Assignment 3

- 1. Nothing to submit
- 2. Response of SQL Editor to requests that describe each of your relation schemas

Region:

	Field	Туре	Null	Key	Default	Extra
•	regionID	int	NO	PRI	NULL	auto_increment
	regionName	varchar(50)	YES		NULL	

PostOffice:

		Field	Туре	Null	Key	Default	Extra	
	▶	officeNo	int	NO	PRI	NULL	auto_increment	
			int	NO		NULL		
		regionID	int	NO	MUL	NULL		
14								

PostOfficeStaff:

	Field	Туре	Null	Key	Default	Extra
•	staffNo	int	NO	PRI	NULL	auto_increment
	staffName	varchar(50)	NO		NULL	
	staffPhoneNo	char(10)	YES	_	NULL	
	dateHired	date	NO		NULL	
	salary	bigint	NO		NULL	
	officeNo	int	NO	MUL	NULL	

Payment:

	Field	Туре	Null	Key	Default	Extra	
•	transactionNo	int	NO	PRI	NULL	auto_increment	
	total	decimal(10,2)	YES		NULL		
	payDate	date	YES		NULL		
	staffNo	int	YES	MUL	NULL		

Truck:

Field	Туре	Null	Key	Default Extra	
▶ plateNo	char(7)	NO	PRI	NULL	П
maxWeight	int	NO		NULL	П
maxSize	int	NO		NULL	
yearPurchased	int	NO		NULL	
regionID	int	NO	MUL	NULL	

Location:

	Field	Туре	Null	Key	Default Extra	Ţ
•	postCode	char(6)	NO	PRI	NULL	Т
	address	varchar(50)	NO		NULL	П
	officeNo	int	NO	MUL	NULL	

Customer:

	Field	Туре	Null	Key	Default Extra
•	email	varchar(50)	NO	PRI	NULL
	custName	varchar(50)	NO		NULL
	postCode	char(6)	NO	MUL	NULL
	custPhoneNo	char(10)	YES		NULL
	cardNo	char(16)	YES		NULL

Package:

weight int NO NOLL size int NO NOLL price decimal(5,2) YES MULL destination char(6) NO NOLL deliveryDate date NO NOLL senderEmail varchar(50) NO MUL NOLL transactionNo int YES MUL NOLL	Field	Туре	Null	Key	Default	Extra
Size int NO NULL	▶ packageID	int	NO	PRI	NULL	auto_increment
price decimal(5,2) YES NULL	weight	int	NO		NULL	
destination char(6) NO	size	int	NO		NULL	
orderDate date NO NOLL deliveryDate date YES NULL senderEmail varchar(50) NO MUL NULL transactionNo int YES MUL NULL	price	decimal(5,2)	YES		NULL	
deliveryDate date YES NULL senderEmail varchar(50) NO MUL NULL transactionNo int YES MUL NULL	destination	char(6)	NO		NULL	
senderEmail varchar(50) NO MUL NULL transactionNo int YES MUL NULL	orderDate	date	NO		NULL	
transactionNo int YES MUL HULL	deliveryDate	date	YES		NULL	
The state of the s	senderEmail	varchar(50)	NO	MUL	NULL	
	transactionNo	int	YES	MUL	NULL	
plateNo char(7) YES MUL NULL	plateNo	char(7)	YES	MUL	NULL	

Driver:

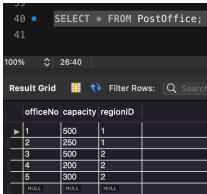
		Field	Туре	Null	Key	Default	Extra
	▶	staffNo	int	NO	PRI	NULL	
		staffName	varchar(50)	NO		NULL	
		staffPhoneNo	char(10)	YES		NULL	
1		dateHired	date	NO		NULL	
		licenseNo	char(15)	NO		NULL	
1		weeklyHours	int	NO		NULL	
		plateNo	char(7)	YES	MUL	NULL	

Visit:

	Field	Туре	Null	Key	Default	Extra	
•	officeNo	int	NO	PRI	NULL		
	plateNo	char(7)	NO	PRI	NULL		
	visitDate	date	NO		NULL		

3. Show the response of the SQL Editor and the relation that results when you issue a SELECT * command





4. Turn in a small sample of the records generated for each relation

Wrote a program to fabricate data for Location, Customer, Package, PostOfficeStaff, Payment and Truck.

