ICT285 Databases Assignment

Name: Styverson Ng Yu Hao

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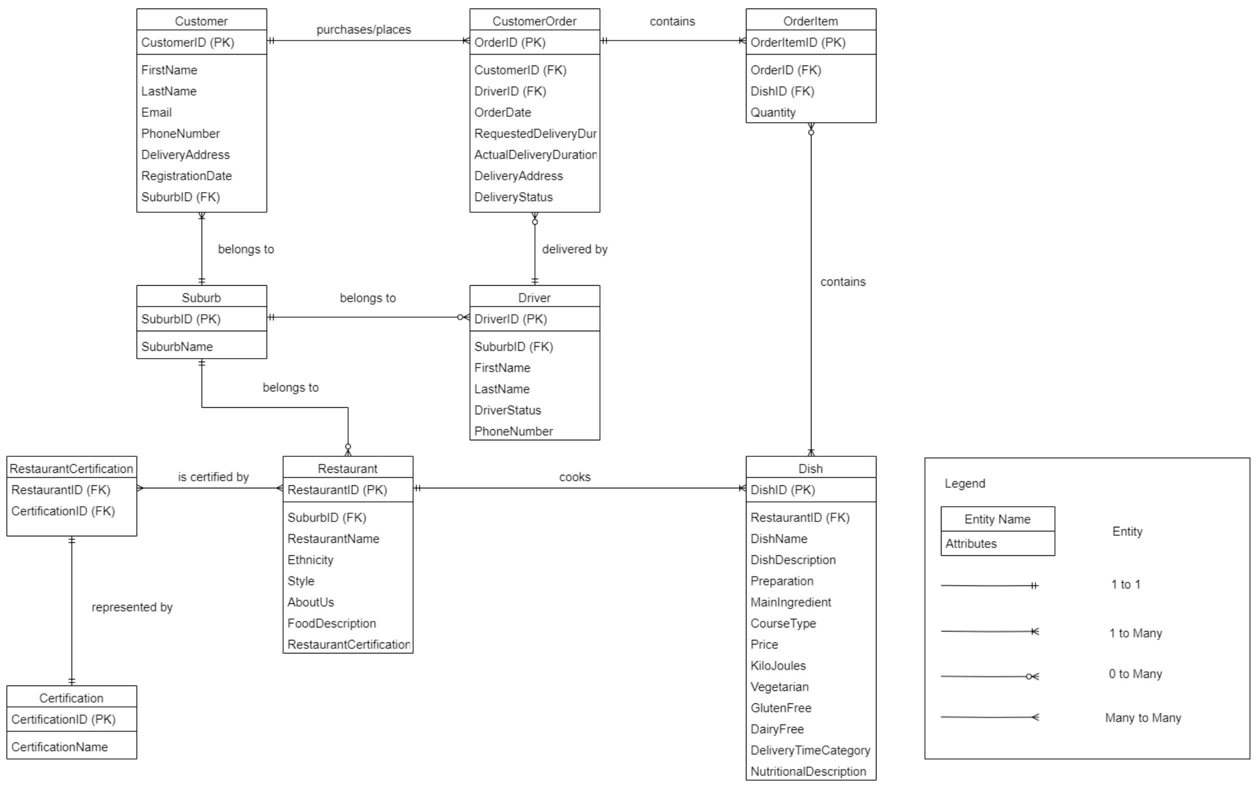
Question 1: Revised ERD and Schema



Based on the feedback received from the previous assignment, I have made some changes to my Entity-Relationship Diagram (ERD). Firstly, the removal of the Delivery entity as the details within should be under the Order entity. With the Delivery entity in the ERD, it would create data redundancy, and hence should be removed. Second, the relationship between OrderItem and Dish was incorrect. Instead of a one-to-one relationship, a single dish many be included within multiple different orders. A dish may be present within an order in multiple quantities or none, hence should be a zero-to-many relationship. Similarly, the relationship between RestaurantCertification and Certification should be in a one-to-one relationship and has been changed from a many-to-many relationship. Third, the connection between Restaurant and CustomerOrder is linked by its dishes, instead of having a direct relationship and hence has been changed. Order is changed to CustomerOrder as “Order” is a reserved keyword in SQL.

Additionally, with the foresight of Bill’s expansion, a Suburb entity has been added into the ERD. Instead of having suburb as an attribute, including a foreign key of SuburbID within entities such as driver, customer and restaurant avoids redundancy and improves consistency.

Relational Schema

1. Customer (CustomerID, FirstName, LastName, Email, PhoneNumber, DeliveryAddress, RegistrationDate, **SuburbID**)

2. Suburb (SuburbID, SuburbName)

3. Orders (OrderID, OrderDate, RequestedDeliveryDuration, ActualDeliveryDuration, DeliveryAddress, DeliveryStatus, **CustomerID, DriverID**)

4. Driver (DriverID, FirstName, LastName, DriverStatus, PhoneNumber, **SuburbID**)

5. Restaurant (RestaurantID, RestaurantName, Ethnicity, Style, AboutUs, FoodDescription, **SuburbID**)

6. Dish (DishID, DishName, DishDescription, Preparation, MainIngredient, CourseType, Price, KiloJoules, Vegetarian, GlutenFree, DairyFree, DeliveryTimeCategory, NutritionalDescription, **RestaurantID**)

