": "Toronto",
	"province": "Ontario",
	"zip": "1A1",
	"phoneNum": "516-111-2222",
	"email": "sanghwa@gmail.com",
	"customerNum":[
	{
	"orderNum":[
	"cardNum": 100,
	"cardHolderName": "Sanghwa",
	"expiryDate": "20-JUN-25",
	"cardType": "VISA"
	],
	"orderDate": "01-JAN-16",
	"orderTotal": 10,
	},
	{
	"orderNum":[
	"cardNum": 500,
	"cardHolderName": "Sanghwa",
	"expiryDate": "24-OCT-29",
	"cardType": "AMEX"
	],
	"orderDate": "05-MAY-20",
	"orderTotal": 50,
	}
	]
	}

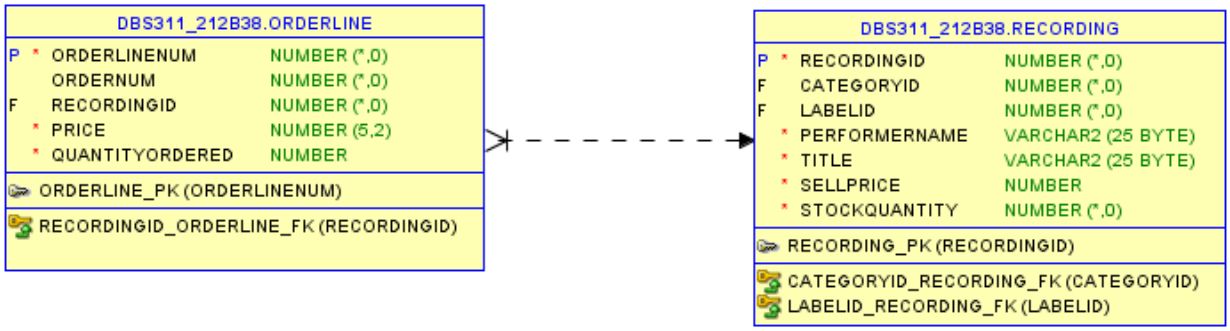



```
Order & OrderLine
{
    "orderNum":[
        orderlineNum: INT,
        recordingID: INT,
        price: Number,
        quantityOrdered: Number
    ],
    "orderDate": Date,
    "orderTotal": Number,
    "customerNum": Number
}
```

```
Order & OrderLine
{
    "orderNum":[
        orderlineNum: 101,
        recordingID: 1,
        price: 25,
        quantityOrdered: 10
    ],
    "orderDate": "01-JAN-16",
    "orderTotal": 10,
    "customerNum": 1
}
```

1-M relationship	Data

Order & OrderLine
{
"orderNum":[
orderlineNum: INT,
recordingID: INT,
price: Number,
quantityOrdered: Number
],
"orderDate": Date,
"orderTotal": Number,
"customerNum": Number
}
	Order & OrderLine
	{
	"orderNum":[
	orderlineNum: 101,
	recordingID: 1,
	price: 25,
	quantityOrdered: 10
	],
	"orderDate": "01-JAN-16",
	"orderTotal": 10,
	"customerNum": 1
	}

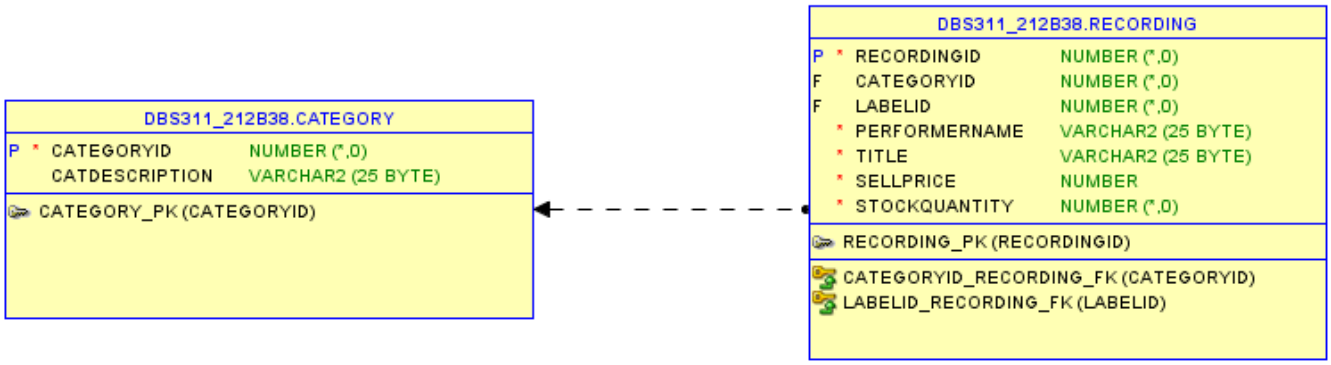



```
Recording & OrderLine
{
    recordingID:[
        orderlineNum: INT,
        orderNum: INT,
        price: Number,
        quantityOrdered: Number
    ],
    category: String,
    performerName: String,
    title: String,
    sellPrice: Number,
    stockQuantity: Number
}
```

```
Recording & OrderLine
{
    recordingID:[
        orderlineNum: 101,
        orderNum: 1,
        price: 25,
        quantityOrdered: 10
    ],
    category: 70,
    performerName: "Beyonce",
    title: "Lemonade",
    sellPrice: 25,
    stockQuantity: 150
}
```