Location:

	postCode	address	officeNo	
•	A1A1A1	123 Example St	1	
	A1K7Q2	123 Example St	5	
	A1L7L5	123 Example St	3	
6. 2.	A1Q3J6	123 Example St	2	
	A1U2S4	123 Example St	4	
	A2C5Q2	123 Example St	4	
	A2J7W2	123 Example St	5	
6.	A2P2W1	123 Example St	4	

Customer:

email	custName	postCode	custPhoneNo	cardNo
avawashington2731@msn.com	Ava Washington	D2Q5B7	6470000000	00000000000000000
avawashington5126@yahoo.com	Ava Washington	V4X2P6	6470000000	0000000000000000
avawood2936@msn.com	Ava Wood	B5H3T6	6470000000	000000000000000000000000000000000000000
avawood5379@aol.com	Ava Wood	N5I5Q4	6470000000	000000000000000000000000000000000000000
avawood8902@uwo.ca	Ava Wood	M6N7E1	6470000000	000000000000000000000000000000000000000
benjaminbezos7189@icloud.com	Benjamin Bezos	U4U1D4	6470000000	0000000000000000
benjamincaufield447@gmail.com	Benjamin Caufi	X7A6Y3	6470000000	0000000000000000
benjaminchevalier8025@aol.com	Beniamin Chev	O3K4Y6	6470000000	0000000000000000

Payment:

	transaction	total	payDate	staffNo	
•	1	NULL	2021-11-26	1	
	2	NULL	2021-11-26	31	
	3	NULL	2021-11-26	17	
	4	NULL	2021-11-26	15	
	5	NULL	2021-11-26	41	
	6	NULL	2021-11-26	20	
	7	NULL	2021-11-26	15	

Package:

	packageID	weight	size	price	destination	orderDate	deliveryDate	senderEmail	transaction	plateNo	
•	1	10	2	25.00	B1A1A1	2021-11-26	NULL	example@gmail.com	1	HULL	
	2	36	6	5.00	H2K3C2	2021-11-26	2021-11-26	jacksonsharkey9408@hotmail.com	170	HULL	
	3	83	8	5.00	N1J6B4	2021-11-26	2021-11-26	oliverdimaline8173@yahoo.com	169	HULL	
	4	8	2	5.00	F4K1T3	2021-11-26	2021-11-26	gordonchevalier1404@uwo.ca	37	NULL	
	5	83	7	5.00	N5N5F2	2021-11-26	2021-11-26	zoeyjohnson1387@msn.com	117	NULL	
	6	5	10	5.00	C4E3O3	2021-11-26	2021-11-26	jameschen6803@uwo.ca	246	NULL	
	7	70	10	5.00	O4W3M6	2021-11-26	2021-11-26	matthewbraun7735@aol.com	30	NULL	
_	•		-	- 00	100707	0004 44 00	0004 44 00	1 1 20446	0.45		-

PostOfficeStaff:

	staffNo	staffName	staffPhoneNo	dateHired	salary	officeNo	l
•	1	Justin Beaudry	000000000	2021-11-26	100000	1	Γ
	2	Matthew Wilson	000000000	2021-11-26	67000	1	П
	3	Amilia Sankara	0000000000	2021-11-26	56000	4	П
	4	Omar Johnson	000000000	2021-11-26	55000	2	Т
	5	Benjamin Neff	000000000	2021-11-26	75000	2	Т
	6	Lucas Lavoie	000000000	2021-11-26	77000	3	T
	7	Harman Mahar	000000000	0001 11 00	CEOOO	E	т

Truck:

	plateNo	maxWeight	maxSize	yearPurchased	regionID
•	AV00000	800	250	2019	1
Г	CJ80817	477	297	2019	1
_	HE15263	255	253	2011	1
С	LT16002	371	251	2020	2
	NB53800	264	200	2019	2
	NO71098	419	281	2010	1
	OQ95233	301	232	2021	2