7. OrderItem (OrderItemID, Quantity, **OrderID, DishID**)

8. Certification (CertificationID, CertificationName)

9. RestaurantCertification (**RestaurantID**, **CertificationID**)

Question 2: Data Dictionary

- Customer Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
CustomerID	Unique identifier of each customer	INT	-	Positive Integers	-	Yes	Primary Key
FirstName	First name of customer	VARCHAR	50	Alphabetical Characters	-	Yes	
LastName	Last name of customer	VARCHAR	50	Alphabetical Characters		Yes	
Email	Email of customer	VARCHAR	100	Valid email format		Yes	Unique
PhoneNumber	Contact number of customer	VARCHAR	15	Numeric Characters		Yes	
DeliveryAddress	Address for delivery	VARCHAR	200	Alphabetical Characters		Yes	
RegistrationDate	Date of registration	DATE	-	Valid Date	Current Date	Yes	
SuburbID	Suburb of customer's address	INT	-	Existing SuburbID		Yes	Foreign Key (Suburb)

- Driver Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
DriverID	Unique identifier for each driver	INT	-	Positive Integers	-	Yes	Primary Key
FirstName	First name of driver	VARCHAR	50	Alphabetical Characters	-	Yes	
LastName	Last name of driver	VARCHAR	50	Alphabetical Characters	-	Yes	
DriverStatus	Present availability status	VARCHAR	20	'Available', 'On delivery', 'Offline'	'Offline'	Yes	
PhoneNumber	Contact number of driver	VARCHAR	15	Numeric Characters	-	Yes	
SuburbID	Suburb of where the driver works in	INT	-	Existing SuburbID	-	Yes	Foreign Key (Suburb)

- Restaurant Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
RestaurantID	Unique identification for each restaurant	INT	-	Positive Integers	-	Yes	Primary Key
RestaurantName	Name of restaurant	VARCHAR	100	Alphabetical Characters	-	Yes	Unique
Ethnicity	Ethnicity of restaurant	VARCHAR	50	'Chinese', 'Indian', 'Muslim', etc.	-	Yes	
Style	Style of food served	VARCHAR	50	'BBQ', 'Soup', 'Western', etc.	-	Yes	
AboutUs	Short description of restaurant	VARCHAR	500	Alphabetical Characters	-	Yes	
FoodDescription	General description of restaurant's food	VARCHAR	500	Alphabetical Characters	-	Yes	
SuburbID	Suburb of restaurant's address	INT	-	Existing SuburbID	-	Yes	Foreign Key (Suburb)

- Suburb Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
SuburbID	Unique identifier for each suburb	INT	-	Positive Integers	-	Yes	Primary Key
SuburbName	Name of the suburb	VARCHAR	100	Alphabetical Characters	-	Yes	Unique

- CustomerOrder Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
OrderID	Unique identifier of each order	INT	-	Positive Integers	-	Yes	Primary Key
CustomerID	Unique identifier of each customer	INT	-	Existing CustomerID	-	Yes	Foreign Key (Customer)
DriverID	Driver assign to each order	VARCHAR	-	Existing Driver ID	-	No	Foreign Key (Driver)
OrderDate	Date of order placed	VARCHAR	-	Valid Date	Current Date	Yes	
RequestedDeliveryDuration	Anticipated duration of delivery	VARCHAR	-	Time	-	Yes	
ActualDeliveryDuration	Actual delivery time taken	VARCHAR	-	Time	-	No	
DeliveryAddress	Date of registration	DATE	200	Alphabetical Characters	-	Yes	
DeliveryStatus	Suburb of customer's address	INT	20	'Delivered', 'Out for Delivery'	'Out for Delivery'	Yes	

- OrderItem Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
OrderItemID	Unique identification of each ordered dish/item	INT	-	Positive Integers	-	Yes	Primary Key
OrderID	Identifier of the order the ordered dishes belong to	INT	-	Existing OrderID	-	Yes	Foreign Key (Order)
DishID	Identifier of the dishes being ordered	INT	-	Existing DishID	-	Yes	Foreign Key (Dish)
Quantity	Quantity per dish ordered	INT	-	Positive Integers	1	Yes	

- Dish Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
DishID	Unique identification of each dish	INT	-	Positive Integers	-	Yes	Primary Key
RestaurantID	Identifier of the restaurant that serves the dish	INT	-	Existing RestaurantID	-	Yes	Foreign Key (Restaurant)
DishName	Name of dish	VARCHAR	100	Alphabetical Characters	-	Yes	
DishDescription	Brief description of dish	VARCHAR	500	Alphabetical Characters	-	Yes	
Preparation	Method of how the dish is prepared	VARCHAR	50	'Fried', 'Steamed', etc.	-	Yes	
MainIngredient	Primary ingredients used in dish	VARCHAR	50	Alphabetical Characters	-	Yes	
CourseType	Type of course	VARCHAR	50	'Main', 'Sides', etc.	-	Yes	
Price	Price of dish	DECIMAL(5,2)	-	Positive decimal	-	Yes	
KiloJoules	Amount of calories in dish	INT	-	Positive Integer	-	Yes	
Vegetarian	Checking condition if the food is vegetarian	BOOLEAN	-	'True' or 'False'	-	Yes	
GlutenFree	Checking condition if the food is gluten free	BOOLEAN	-	'True' or 'False'	-	Yes	
DairyFree	Checking condition if the food is dairy free	BOOLEAN	-	'True' or 'False'	-	Yes	
DeliveryTimeCategory	Indication of how long the delivery will take	VARCHAR	20	'Fast', 'Regular', 'Worth the Wait'	-	Yes	
NutritionalDescription	Additional nutriential description of dish	VARCHAR	200	Alphabetical Characters	-	Yes	

