
OMAR ISMAIL ABDJALEEL ALOMORY

Matric No: S63955

Date: 25/12/2022

Lab: MP3

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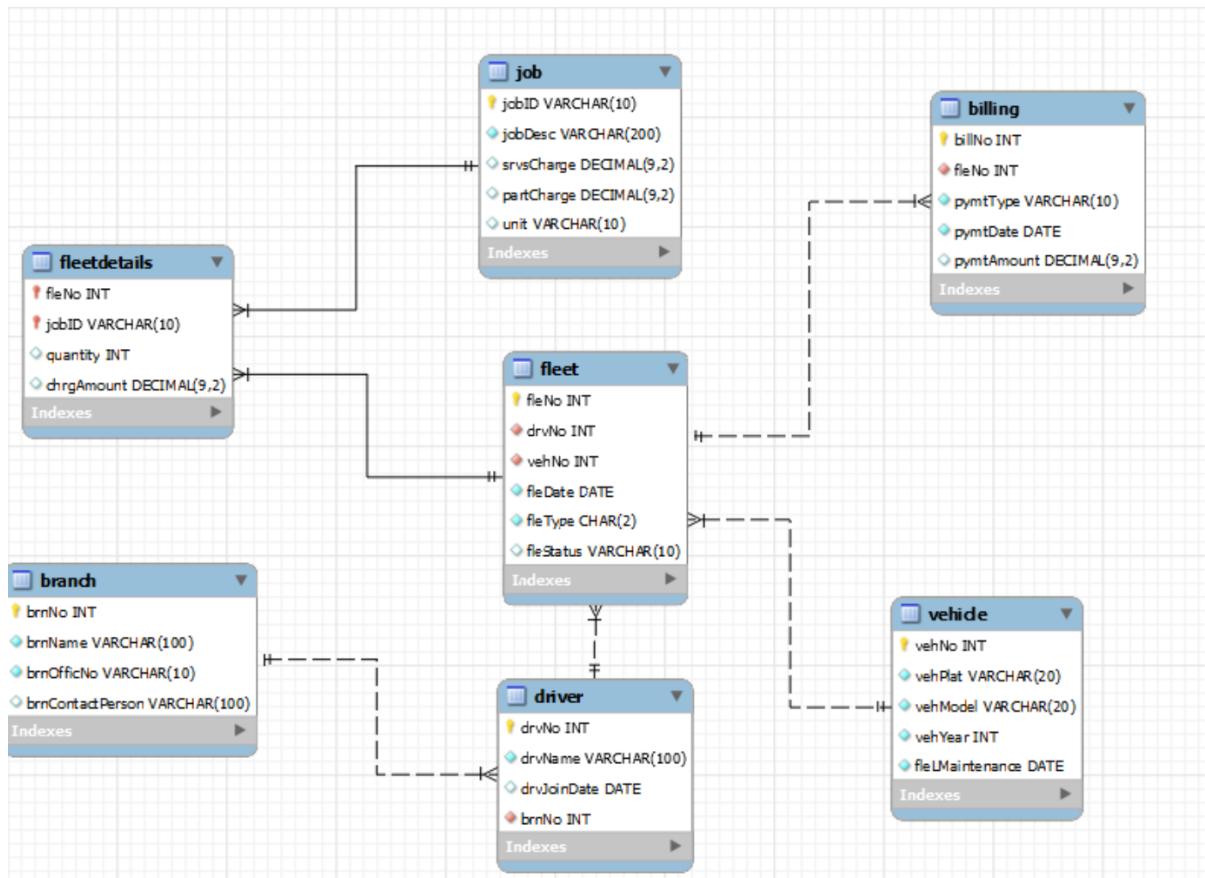
Lab 5

DATABASE (CSF3123) K2

Activity 1

TASK 1

Create a Entity Relationship Diagram (ERD) for this scenario.