5. Turn in a copy of all your SQL queries and the response of the system

```
-- 1. Selecting all packages sent by a certain customer

SELECT packageID, destination, orderbate, deliveryDate, plateNo
FROM Package

WHERE senderEmail = 'example@gmail.com';

-- 2. Selecting all staff with an above average salary

SELECT + FROM PostOfficeStaff

WHERE salary > (SELECT AVG(salary) FROM PostOfficeStaff);

-- 3. Selecting all trucks purchased before 2020, showing total for each region

SELECT regionID, COUNT(*) AS numfrucks

FROM Truck

GROUP BY regionID;

-- 4. Selecting all undelivered packages

SELECT p.packageID, p. destination, p.orderDate, c.custName
FROM Package p, Customer c

WHERE p.deliveryDate IS NULL AND p.senderEmail = c.email;

-- 5. Selecting staff with highest sales

SELECT sub2.staffNo, staffName, sub2.MaxSum AS "Winning Revenue"

FROM (SELECT sub1.staffNo, staffName, hax(sub1.Sumfotal) AS MaxSum
FROM (SELECT pos.staffNo, staffName, sub2.MaxSum AS "Winning Revenue"

FROM (SELECT sub2.staffNo, staffName, sub2.MaxSum AS "Winning Revenue"

SELECT sub2.staffNo, staffName, sub2.MaxSum AS "Winning Revenue"

-- 5. Selecting all customers with gmail addresses

SELECT + FROM (Customer WHERE email LIKE "Magmail.com";

-- 6. Selecting all customers with gmail addresses

SELECT + FROM Customer WHERE email LIKE "Magmail.com";

-- 7. Selecting total revenue for each post office +NOTE THIS MON'T WORK UNITIL YOU RUN UPDATES IN ex6.sql

SELECT officeNo, SUM(total) AS "Total Revenue"
FROM (PostOfficeStaff pos JOIN Payment py ON pos.staffNo = py.staffNo)

GOUP BY officeNo;
```

1:

	packageID	destination	orderDate	deliveryDate	plateNo	
•	1	B1A1A1	2021-11-26	2021-11-26	NULL	
	NULL	NULL	NULL	NULL	NULL	

2:

	staffNo	staffName	staffPhoneNo	dateHired	salary	officeNo	
•	1	Justin Beaudry	0000000000	2021-11-26	100000	1	
	2	Sophia Martin	0000000000	2021-11-26	91000	4	
	3	Mary Atwood	0000000000	2021-11-26	82000	4	
	6	Justin Austen	000000000	2021-11-26	100000	1	
	8	Ava Wilson	000000000	2021-11-26	89000	4	
	9	Logan Wood	000000000	2021-11-26	93000	2	
	12	Karen Rodriguez	000000000	2021-11-26	96000	3	
	20	Keith Lee	000000000	2021-11-26	75000	1	
	28	Benjamin Kropotkin	000000000	2021-11-26	80000	3	
	30	Taitum Braun	000000000	2021-11-26	77000	4	
	31	Chloe Northup	000000000	2021-11-26	85000	1	
	32	Ahmed Lavoie	000000000	2021-11-26	92000	5	I^{-}
	36	Kenny Atwood	000000000	2021-11-26	88000	3	ı
	37	Heather Bouchard	000000000	2021-11-26	91000	2	
	39	Amilia Northup	000000000	2021-11-26	77000	1	
	40	Warren Miller	000000000	2021-11-26	92000	3	
	44	Aria Towels	000000000	2021-11-26	98000	3	
	46	Sophia Morin	000000000	2021-11-26	83000	2	
	49	Omar Kropotkin	000000000	2021-11-26	97000	5	
1	51	Gordon Stienbeck	000000000	2021-11-26	93000	4	
100		Toronto I	DOWNERS	December 1	Terror was	-	

3:

	regionID	numTrucks	
•	1	4	Γ
	2	3	

4:

	packageID	destination	orderDate	custName
•	1115	T8X8A4	2021-11-26	Joel Towels
	1212	F2V5D2	2021-11-26	Cole Tremblay
	1214	Q2V5W8	2021-11-26	Cole Tremblay
	1276	L3R7Z4	2021-11-26	Noah Washington
_	1314	P6A1J6	2021-11-26	Aria Caufield
Г	1325	M8E4H2	2021-11-26	James Washington
	1359	E1Y7Y1	2021-11-26	Karen Chevalier
Т	1394	G3R3K3	2021-11-26	Thomas Tremblay
	1481	K4A6L5	2021-11-26	Matthew Northup
Г	1537	N7F5O7	2021-11-26	Amilia Neff
_	1561	T8Q1U1	2021-11-26	Oliver Sharkey
Г	1701	A4B4S4	2021-11-26	Abigail Wood
Т	1712	17B5F8	2021-11-26	Amilia Wood
Г	1789	B4I3X6	2021-11-26	Carl Chen
	1812	C7N8L7	2021-11-26	Patricia Ramsey
П	1828	H3O2B3	2021-11-26	Abigail Braun
	1835	W7J5P6	2021-11-26	Bill Dimaline
Г	1840	X5L6J1	2021-11-26	Angela Martin
	1952	C2U7W8	2021-11-26	Mario Austen
Г	2101	Z8X8S6	2021-11-26	Candace Brown
	2138	Y1F2J2	2021-11-26	Patrick Martin
	2170	M7Z8K6	2021-11-26	Oliver Garcia
	2225	C1X3I4	2021-11-26	Mary Bezos
	2249	Z7N3X3	2021-11-26	Bill Martinez