- RestaurantCertification Table

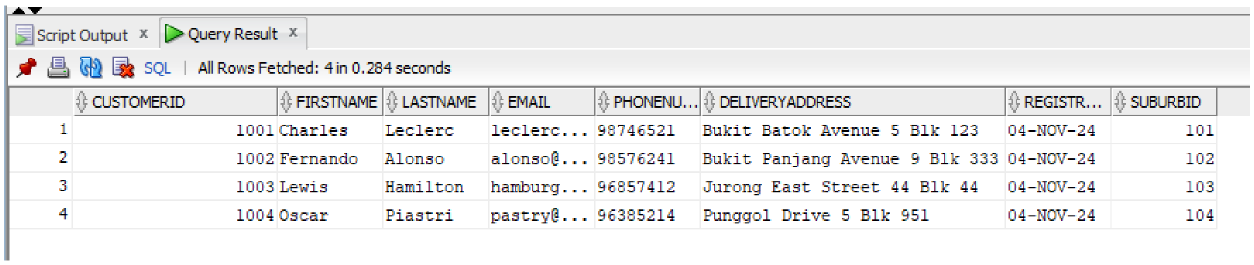
Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
RestaurantID	Identification of the restaurant the certification belongs to	INT	-	Existing RestaurantID	-	Yes	Foreign Key (Restaurant)
CertificationID	Identification of the certification	INT	-	Existing CertificationID	-	Yes	Foreign Key (Certification)

- Certification Table

Column Name	Description	Data Type	Size	Domain	Default Value	Required/ NOT NULL	Constraints
CertificationID	Unique identification of each certification	INT	-	Positive Integers	-	Yes	Primary Key
CertificationName	Name of certificate	VARCHAR	50	'Vegan', 'Halal', etc.	-	Yes	Unique

Question 3: Implementation

- SQL Customer Table



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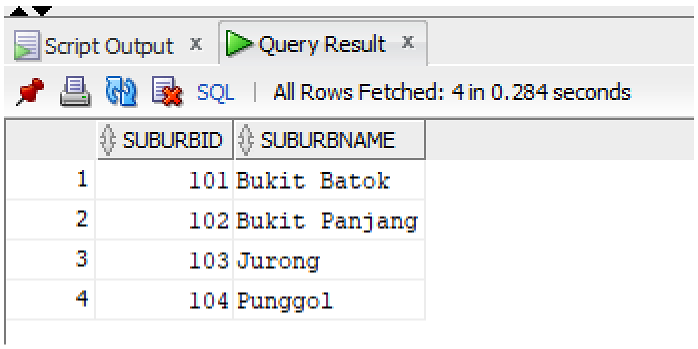
	CUSTOMERID	FIRSTNAME	LASTNAME	EMAIL	PHONENU...	DELIVERYADDRESS	REGISTR...	SUBURBID
1	1001	Charles	Leclerc	leclerc...	98746521	Bukit Batok Avenue 5 Blk 123	04-NOV-24	101
2	1002	Fernando	Alonso	alonso@...	98576241	Bukit Panjang Avenue 9 Blk 333	04-NOV-24	102
3	1003	Lewis	Hamilton	hamburg...	96857412	Jurong East Street 44 Blk 44	04-NOV-24	103
4	1004	Oscar	Piastri	pastry@...	96385214	Punggol Drive 5 Blk 951	04-NOV-24	104

- SQL Suburb Table



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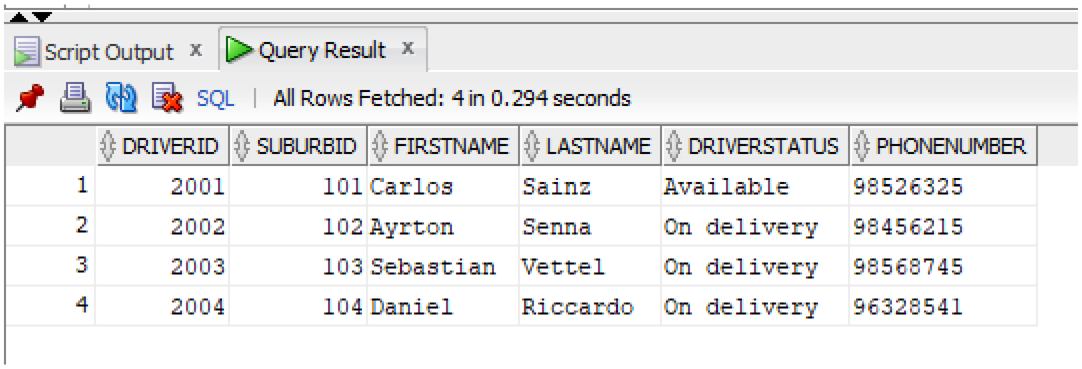
	SUBURBID	SUBURBNAME
1	101	Bukit Batok
2	102	Bukit Panjang
3	103	Jurong
4	104	Punggol

- SQL Driver Table



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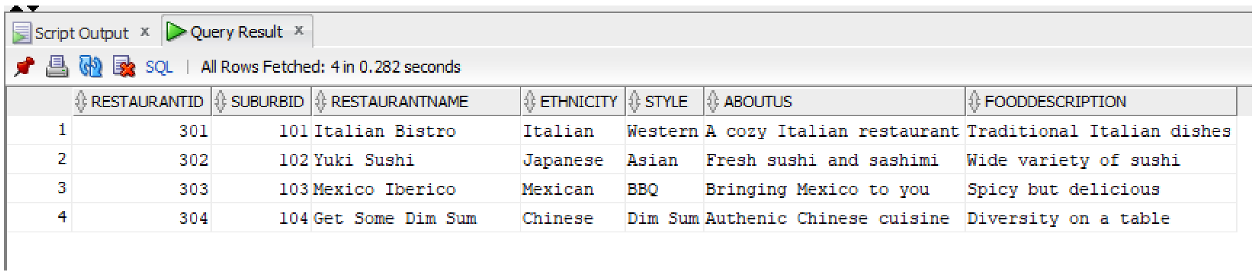
	DRIVERID	SUBURBID	FIRSTNAME	LASTNAME	DRIVERSTATUS	PHONENUMBER
1	2001	101	Carlos	Sainz	Available	98526325
2	2002	102	Ayrton	Senna	On delivery	98456215
3	2003	103	Sebastian	Vettel	On delivery	98568745
4	2004	104	Daniel	Riccardo	On delivery	96328541