TASK 2

Create a tables based on data dictionary and apply all business rules stated in the requirements, and referential integrity for related entities.

```
22      -- ----- FIRST ONE
23 • CREATE TABLE Branch(
24     brnNo INT(3) PRIMARY KEY NOT NULL AUTO_INCREMENT,
25     brnName VARCHAR(100) NOT NULL,
26     brnOfficNo VARCHAR(10) NOT NULL,
27     brnContactPerson VARCHAR(100)
28 );
29 • ALTER TABLE Branch AUTO_INCREMENT = 10;
30
31      -- ----- SECOND
32 • CREATE TABLE Vehicle(
33     vehNo INT (7) NOT NULL PRIMARY KEY AUTO_INCREMENT,
34     vehPlat VARCHAR(20) UNIQUE NOT NULL,
35     vehModel VARCHAR (20) NOT NULL,
36     vehYear INT(4) NOT NULL,
37     fleLMaintenance DATE NOT NULL
38 );
39 • ALTER TABLE Vehicle AUTO_INCREMENT =200001;
40
41      -- ----- THIRD
42 • CREATE TABLE Job (
43     jobID VARCHAR(10) PRIMARY KEY NOT NULL,
44     jobDesc VARCHAR(200) NOT NULL,
45     svrsCharge DECIMAL(9,2) DEFAULT 0.00,
46     partCharge DECIMAL(9,2) DEFAULT 0.00,
47     unit VARCHAR(10) DEFAULT 'N.A'
48 );
49
50      -- ----- FOURTH
51 • CREATE TABLE Driver(
52     drvNo INT(5) NOT NULL PRIMARY KEY AUTO_INCREMENT,
53     drvName VARCHAR (100) NOT NULL,
54     drvJoinDate DATE,
55     brnNo INT(3) NOT NULL,
56     CONSTRAINT fk_Driver_brnNo FOREIGN KEY(brnNo) REFERENCES Branch (brnNo)
57 );
58 • ALTER TABLE Driver AUTO_INCREMENT = 1001;
59
60      -- ----- FIFTH
61 • CREATE TABLE Fleet (
62     fleNo INT(7) PRIMARY KEY NOT NULL AUTO_INCREMENT,
63     drvNo INT (5) NOT NULL, -- FOREIGN KEY
64     vehNo INT (7) NOT NULL, -- FOREIGN KEY
65     fleDate DATE NOT NULL,
66     fileType CHAR(2) NOT NULL, -- CHECK (),
67     fleStatus VARCHAR(10),
68     CONSTRAINT fk_Fleet_drvNo FOREIGN KEY(drvNo) REFERENCES Driver(drvNo),
69     CONSTRAINT fk_Fleet_vehNo FOREIGN KEY(vehNo) REFERENCES Vehicle(vehNo),
70     CONSTRAINT ck_fleType CHECK (fleType IN ('01','02'))
71 );
72 • ALTER TABLE Fleet AUTO_INCREMENT = 9000001;
```

```

83      -- -----
84 • CREATE TABLE FleetDetails(
85     fleNo INT (7) NOT NULL,
86     jobID VARCHAR(10) NOT NULL,
87     quantity INT(1) ,
88     chrgAmount DECIMAL(9,2) DEFAULT 0.00,
89     CONSTRAINT pk_FleetDetails PRIMARY KEY(fleNo, jobID),
90     CONSTRAINT fk_FleetDetails_fleNo FOREIGN KEY (fleNo) REFERENCES Fleet(fleNo),
91     CONSTRAINT fk_FleetDetails_jobID FOREIGN KEY (jobID) REFERENCES Job(jobID)
92 );
93      -- -----
94 • CREATE TABLE Billing(
95     billNo INT(8) PRIMARY KEY NOT NULL AUTO_INCREMENT,
96     fleNo INT(7) NOT NULL, -- FOREIGN KEY
97     pymtType VARCHAR (10) NOT NULL,
98     pymtDate DATE NOT NULL,
99     pymtAmount DECIMAL(9,2) DEFAULT 0.00,
100    CONSTRAINT fk_Billing_fleNo FOREIGN KEY (fleNo) REFERENCES Fleet(fleNo)
101 );
102      -- -----
103 • ALTER TABLE Billing AUTO_INCREMENT = 88000001;