1-M relationship	Data

Recording & OrderLine
{
recordingID:[
orderlineNum: INT,
orderNum: INT,
price: Number,
quantityOrdered: Number
],
category: String,
performerName: String,
title: String,
sellPrice: Number,
stockQuantity: Number
}
	Recording & OrderLine
	{
	recordingID:[
	orderlineNum: 101,
	orderNum: 1,
	price: 25,
	quantityOrdered: 10
	],
	category: 70,
	performerName: "Beyonce",
	title: "Lemonade",
	sellPrice: 25,
	stockQuantity: 150
	}

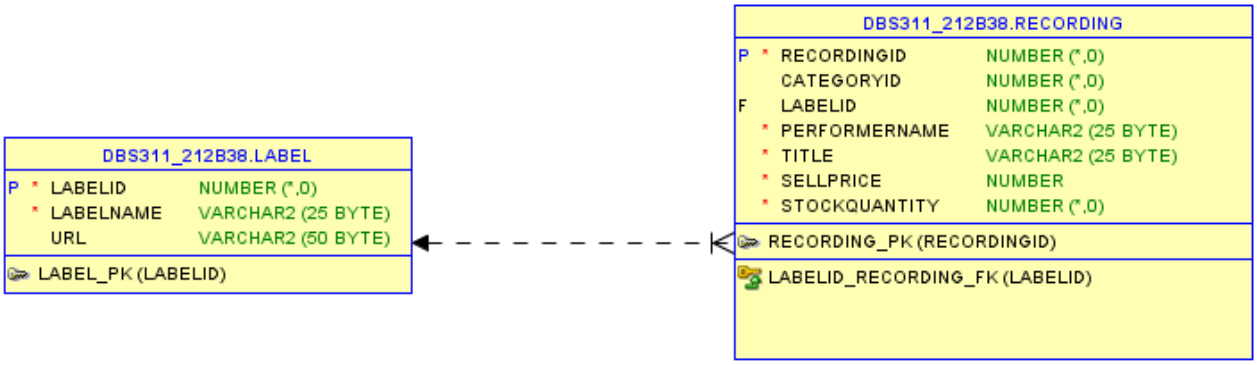



```
Category & Recording
{
    categoryID:[
        recordingID: INT,
        categoryID: INT,
        labelID: INT,
        performerName: String,
        title: String,
        sellPrice: Number,
        stockQuantity: INT
    ],
    catDescription: String
}
```

```
Category & Recording
{
    categoryID:[
        recordingID: 1,
        categoryID: 70,
        labelID: 5,
        performerName: "Beyonce",
        title: "Lemonade",
        sellPrice: 25,
        stockQuantity: 150
    ],
    catDescription: "Hip-Hop"
}
```

1-M relationship	Data

Category & Recording
{
categoryID:[
recordingID: INT,
categoryID: INT,
labelID: INT,
performerName: String,
title: String,
sellPrice: Number,
stockQuantity: INT
],
catDescription: String
}
	Category & Recording
	{
	categoryID:[
	recordingID: 1,
	categoryID: 70,
	labelID: 5,
	performerName: "Beyonce",
	title: "Lemonade",
	sellPrice: 25,
	stockQuantity: 150
	],
	catDescription: "Hip-Hop"
	}

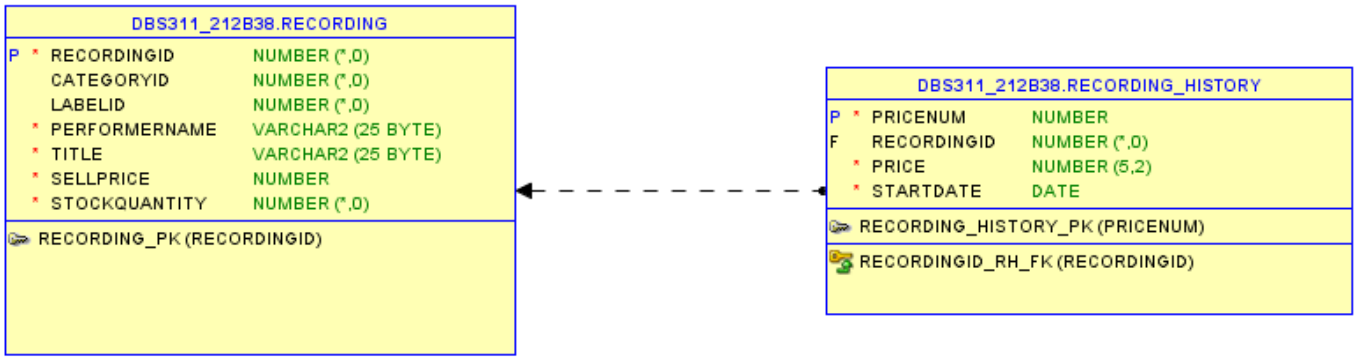



```
Label & Recording
{
    labelID:[
        recordingID: INT,
        categoryID: INT,
        performerName: String,
        title: String,
        sellPrice: Number,
        stockQuantity: INT
    ],
    labelName: String,
    URL: String
}
```

```
Label & Recording
{
    labelID:[
        recordingID: 1,
        categoryID: 70,
        performerName: "Beyonce",
        title: "Lemonade",
        sellPrice: 25,
        stockQuantity: 150
    ],
    labelName: "BMG",
    URL: "www.bmgmusic.com"
}
```