- SQL Restaurant Table



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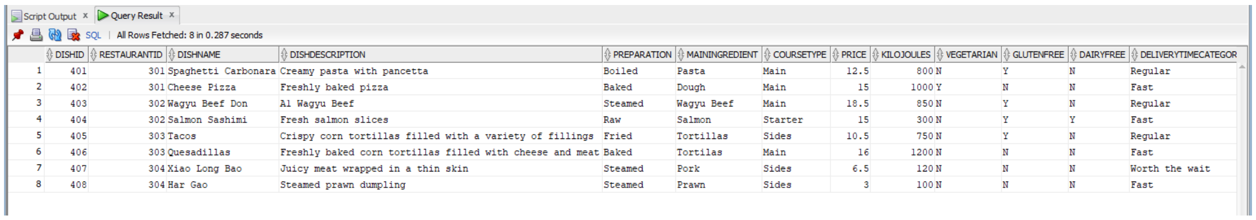
	RESTAURANTID	SUBURBID	RESTAURANTNAME	ETHNICITY	STYLE	ABOUTUS	FOODDESCRIPTION
1	301	101	Italian Bistro	Italian	Western	A cozy Italian restaurant	Traditional Italian dishes
2	302	102	Yuki Sushi	Japanese	Asian	Fresh sushi and sashimi	Wide variety of sushi
3	303	103	Mexico Iberico	Mexican	BBQ	Bringing Mexico to you	Spicy but delicious
4	304	104	Get Some Dim Sum	Chinese	Dim Sum	Authenic Chinese cuisine	Diversity on a table

- SQL Dish



Script Output | Query Result

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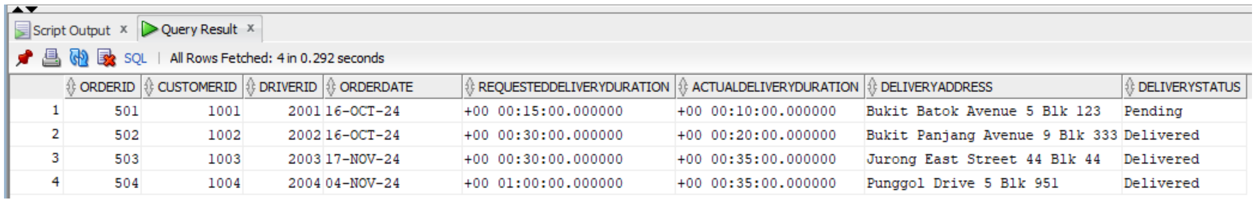
	DISHID	RESTAURANTID	DISHNAME	DISHDESCRIPTION	PREPARATION	MAININGREDIENT	COURSETYPE	PRICE	KILOJOULES	VEGETARIAN	GLUTENFREE	DAIRYFREE	DELIVERYTIMECATEGOR
1	401	301	Spaghetti Carbonara	Creamy pasta with pancetta	Boiled	Pasta	Main	12.5	800	N	Y	N	Regular
2	402	301	Cheese Pizza	Freshly baked pizza	Baked	Dough	Main	15	1000	Y	N	N	Fast
3	403	302	Wagyu Beef Don	Al Wagyu Beef	Steamed	Wagyu Beef	Main	18.5	850	N	Y	N	Regular
4	404	302	Salmon Sashimi	Fresh salmon slices	Raw	Salmon	Starter	15	300	N	Y	Y	Fast
5	405	303	Tacos	Crispy corn tortillas filled with a variety of fillings	Fried	Tortillas	Sides	10.5	750	N	Y	N	Regular
6	406	303	Quesadillas	Freshly baked corn tortillas filled with cheese and meat	Baked	Tortilas	Main	16	1200	N	N	N	Fast
7	407	304	Xiao Long Bao	Juicy meat wrapped in a thin skin	Steamed	Pork	Sides	6.5	120	N	N	N	Worth the wait
8	408	304	Har Gao	Steamed prawn dumpling	Steamed	Prawn	Sides	3	100	N	N	N	Fast

- SQL CustomerOrder Table



Script Output | Query Result

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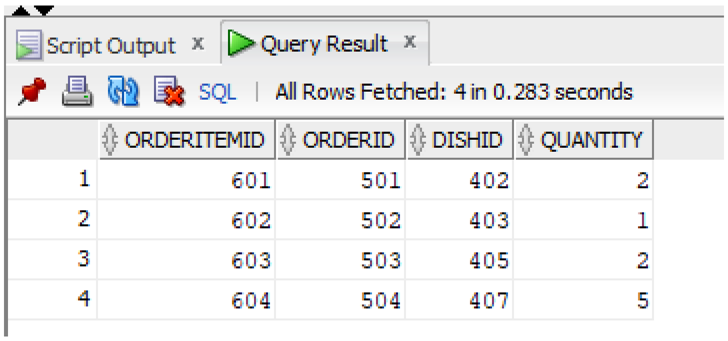
	ORDERID	CUSTOMERID	DRIVERID	ORDERDATE	REQUESTEDDELIVERYDURATION	ACTUALDELIVERYDURATION	DELIVERYADDRESS	DELIVERYSTATUS
1	501	1001	2001	16-OCT-24	+00 00:15:00.000000	+00 00:10:00.000000	Bukit Batok Avenue 5 Blk 123	Pending
2	502	1002	2002	16-OCT-24	+00 00:30:00.000000	+00 00:20:00.000000	Bukit Panjang Avenue 9 Blk 333	Delivered
3	503	1003	2003	17-NOV-24	+00 00:30:00.000000	+00 00:35:00.000000	Jurong East Street 44 Blk 44	Delivered
4	504	1004	2004	04-NOV-24	+00 01:00:00.000000	+00 00:35:00.000000	Punggol Drive 5 Blk 951	Delivered