st	affNo	staffName	Winning Revenue	
b 1		Justin Beaudry	1015.00	

6:

	email	custName	postCode	custPhoneNo	cardNo	
•	abigaildimaline5948@gmail.com	Abigail Dimaline	T5X4H8	6470000000	000000000000000	
1	abigailmiller7788@gmail.com	Abigail Miller	Z1T6D2	6470000000	000000000000000	
	abigailmiller981@gmail.com	Abigail Miller	V4A3W6	6470000000	000000000000000	
	abigailramsey1115@gmail.com	Abigail Ramsey	S3J4Q5	6470000000	000000000000000	
	abigailstienbeck3421@gmail.com	Abigail Stienbeck	S7G7V8	6470000000	000000000000000	
	ahmeddavis462@gmail.com	Ahmed Davis	A6Q6X7	6470000000	000000000000000	
	ahmedkeefe6284@gmail.com	Ahmed Keefe	U4H1G4	6470000000	000000000000000	
	ahmedkeefe9514@gmail.com	Ahmed Keefe	W8Z2Z7	6470000000	000000000000000	
	ahmedsharkey7274@gmail.com	Ahmed Sharkey	B8S6D6	6470000000	000000000000000	
	amiliaausten776@gmail.com	Amilia Austen	I7N2A2	6470000000	000000000000000	
	amiliabraun657@gmail.com	Amilia Braun	L3R7Z4	6470000000	000000000000000	
	amiliamiller6512@gmail.com	Amilia Miller	P5D7E3	6470000000	000000000000000	
	amilianeff9152@gmail.com	Amilia Neff	F6H6A5	6470000000	000000000000000	
	amiliasmith6613@gmail.com	Amilia Smith	O2S3B3	6470000000	000000000000000	
	angelaatwood5029@gmail.com	Angela Atwood	G5H2S8	6470000000	000000000000000	
	angelagauthier8553@gmail.com	Angela Gauthier	Q2G4L8	6470000000	000000000000000	
	angelajones1821@gmail.com	Angela Jones	Y7R3O3	6470000000	000000000000000	
	angelajones3989@gmail.com	Angela Jones	F6W2V1	6470000000	000000000000000	
	angelamartin704@gmail.com	Angela Martin	F1Q4W3	6470000000	000000000000000	
1	ariacaufield2387@gmail.com	Aria Caufield	E1V7J2	6470000000	000000000000000	
	ariachen5993@gmail.com	Aria Chen	L3R7Z4	6470000000	000000000000000	
	ariaprice7282@gmail.com	Aria Price	J1U7K5	6470000000	000000000000000	
	ariaprimeau8369@gmail.com	Aria Primeau	L7P2N6	6470000000	000000000000000	

7:

officeNO Total Revenue							
ا	•	1	5000.00				
		2	3845.00				
		3	5675.00				
		4	3955.00				
		5	4050.00				

6. Hand in your modification commands and the response of the system

```
        4 45
        19:33:33
        UPDATE Package SET deliveryDate = CURRENT_DATE() WHERE packageID < 1000 AND deliveryDate IS NULL</th>
        15 row(s) affected Rows matched: 15 Changed: 15 W... 0.0048 sec
        0.00018 sec

        4 6
        19:33:33
        SET SQL_SAFE_UPDATES = 0
        0 row(s) affected
        0.00018 sec
        0.00018 sec

        4 7
        19:33:33
        UPDATE Payment py SET total = (SELECT SUM(price) FROM Package pk
        WHERE pytransactionNo = pk.transaction.
        400 row(s) affected Rows matched: 4001 Changed:...
        0.0013 sec

        4 9
        19:33:34
        SET SQL_SAFE_UPDATES = 1
        0 row(s) affected
        0.00021 sec
```

7. Hand in your CREATE VIEW statements and the response of the system. Also, show a query involving each view and the system response (but truncate the response if there are more than a few tuples produced). Finally, show a script of what happens when you try to modify your view, say by inserting a new tuple into it. Are your views updatable? Tell why or why not?