1-M relationship	Data

Label & Recording
{
labelID:[
recordingID: INT,
categoryID: INT,
performerName: String,
title: String,
sellPrice: Number,
stockQuantity: INT
],
labelName: String,
URL: String
}
	Label & Recording
	{
	labelID:[
	recordingID: 1,
	categoryID: 70,
	performerName: "Beyonce",
	title: "Lemonade",
	sellPrice: 25,
	stockQuantity: 150
	],
	labelName: "BMG",
	URL: "www.bmgmusic.com"
	}

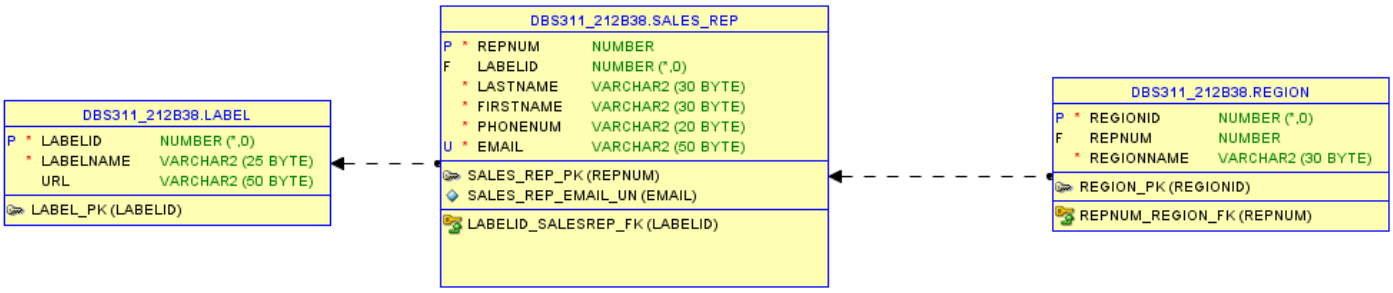



```
Recording & Recording History
{
    recordingID:[
        priceNum: INT,
        price: Number,
        pricestartDate: Date
    ],
    cateogryID: INT,
    labelID: INT,
    performerName: String,
    title: String,
    sellPrice: Number,
    stockQuantity: Number
}
```

```
Recording & Recording History
{
    recordingID:[
        priceNum: 1,
        price: 11.25,
        pricestartDate: "01-JAN-20"
    ],
    cateogryID: 70,
    labelID: 5,
    performerName: "Beyonce",
    title: "Lemonade",
    sellPrice: 25,
    stockQuantity: 150
}
```

1-M relationship	Data

Recording & Recording History
{
recordingID:[
priceNum: INT,
price: Number,
pricestartDate: Date
],
cateogryID: INT,
labelID: INT,
performerName: String,
title: String,
sellPrice: Number,
stockQuantity: Number
}
	Recording & Recording History
	{
	recordingID:[
	priceNum: 1,
	price: 11.25,
	pricestartDate: "01-JAN-20"
	],
	cateogryID: 70,
	labelID: 5,
	performerName: "Beyonce",
	title: "Lemonade",
	sellPrice: 25,
	stockQuantity: 150
	}




```
Label & Sales Rep & Region
{
    labelID:[
        repNum:[
            regionID: INT,
            regionName: String
        ],
        lastName: String,
        firstName: String,
        phoneNum: String,
        email: String
    ],
    labelName: String,
    URL: String
}
```

```
Label & Sales Rep & Region
{
    labelID:[
        repNum:[
            regionID: 5555,
            regionName: "Niagara"
        ],
        lastName: "Ada",
        firstName: "Wong",
        phoneNum: "416-555-6666",
        email: "a.wong@gmail.com"
    ],
    labelName: "BMG",
    URL: "www.bmgmusic.com"
}
```

1-M relationship	Data

Label & Sales Rep & Region
{
labelID:[
repNum:[
regionID: INT,
regionName: String
],
lastName: String,
firstName: String,
phoneNum: String,
email: String
],
labelName: String,
URL: String
}
	Label & Sales Rep & Region
	{
	labelID:[
	repNum:[
	regionID: 5555,
	regionName: "Niagara"
	],
	lastName: "Ada",
	firstName: "Wong",
	phoneNum: "416-555-6666",
	email: "a.wong@gmail.com"
	],
	labelName: "BMG",
	URL: "www.bmgmusic.com"
	}