```

OUTPUT

Action	Time	Action	Message	Duration / Fetch
1	16:16:25	CREATE DATABASE XYZ_Express_Servicing	1 row(s) affected	0.016 sec
2	16:16:27	USE XYZ_Express_Servicing	0 row(s) affected	0.000 sec
3	16:16:32	CREATE TABLE Branch(brnNo INT(3) PRIMARY KEY NOT NULL AUTO_INCREMENT, brnName VAR...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future rel...	0.016 sec
4	16:16:35	ALTER TABLE Branch AUTO_INCREMENT = 10	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec
5	16:16:42	CREATE TABLE Vehicle(vehNo INT (7) NOT NULL PRIMARY KEY AUTO_INCREMENT, vehPlat VAR...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future rel...	0.032 sec
6	16:16:45	ALTER TABLE Vehicle AUTO_INCREMENT=200001	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec
7	16:16:52	CREATE TABLE Job (jobID VARCHAR(10) PRIMARY KEY NOT NULL, jobDesc VARCHAR(200) NOT ...	0 row(s) affected	0.015 sec
8	16:17:01	CREATE TABLE Driver(drivNo INT(5) NOT NULL PRIMARY KEY AUTO_INCREMENT, drivName VAR...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future rel...	0.016 sec
9	16:17:02	ALTER TABLE Driver AUTO_INCREMENT = 100	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec
10	16:17:11	CREATE TABLE Fleet (fleNo INT(7) PRIMARY KEY NOT NULL AUTO_INCREMENT, drivNo INT (5) NO...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future rel...	0.016 sec
11	16:17:14	ALTER TABLE Fleet AUTO_INCREMENT = 900001	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec
12	16:17:21	CREATE TABLE FleetDetails(fleNo INT (7) NOT NULL, jobID VARCHAR(10) NOT NULL, quant...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future rel...	0.015 sec
13	16:17:34	CREATE TABLE Billing(billNo INT(8) PRIMARY KEY NOT NULL AUTO_INCREMENT, fleNo INT(7) NO...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future rel...	0.032 sec
14	16:17:37	ALTER TABLE Billing AUTO_INCREMENT = 88000001	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec

TASK 3

Create a record for each table based on data provided in Table 1.

```

31      -- Insertion to Branch table:
32 • INSERT INTO Branch (brnNo, brnName, brnOfficeNo, brnContactPerson)
33     VALUES (default, 'Kuala Terengganu', '09-6671020', 'Amri Aziz'),
34             (default, 'Kemaman', '09-6951234', 'Sharifah Syed Ali'),
35             (default, 'Besut', '09-6973490', 'Rohaiza Rahmad');
36      -- -----
37      -- Insertion to Vehicle table:
38 • INSERT INTO Vehicle (vehNo, vehPlat, vehModel, vehYear, fleLMaintenance)
39     VALUES (DEFAULT, 'TBS1234', 'MAN SE', '2015', '2016-01-17'),
40             (DEFAULT, 'TBS2021', 'MAN SE', '2015', '2016-01-04'),
41             (DEFAULT, 'TBU5912', 'Hino Motors', '2015', '2016-01-15'),
42             (DEFAULT, 'TBU9890', 'Isuzu Motors', '2016', '2016-01-15'),
43             (DEFAULT, 'TBV2000', 'Hino Motors', '2016', '2016-02-26'),
44             (DEFAULT, 'TBW7878', 'Hino Motors', '2016', '2015-12-02');
45      -- -----