- SQL OrderItem Table



Script Output | Query Result

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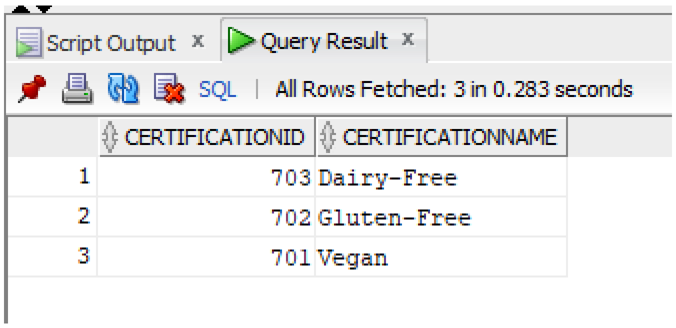
	ORDERITEMID	ORDERID	DISHID	QUANTITY
1	601	501	402	2
2	602	502	403	1
3	603	503	405	2
4	604	504	407	5

- SQL Certification Table



Script Output | Query Result

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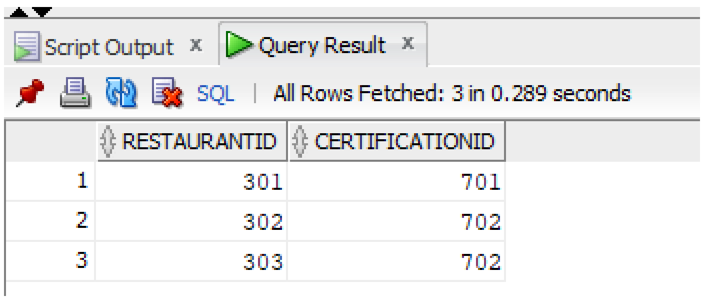
	CERTIFICATIONID	CERTIFICATIONNAME
1	703	Dairy-Free
2	702	Gluten-Free
3	701	Vegan

- SQL RestaurantCertification Table



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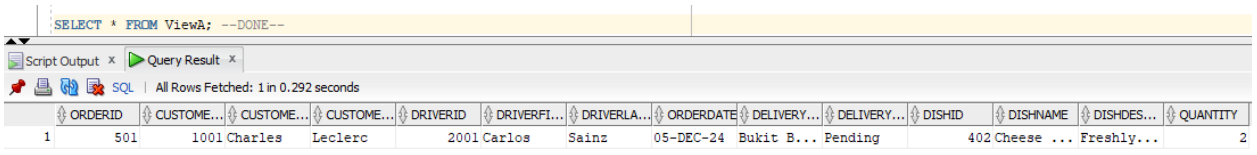
	RESTAURANTID	CERTIFICATIONID
1	301	701
2	302	702
3	303	702

Question 4: Views

- View A: All details of an order for a particular customer (Used for driver during pickup and confirmation with customer during delivery)

```
CREATE VIEW ViewA AS
SELECT CustomerOrder.OrderID,
    CustomerOrder.CustomerID,
    Customer.FirstName AS CustomerFirstName,
    Customer.LastName AS CustomerLastName,
    CustomerOrder.DriverID,
    Driver.FirstName AS DriverFirstName,
    Driver.LastName AS DriverLastName,
    CustomerOrder.OrderDate,
    CustomerOrder.DeliveryAddress,
    CustomerOrder.DeliveryStatus,
    OrderItem.DishID,
    Dish.DishName,
    Dish.DishDescription,
    OrderItem.Quantity
FROM CustomerOrder
JOIN Customer ON CustomerOrder.CustomerID = Customer.CustomerID
JOIN Driver ON CustomerOrder.DriverID = Driver.DriverID
JOIN OrderItem ON CustomerOrder.OrderID = OrderItem.OrderID
JOIN Dish ON OrderItem.DishID = Dish.DishID
WHERE CustomerOrder.CustomerID = 1001;
```



```
SELECT * FROM ViewA; --DONE--
```

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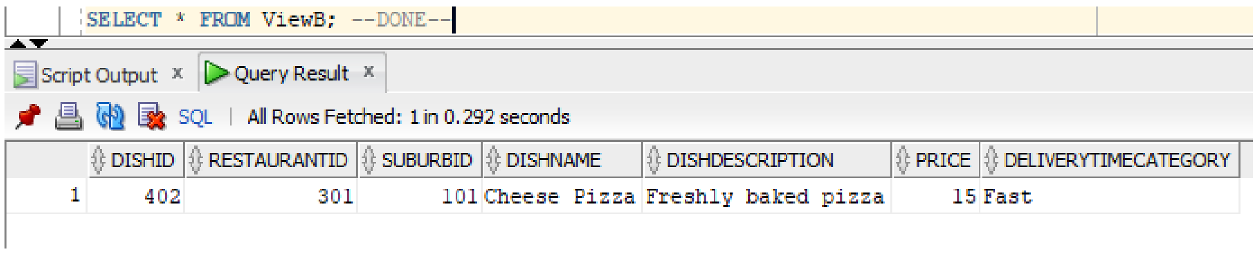
	ORDERID	CUSTOME...	CUSTOME...	CUSTOME...	DRIVERID	DRIVERFI...	DRIVERLA...	ORDERDATE	DELIVERY...	DELIVERY...	DISHID	DISHNAME	DISHDES...	QUANTITY
1	501	1001	Charles	Leclerc	2001	Carlos	Sainz	05-DEC-24	Bukit B...	Pending	402	Cheese ...	Freshly...	2