After attempting to update our VIEW statements it was clear by our results in the screenshots below we were not able to. Thus our views are not updatable because of the two tables present, making it unchangeable.

```
-- 1.

CREATE VIEW driverRegion AS

SELECT d.staffNo, d.staffName, d.licenseNo, t.plateNo, t.regionID

FROM Driver AS d INNER JOIN Truck AS t

ON d.plateNo = t.plateNo;

-- SELECT * FROM driverRegion WHERE regionID = 1;

REATE VIEW paymentHandler AS

SELECT p.transactionNo, p.total, p.payDate, s.staffName, s.staffNo
FROM Payment AS p INNER JOIN PostOfficeStaff AS s

ON p.staffNo = s.staffNo;

-- Select's All payments made by Justin Beaudry (Employee of the month)

-- SELECT * FROM paymentHandler WHERE staffNo = 1;

-- 3.

REATE VIEW packageInfo AS

SELECT p.transactionNo, p.total, p.payDate, s.staffName, s.staffNo

FROM Package AS p INNER JOIN PostOfficeStaff AS s

ON p.staffNo = s.staffNo;

-- SELECT * FROM paymentHandler WHERE staffNo = 1;

SELECT * FROM packageInfo AS

SELECT p.packageID, p.destination, p.orderDate, p.deliveryDate, d.staffName, d.plateNo
FROM Package AS p INNER JOIN Driver AS d

ON p.plateNo = d.plateNo;

-- SELECT * FROM packageInfo WHERE orderDate > 2021/01/01;
```

```
      ₹
      78
      19:53:34
      CREATE VIEW driverRegion AS SELECT d.staffNome, d.staffName, d.licenseNo, t.regionID FROM Driver AS d INNER JOIN... 0 row(s) affected
      0.022 sec

      ₹
      79
      19:53:34
      CREATE VIEW paymentHandler AS SELECT p.transactionNo, p.total, p.pay/Date, s.staffName, s.staffNo FROM Payment... 0 row(s) affected
      0.0050 sec

      ₹
      80
      19:53:34
      CREATE VIEW packageInfo AS SELECT p.packageID, p.destination, p.orderDate, p.deliveryDate, d.staffName, d.plateN... 0 row(s) affected
      0.0028 sec
```

1:

	staffNo	staffName	licenseNo	plateNo	regionID	
•	1	Warren Sucklal	B23600000000000	AV00000	1	ı

2:

	transaction	total	payDate	staffName	staffNo
•	1	25.00	2021-11-26	Justin Beaudry	1
	29	5.00	2021-11-26	Justin Beaudry	1
	180	NULL	2021-11-26	Justin Beaudry	1
1	193	5.00	2021-11-26	Justin Beaudry	1
	265	NULL	2021-11-26	Justin Beaudry	1
	353	NULL	2021-11-26	Justin Beaudry	1
	399	NULL	2021-11-26	Justin Beaudry	1
0	404	NULL	2021-11-26	Justin Beaudry	1
100	490	15.00	2021-11-26	Justin Beaudry	1
	567	5.00	2021-11-26	Justin Beaudry	1
	588	NULL	2021-11-26	Justin Beaudry	1
	854	30.00	2021-11-26	Justin Beaudry	1
100	983	NULL	2021-11-26	Justin Beaudry	1
_	000	45.00	0004 44 00	Institut Description	7

	packageID	destination	orderDate	deliveryDate	staffName	plateNo	
•	2	O8E8U4	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	3	C8X7M6	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	4	M4F3T8	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	5	M3G3J4	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	6	H2K3D7	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	7	R8X7W7	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	8	Z7D1H7	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
1	9	T5H8G4	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	10	Z6S8V2	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
1	11	I2T7B7	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	12	E8P8G8	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	13	U6A5V7	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	14	T1Z6F8	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
11	15	U4G8K1	2021-11-26	2021-11-26	Warren Sucklal	AV00000	
	16	J5X8C1	2021-11-26	2021-11-26	Warren Sucklal	AV00000	

Trying to modify view:



8. Was there an SQL clause that you learned in class (from ISO standard) that you were not able to use in MySQL because the dialect has not implemented it?

In the project's entirety, we have not encountered a SQL clause that could not be implemented using MySQL workbench.