```

```

137 •    INSERT INTO Job(jobID, jobDesc, svrsCharge, partCharge, unit)
138     VALUES ('Lub-01', 'Lubricant Minor Sv', 100.00, 500.00, '1 unit'),
139             ('Lub-02', 'Lubricant Major Sv', 200.00, 800.00, '1 unit'),
140             ('Lub-03', 'Lubricant Major Sv + Break Lubricant', 500.00, 1200.00, '1 unit'),
141             ('Part-01', 'Spare Part Service Minor', 300.00, 600.00, '1 unit'),
142             ('Part-02', 'Spare Part Service Major', 300.00, 1400.00, '1 unit'),
143             ('Part-03', 'Spare Part Service Overhaul', 1200.00, 8000.00, '1 unit'),
144             ('AirC-01', 'Air-Cond Minor Maintenance', 400.00, 600.00, '1 unit'),
145             ('AirC-02', 'Air-Cond Major Maintenance', 700.00, 1500.00, '1 unit'),
146             ('AirC-03', 'Air-Cond Replacement', 600.00, 6000.00, '1 unit'),
147             ('BA-01', 'Balancing & Alignment', 300.00, 100.00, '1 unit'),
148             ('Tyre-01', 'Rotation', 150.00, 0.00, 'N.A'),
149             ('Tyre-02', 'Tyres Replacement', 60.00, 1000.00, '1 unit'),
150             ('WTY-01', 'Warranty Minor', 0.00, 0.00, '1 unit'),
151             ('WTY-02', 'Warranty Major', 0.00, 0.00, '1 unit');
152     --
153     -- Insertion of Driver table:
14 •    INSERT INTO driver (drvNo, drvName, drvJoinDate, brnNo)
15     VALUES (default, 'Mohd Hashim Ali', "2015-09-12", 10),
16             (default, 'Hamzah Razali', "2015-10-14", 11),
17             (default, 'Arif Fadillah', "2015-10-15", 12),
18             (default, 'Wan Haizan Wan Omar', "2015-11-02", 10),
19             (default, 'Badrulhisham Mokhtar', "2016-01-15", 11);
20     --
21     -- insertion to Fleet table:
68     --
69 •    INSERT INTO Fleet (fleNo, drvNo, vehNo, fleDate, fleType, fleStatus)
70     VALUES
71         (DEFAULT, 1001, 200001, '2015-10-10', '01', 'Closed'),
72         (DEFAULT, 1002, 200002, '2015-11-05', '01', 'Closed'),
73         (DEFAULT, 1004, 200003, '2015-11-17', '01', 'Closed'),
74         (DEFAULT, 1001, 200001, '2015-11-21', '02', 'WIP'),
75         (DEFAULT, 1003, 200004, '2015-11-25', '01', 'Closed'),
76         (DEFAULT, 1005, 200005, '2015-12-14', '01', 'Closed'),
77         (DEFAULT, 1001, 200006, '2015-12-16', '01', 'Closed'),
78         (DEFAULT, 1004, 200002, '2016-01-04', '01', 'Closed'),
79         (DEFAULT, 1005, 200003, '2016-01-15', '01', 'WIP'),
80         (DEFAULT, 1003, 200004, '2016-01-15', '02', 'WIP'),
81         (DEFAULT, 1001, 200001, '2016-01-17', '01', 'Open'),
82         (DEFAULT, 1002, 200005, '2016-02-26', '01', 'Open');
83     --
95 •    INSERT INTO FleetDetails (fleNo, jobID, quantity, chrgAmount)
96     VALUES (9000001, 'Lub-01', 1, 600.00),
97             (9000001, 'Part-01', 1, 900.00),
98             (9000002, 'Lub-01', 1, 600.00),
99             (9000002, 'Part-01', 1, 900.00),
100            (9000002, 'AirC-01', 1, 1000.00),
101            (9000003, 'Lub-02', 1, 1000.00),
102            (9000003, 'Part-02', 2, 3400.00),
103            (9000003, 'BA-01', 1, 400.00),
104            (9000004, 'AirC-03', 1, 0.00),
105            (9000005, 'Lub-03', 1, 1700.00),
106            (9000006, 'Lub-01', 1, 600.00),
107            (9000006, 'Part-01', 1, 900.00),
108            (9000007, 'Lub-02', 1, 1000.00),
109            (9000007, 'Part-02', 1, 3400.00),

```

```

110      (9000007, 'Tyre-02', 2, 2120.00),
111      (9000008, 'Lub-01', 1, 600.00),
112      (9000008, 'Part-01', 1, 900.00),
113      (9000009, 'Lub-03', 1, 1700.00),
114      (9000009, 'Part-02', 1, 3400.00),
115      (9000009, 'AirC-01', 1, 1000.00),
116      (9000009, 'Tyre-01', 1, 150.00),
117      (9000010, 'AirC-03', 1, 0.00),
118      (9000010, 'Part-02', 1, 0.00),
119      (9000011, 'Lub-01', 1, 600.00),
120      (9000011, 'Part-01', 1, 900.00),
121      (9000011, 'AirC-01', 1, 1000.00),
122      (9000012, 'Lub-03', 1, 1700.00),
123      (9000012, 'Part-02', 1, 3400.00),
124      (9000012, 'BA-01', 1, 400.00);

125 • INSERT INTO Billing (billNo, fleNo, pymtType, pymtDate, pymtAmount)
126     VALUES (DEFAULT, 9000001, 'Credit', '2015-10-10', 1500.00),
127     (DEFAULT, 9000002, 'Credit', '2015-11-05', 2500.00),
128     (DEFAULT, 9000003, 'Credit', '2015-11-17', 4800.00),
129     (DEFAULT, 9000004, 'Wty Credit', '2015-11-21', 0.00),
130     (DEFAULT, 9000005, 'Credit', '2015-11-25', 1700.00),
131     (DEFAULT, 9000006, 'Credit', '2015-12-14', 1500.00),
132     (DEFAULT, 9000007, 'Cash', '2015-12-02', 6520.00),
133     (DEFAULT, 9000008, 'Credit', '2016-01-04', 1500.00),
134     (DEFAULT, 9000009, 'Credit', '2016-01-15', 6250.00),
135     (DEFAULT, 9000010, 'Wty Credit', '2016-01-15', 0.00),
136     (DEFAULT, 9000011, 'Credit', '2016-01-17', 2500.00),
137     (DEFAULT, 9000012, 'Credit', '2016-02-26', 5500.00);
138