- View B: All the vegetarian dishes that can be delivered to customers in a particular suburb (SuburbID = 101) in less than half an hour

```
CREATE VIEW ViewB AS
SELECT Dish.DishID,
    Restaurant.RestaurantID,
    Suburb.SuburbID,
    Dish.DishName,
    Dish.DishDescription,
    Dish.Price,
    Dish.DeliveryTimeCategory
FROM Dish
JOIN Restaurant ON Dish.RestaurantID = Restaurant.RestaurantID
JOIN Suburb ON Restaurant.SuburbID = Suburb.SuburbID
WHERE Dish.Vegetarian = 'Y' AND Suburb.SuburbID = 101 AND
Dish.DeliveryTimeCategory = 'Fast';
```

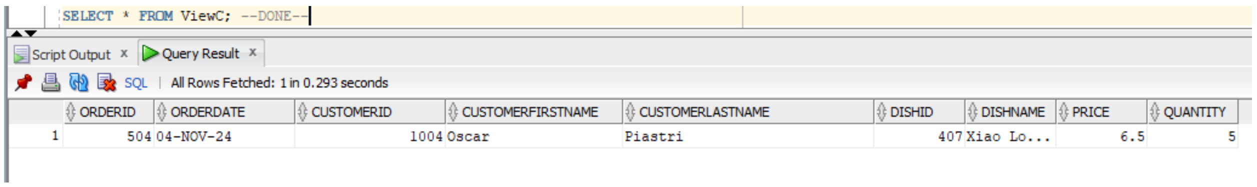


```
SELECT * FROM ViewB; --DONE--
```

	DISHID	RESTAURANTID	SUBURBID	DISHNAME	DISHDESCRIPTION	PRICE	DELIVERYTIMECATEGORY
1	402	301	101	Cheese Pizza	Freshly baked pizza	15	Fast

- View C: The details of the orders for a particular restaurant on a particular date (04 Nov 2024)

```
CREATE VIEW ViewC AS
SELECT CustomerOrder.OrderID,
       CustomerOrder.OrderDate,
       CustomerOrder.CustomerID,
       Customer.FirstName AS CustomerFirstName,
       Customer.LastName AS CustomerLastName,
       OrderItem.DishID,
       Dish.DishName,
       Dish.Price,
       OrderItem.Quantity
FROM CustomerOrder
JOIN OrderItem ON CustomerOrder.OrderID = OrderItem.OrderID
JOIN Dish ON OrderItem.DishID = Dish.DishID
JOIN Restaurant ON Dish.RestaurantID = Restaurant.RestaurantID
JOIN Customer ON CustomerOrder.CustomerID = Customer.CustomerID
WHERE Restaurant.RestaurantID = 304 AND
TO_CHAR(CustomerOrder.OrderDate, 'DD-MON-YY') = '04-NOV-24';
```



```
SELECT * FROM ViewC; --DONE--
```

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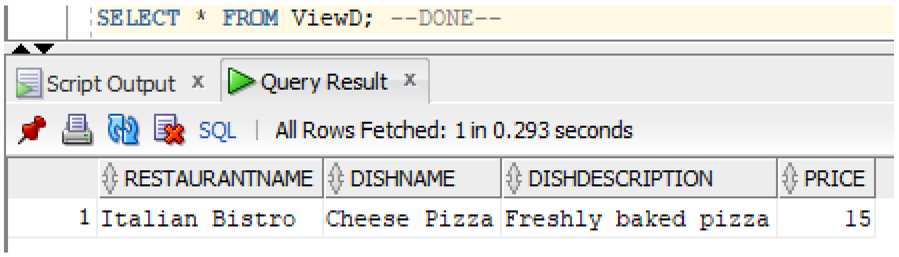
	ORDERID	ORDERDATE	CUSTOMERID	CUSTOMERFIRSTNAME	CUSTOMERLASTNAME	DISHID	DISHNAME	PRICE	QUANTITY
1	504	04-NOV-24	1004	Oscar	Piastri	407	Xiao Lo...	6.5	5

- View D: All the vegan restaurants and their names, description and prices of the dishes they offer

```
CREATE VIEW ViewD AS
SELECT Restaurant.RestaurantName,
    Dish.DishName,
    Dish.DishDescription,
    Dish.Price
FROM Restaurant
JOIN Dish ON Restaurant.RestaurantID = Dish.RestaurantID
WHERE Dish.Vegetarian = 'Y';
```



```
SELECT * FROM ViewD; --DONE--
```

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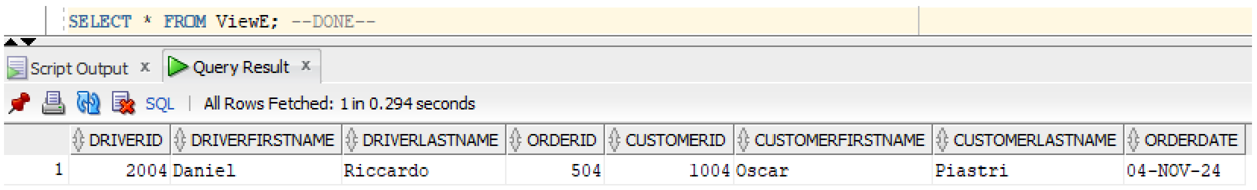
	RESTAURANTNAME	DISHNAME	DISHDESCRIPTION	PRICE
1	Italian Bistro	Cheese Pizza	Freshly baked pizza	15