```

OUTPUT

#	Time	Action	Message	Duration / Fetch
1	16:25:23	INSERT INTO Branch (bmNo, bmName, bmOfficNo, bmContactPerson) VALUES (default, 'Kuala Teren... 3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0		0.016 sec
2	16:25:54	INSERT INTO Vehicle (vehNo, vehPlat, vehModel, vehYear, fleMaintenance) VALUES (DEFAULT, T... 6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0		0.015 sec
3	16:26:27	INSERT INTO Job(jobID, jobDesc, arvCharge, partCharge, unit) VALUES ('Lub-01', 'Lubricant Minor Sv... 14 row(s) affected Records: 14 Duplicates: 0 Warnings: 0		0.000 sec
4	17:23:51	INSERT INTO driver (drvNo, drvName, drvJoinDate, bmNo) VALUES (default, 'Mohd Haahim Ali', "2015-... 5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0		0.000 sec
5	17:24:02	INSERT INTO Fleet (fleNo, drvNo, vehNo, fleDate, fleType, fleStatus) VALUES (DEFAULT, 1001, 200... 12 row(s) affected Records: 12 Duplicates: 0 Warnings: 0		0.015 sec
6	17:24:05	INSERT INTO FleetDetails (fleNo, jobID, quantity, chrgAmount) VALUES (9000001, 'Lub-01', 1, 600.00)... 29 row(s) affected Records: 29 Duplicates: 0 Warnings: 0		0.016 sec
7	17:24:14	INSERT INTO Billing (billNo, fleNo, pymtType, pymtDate, pymtAmount) VALUES (DEFAULT, 9000001, ... 12 row(s) affected Records: 12 Duplicates: 0 Warnings: 0		0.015 sec

Activity 2

QUESTIONS:

```

1      -- 1. Display driver no, name and joined date for driver that comes from Kuala Terengganu's
2      -- branch.
3 •  SELECT d.drvNo, d.drvName, d.drvJoinDate , b.brnName FROM driver AS d
4      INNER JOIN branch AS b ON b.brnNo = d.brnNo WHERE b.brnName = "Kuala Terengganu";
5      -- NOTE : No need for branch name, i just add it for validation.

```

Result Grid				
	drvNo	drvName	drvJoinDate	brnName
▶	1001	Mohd Hashim Ali	2015-09-12	Kuala Terengganu
	1004	Wan Haizan Wan Omar	2015-11-02	Kuala Terengganu

```

7      -- 2. Retrieve the details of job description and charged amount incurred for fleet reference
8      -- number 9000003. You should produce two set of SQL scripts to display the result using normal
9      -- approach and using inner join operator.
10 •  SELECT jobDesc,chrgAmount FROM job, fleetdetails WHERE fleetdetails.jobID = job.jobID AND fleetdetails.fleNo = 9000003;
11 •  SELECT j.jobDesc, f.chrgAmount FROM job AS j INNER JOIN fleetdetails AS f ON f.jobID = j.jobID WHERE f.fleNo =9000003;
12      --- -----

```

Ref.10

Ref.11

	jobDesc	chrgAmount		jobDesc	chrgAmount
▶	Balancing & Alignment	400.00	▶	Balancing & Alignment	400.00
	Lubricant Major Svs	1000.00		Lubricant Major Svs	1000.00
	Spare Part Service Major	3400.00		Spare Part Service Major	3400.00

```

13     -- 3. Display the driver number, name, fleet reference number, fleet status and plat number for
14     -- buses that going for fleet maintenance on 15 January 2016.
15 •  SELECT d.drvNo, d.drvName , f.fleNo, f.fleStatus, v.vehPlat FROM driver AS d
16     INNER JOIN fleet AS f ON d.drvNo = f.drvNo
17     INNER JOIN vehicle AS v ON f.vehNo = v.vehNo
18     WHERE f.fleDate = '2016-01-15';
19     --- -----

```

Result Grid					
	drvNo	drvName	fleNo	fleStatus	vehPlat
▶	1005	Badrulhisham Mokhtar	9000009	WIP	TBU5912
	1003	Arif Fadillah	9000010	WIP	TBU9890

```

20    -- 4. Retrieve fleet reference number, driver name and jobid for fleet maintenance that being sent
21    -- to the workshop as a warranty fleet and the person who responsible to handle this vehicle is
22    -- from Besut's branch.
23 •  SELECT f.fleNo, d.drvName, ft.jobID ,B.brnName , f.fleType FROM fleetdetails AS ft
24    INNER JOIN fleet AS f ON ft.fleNo = f.fleNo
25    INNER JOIN driver AS d ON f.drvNo = f.drvNo
26    INNER JOIN branch AS b ON d.brnNo = b.brnNo
27    WHERE f.fleType = 2 AND b.brnName = 'Besut';

```

	fleNo	drvName	jobID	brnName	fleType
▶	9000004	Arif Fadillah	AirC-03	Besut	02
	9000010	Arif Fadillah	AirC-03	Besut	02
	9000010	Arif Fadillah	Part-02	Besut	02

Note: branch Name and Fleet Type was included only for validation purposes

OUTPUT

#	Time	Action	Message	Duration / Fetch
✓ 1	17:30:13	SELECT d.drvNo, d.drvName, d.drvJoinDate ,b.bnName FROM driver AS d INNER JOIN branch AS b ...	2 row(s) returned	0.000 sec / 0.000 sec
✓ 2	17:33:13	SELECT jobDesc.chrgAmount FROM job, fleetdetails WHERE fleetdetails.jobID = job.jobID AND fleetdet...	3 row(s) returned	0.000 sec / 0.000 sec
✓ 3	17:33:36	SELECT jobDesc, chrgAmount FROM job AS j INNER JOIN fleetdetails AS f ON f.jobID = j.jobID WHERE ...	3 row(s) returned	0.000 sec / 0.000 sec
✓ 4	17:35:25	SELECT d.drvNo, d.drvName, f.fleNo, fleStatus, v.vehPlat FROM driver AS d INNER JOIN fleet AS f ...	2 row(s) returned	0.000 sec / 0.000 sec
✓ 5	17:37:03	SELECT f.fleNo, d.drvName, ft.jobID ,B.bnName , f.fleType FROM fleetdetails AS ft INNER JOIN fleet A...	3 row(s) returned	0.000 sec / 0.000 sec

Activity 3

QUESTIONS:

```

1    -- Requirement 1 - Display job id, job description and respective fleet reference number regardless
2    -- either job id is created or not, it must be reference to the job master data.
3 •  SELECT j.jobID, j.jobDesc, ft.fleNo FROM job AS j
4    LEFT OUTER JOIN fleetdetails AS ft ON j.jobID = ft.jobID;
5    --