- View E: List of all drivers and the customer they served on a particular date (04 Nov 2024)

```
CREATE VIEW ViewE AS
SELECT Driver.DriverID,
    Driver.FirstName AS DriverFirstName,
    Driver.LastName AS DriverLastName,
    CustomerOrder.OrderID,
    CustomerOrder.CustomerID,
    Customer.FirstName AS CustomerFirstName,
    Customer.LastName AS CustomerLastName,
    CustomerOrder.OrderDate
FROM Driver
LEFT JOIN CustomerOrder ON Driver.DriverID = CustomerOrder.DriverID
LEFT JOIN Customer ON CustomerOrder.CustomerID = Customer.CustomerID
WHERE TO_CHAR(CustomerOrder.OrderDate, 'DD-MON-YY') = '04-NOV-24';
```



```
SELECT * FROM ViewE; --DONE--
```

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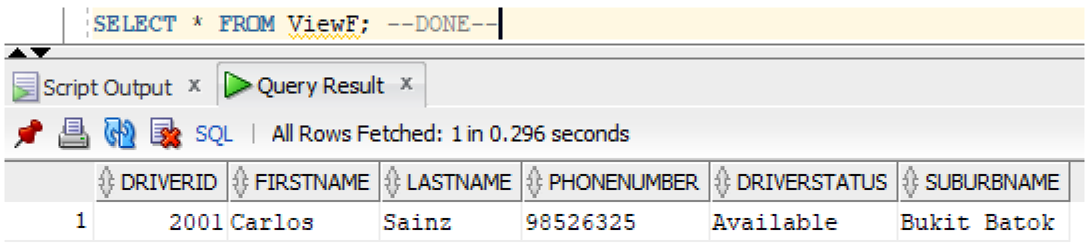
	DRIVERID	DRIVERFIRSTNAME	DRIVERLASTNAME	ORDERID	CUSTOMERID	CUSTOMERFIRSTNAME	CUSTOMERLASTNAME	ORDERDATE
1	2004	Daniel	Riccardo	504	1004	Oscar	Piastri	04-NOV-24

- View F: Available delivery in a particular suburb (Bukit Batok)

```
CREATE VIEW ViewF AS
SELECT Driver.DriverID,
       Driver.FirstName,
       Driver.LastName,
       Driver.PhoneNumber,
       Driver.DriverStatus,
       Suburb.SuburbName
FROM Driver
JOIN Suburb ON Driver.SuburbID = Suburb.SuburbID
WHERE Driver.DriverStatus = 'Available' AND Suburb.SuburbID = 101;
```



```
SELECT * FROM ViewF; --DONE--
```

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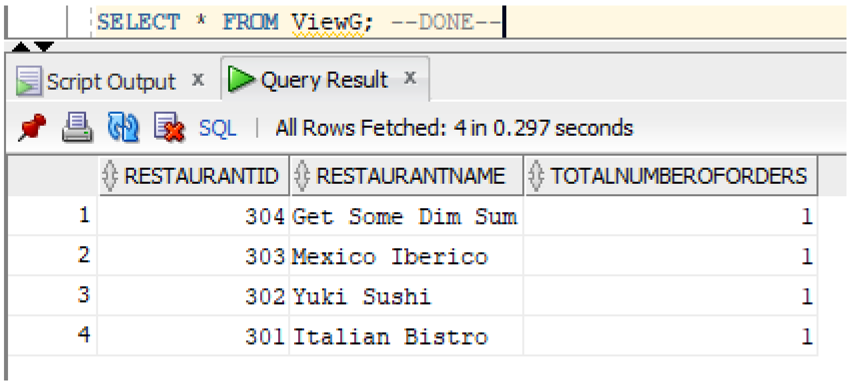
	DRIVERID	FIRSTNAME	LASTNAME	PHONENUMBER	DRIVERSTATUS	SUBURBNAME
1	2001	Carlos	Sainz	98526325	Available	Bukit Batok

- View G: Total number of orders received by each restaurant

```
CREATE VIEW ViewG AS
SELECT Restaurant.RestaurantID,
       Restaurant.RestaurantName,
       COUNT(CustomerOrder.OrderID) AS TotalNumberOfOrders
FROM Restaurant
JOIN Dish ON Restaurant.RestaurantID = Dish.RestaurantID
JOIN OrderItem ON Dish.DishID = OrderItem.DishID
JOIN CustomerOrder ON OrderItem.OrderID = CustomerOrder.OrderID
GROUP BY Restaurant.RestaurantID, Restaurant.RestaurantName;
```



```
SELECT * FROM ViewG; --DONE--
```

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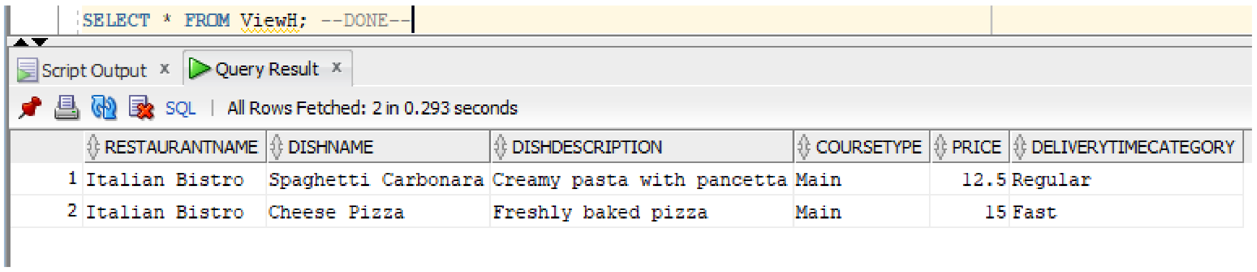
	RESTAURANTID	RESTAURANTNAME	TOTALNUMBEROFORDERS
1	304	Get Some Dim Sum	1
2	303	Mexico Iberico	1
3	302	Yuki Sushi	1
4	301	Italian Bistro	1