```

jobID	jobDesc	fleNo
AirC-01	Air-Cond Minor Maintenance	9000002
AirC-01	Air-Cond Minor Maintenance	9000009
AirC-01	Air-Cond Minor Maintenance	9000011
AirC-02	Air-Cond Major Maintenance	NULL
AirC-03	Air-Cond Replacement	9000004
AirC-03	Air-Cond Replacement	9000010
BA-01	Balancing & Alignment	9000003
BA-01	Balancing & Alignment	9000012
Lub-01	Lubricant Minor SvS	9000001
Lub-01	Lubricant Minor SvS	9000002
Lub-01	Lubricant Minor SvS	9000006
Lub-01	Lubricant Minor SvS	9000008
Lub-01	Lubricant Minor SvS	9000011
Lub-02	Lubricant Major SvS	9000003
Lub-02	Lubricant Major SvS	9000007
Lub-03	Lubricant Major SvS + Brea...	9000005
Lub-03	Lubricant Major SvS + Brea...	9000009
Lub-03	Lubricant Major SvS + Brea...	9000012
Part-01	Spare Part Service Minor	9000001
Part-01	Spare Part Service Minor	9000002
Part-01	Spare Part Service Minor	9000006
5	--	--
6	-- Requirement 2 - List all vehicle number, plat number, and any fleet reference number that being	
7	-- sent to the workshop as a fleet warranty.	
8 •	SELECT v.vehNo, v.vehPlat ,f.fleNo ,f.fleType FROM vehicle AS v	
9	RIGHT OUTER JOIN fleet AS f ON v.vehNo = f.vehNo	
10	WHERE f.fleType = 2 ;	

Result Grid				
	vehNo	vehPlat	fleNo	fleType
▶	200001	TBS1234	9000004	02
	200004	TBU9890	9000010	02

OUTPUT

Output			
Action Output			Message
#	Time	Action	
1	17:41:51	SELECT j.jobID, j.jobDesc, ft.fleNo FROM job AS j LEFT OUTER JOIN fleetdetails AS ft ON j.jobID = ft.jobID;	33 row(s) returned
2	17:45:05	SELECT v.vehNo, v.vehPlat ,f.fleNo ,f.fleType FROM vehicle AS v RIGHT OUTER JOIN fleet AS f ON v.vehNo = f.vehNo WHERE f.fleType = 2 ;	2 row(s) returned

Activity 4

QUESTIONS:

```
1      -- 1. Use SQL DDL command to create prodvendor table.  
2 • CREATE TABLE prodvendor (  
3     prCode VARCHAR (20) NOT NULL,  
4     prVendor VARCHAR(4) NOT NULL,  
5     prPricing DECIMAL(9,2) NOT NULL  
6 );  
7  --  
  
8      -- 2. Insert the records based on Table 2.  
9 • INSERT INTO prodvendor (prCode, prVendor, prPricing)  
10    VALUES  
11        ('PW-1001', 'P10', 500.00),  
12        ('PQ-4570', 'P88', 35.00),  
13        ('MM-120E', 'P67', 245.00),  
14        ('MM-F12WR', 'P10', 1210.00),  
15        ('PW-QZR-09', 'P10', 79.00),  
16        ('PQ-4570', 'P10', 32.50),  
17        ('MM-120E', 'P88', 242.00),  
18        ('PW-1001', 'P45', 550.00),  
19        ('MM-F12WR', 'P73', 1200.00),  
20        ('PQ-4570', 'P67', 33.00),  
21        ('MM-F12WR', 'P35', 1189.00),  
22        ('PW-1001', 'P23', 510.00),  
23        ('PQ-4570', 'P35', 36.00),  
24        ('MM-120E', 'P23', 250.00);  
25  --  
  
26      -- 3. Perform a query to retrieve product code, the pricing and vendor code for product that  
27      -- supplied by more than one vendors and your record must be sorted by product code.  
28 • SELECT prCode, prPricing, prVendor  
29   FROM prodVendor  
30   WHERE prVendor IN (SELECT prVendor FROM prodVendor GROUP BY prVendor HAVING COUNT(*) > 1)  
31   ORDER BY prCode ASC;  
32  --
```

	prCode	prPricing	prVendor
▶	MM-120E	245.00	P67
	MM-120E	242.00	P88
	MM-120E	250.00	P23
	MM-F12WR	1210.00	P10
	MM-F12WR	1189.00	P35
	PQ-4570	35.00	P88
	PQ-4570	32.50	P10
	PQ-4570	33.00	P67
	PQ-4570	36.00	P35
	PW-1001	500.00	P10
	PW-1001	510.00	P23
	PW-QZR-09	79.00	P10