- View H: Booklet of all the dishes from a particular restaurant (Italian Bistro)

```
CREATE VIEW ViewH AS
SELECT Restaurant.RestaurantName,
    Dish.DishName,
    Dish.DishDescription,
    Dish.CourseType,
    Dish.Price,
    Dish.DeliveryTimeCategory
FROM Dish
JOIN Restaurant ON Dish.RestaurantID = Restaurant.RestaurantID
WHERE Restaurant.RestaurantID = 301;
```



```
SELECT * FROM ViewH; --DONE--
```

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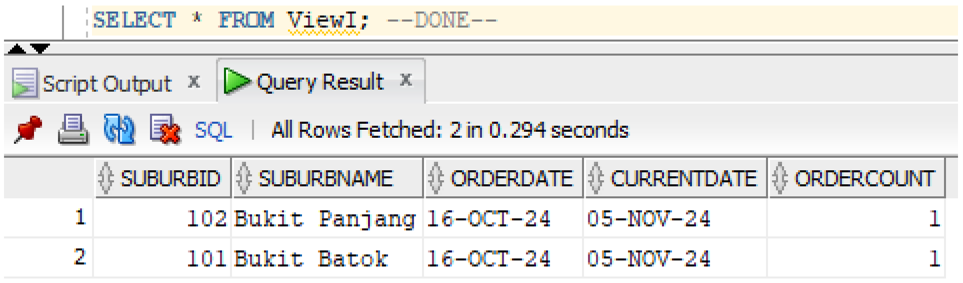
	RESTAURANTNAME	DISHNAME	DISHDESCRIPTION	COURSETYPE	PRICE	DELIVERYTIMECATEGORY
1	Italian Bistro	Spaghetti Carbonara	Creamy pasta with pancetta	Main	12.5	Regular
2	Italian Bistro	Cheese Pizza	Freshly baked pizza	Main	15	Fast

- View I: Number of orders in the previous month, categorized by suburbs and in descending number of orders per suburb

```
CREATE VIEW ViewI AS
SELECT Suburb.SuburbID,
       Suburb.SuburbName,
       CustomerOrder.OrderDate,
       SYSDATE AS CurrentDate,
       COUNT(CustomerOrder.OrderID) AS OrderCount
FROM CustomerOrder
JOIN Customer ON CustomerOrder.CustomerID = Customer.CustomerID
JOIN Suburb ON Customer.SuburbID = Suburb.SuburbID
WHERE CustomerOrder.OrderDate >= TRUNC(ADD_MONTHS(SYSDATE, -1),
'MM')
  AND CustomerOrder.OrderDate < TRUNC(SYSDATE, 'MM')
GROUP BY Suburb.SuburbID, Suburb.SuburbName, CustomerOrder.OrderDate
ORDER BY OrderCount DESC;
```



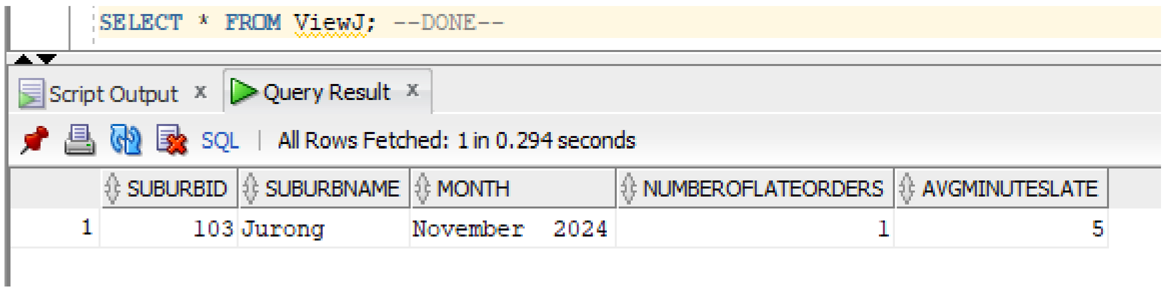
```
SELECT * FROM ViewI; --DONE--
```

All Rows Fetched: 2 in 0.294 seconds

	SUBURBID	SUBURBNAME	ORDERDATE	CURRENTDATE	ORDERCOUNT
1	102	Bukit Panjang	16-OCT-24	05-NOV-24	1
2	101	Bukit Batok	16-OCT-24	05-NOV-24	1

- View J: Number of late orders in a particular month (November 2024) and the average time they were late for

  CREATE VIEW ViewJ AS
  SELECT Suburb.SuburbID,
  	Suburb.SuburbName,
  	TO_CHAR(CustomerOrder.OrderDate, 'Month YYYY') AS Month,
  	COUNT(CustomerOrder.OrderID) AS NumberOfLateOrders,
  	AVG(EXTRACT(MINUTE FROM (CustomerOrder.ActualDeliveryDuration - CustomerOrder.RequestedDeliveryDuration))) AS AvgMinutesLate
  FROM CustomerOrder
  JOIN Customer ON CustomerOrder.CustomerID = Customer.CustomerID
  JOIN Suburb ON Customer.SuburbID = Suburb.SuburbID
  WHERE CustomerOrder.OrderDate >= TO_DATE('01-NOV-2024', 'DD-MON-YYYY')
   AND CustomerOrder.OrderDate < TO_DATE('01-DEC-2024', 'DD-MON-YYYY')
   AND CustomerOrder.ActualDeliveryDuration > CustomerOrder.RequestedDeliveryDuration
  GROUP BY Suburb.SuburbID, Suburb.SuburbName, TO_CHAR(CustomerOrder.OrderDate, 'Month YYYY');



```
SELECT * FROM ViewJ; --DONE--
```

	SUBURBID	SUBURBNAME	MONTH	NUMBEROFLATEORDERS	AVGMINUTESLATE
1	103	Jurong	November 2024	1	5