OUTPUT

Output				
#	Time	Action	Message	Duration / Fetch
1	17:48:30	CREATE TABLE prodvendor (prCode VARCHAR (20) NOT NULL, prVendor VARCHAR(4) NOT NULL, ...)	0 row(s) affected	0.015 sec
2	17:48:32	INSERT INTO prodvendor (prCode, prVendor, prPricing) VALUES ('PW-1001', 'P10', 500.00), ('PQ-4570', 'P88', 35.00), ('MM-120E', 'P67', 245.00), ('MM-F12WR', 'P10', 1210.00), ('PW-QZR-09', 'P10', 79.00), ('PQ-4570', 'P10', 32.50), ('MM-120E', 'P88', 242.00), ('PW-1001', 'P45', 550.00), ('MM-F12WR', 'P73', 1200.00), ('PQ-4570', 'P67', 33.00), ('MM-F12WR', 'P35', 1189.00), ('PW-1001', 'P23', 510.00), ('PQ-4570', 'P35', 36.00), ('MM-120E', 'P23', 250.00);	14 row(s) affected Records: 14 Duplicates: 0 Warnings: 0	0.015 sec
3	17:48:36	SELECT prCode, prPricing, prVendor FROM prodVendor WHERE prVendor IN (SELECT prVendor FROM prodVendor GROUP BY prVendor HAVING COUNT(*) > 1)	12 row(s) returned	0.000 sec / 0.000 sec

Activity 5

QUESTIONS:

1. Based on ERD diagram in Figure 1, create the table structure.

```
3 ● CREATE TABLE lab5student(
4     matricNo VARCHAR(10) PRIMARY KEY NOT NULL,
5     stuName VARCHAR(50),
6     hpNo VARCHAR(25),
7     cgpa DECIMAL(5,2)
8 );
9
10 ● CREATE TABLE lab5course(
11     courseID VARCHAR(15) PRIMARY KEY NOT NULL,
12     cname VARCHAR(50),
13     faculty VARCHAR(25),
14     credit INT(11)
15 );
16
17 ● CREATE TABLE lab5enrollment(
18     matricNo VARCHAR(10) NOT NULL,-- FOREIGN KEY
19     courseID VARCHAR(15) NOT NULL, -- FOREIGN KEY
20     semester VARCHAR(20),
21     result INT(11),
22     grade VARCHAR(5),
23     CONSTRAINT fk_lab5enrollment_matricNo FOREIGN KEY(matricNo) REFERENCES lab5student(matricNo),
24     CONSTRAINT fk_lab5enrollment_courseID FOREIGN KEY(courseID ) REFERENCES lab5course(courseID)
25 );
26 --
```

2. Insert minimum FIVE (5) sample records for the tables.

```

27 ●    INSERT INTO lab5student (matricNo, stuName, hpNo, cgpa)
28     VALUES
29     ('S12457', 'Faturalrhman', '0123456789', 3.5),
30     ('S12458', 'Gary Lim', '9876543210', 3.7),
31     ('S12459', 'Omar Alomory', '0111222333', 3.9),
32     ('S12460', 'MD Akash Ali', '4445556666', 3.4),
33     ('S12461', 'Moaz Mohammed', '7778889999', 3.8);
34
35 ●    INSERT INTO lab5course (courseID, cname, faculty, credit)
36     VALUES
37     ('CSF3402', 'Database Systems', 'FTKKI', 4),
38     ('CSF3403', 'Software Engineering', 'FTKKI', 3),
39     ('CSF3404', 'Computer Networks', 'FTKKI', 3),
40     ('CSF3405', 'Artificial Intelligence', 'FTKKI', 4),
41     ('CSF3406', 'Human-Computer Interaction', 'FTKKI', 3);
42 ●    INSERT INTO lab5enrollment (matricNo, courseID, semester, result, grade)
43     VALUES
44     ('S12457', 'CSF3402', '2021-2022', 70, 'B'),
45     ('S12458', 'CSF3403', '2021-2022', 90, 'A'),
46     ('S12459', 'CSF3404', '2021-2022', 50, 'D'),
47     ('S12460', 'CSF3405', '2020-2021', 65, 'C'),
48     ('S12461', 'CSF3406', '2020-2021', 73, 'B');
49

```

```

51      -- 3. Display student student id, name, course id, course name for student who registered
52      -- course id CSF3402. Is there any difference if you are adopting USING keyword in join
53      -- condition instead of using ON keyword for join condition? Justify your answer.
54
55 ●    SELECT s.matricNo, s.stuName, c.courseID, c.cname FROM lab5student AS s
56     INNER JOIN lab5enrollment AS e ON s.matricNo = e.matricNo
57     INNER JOIN lab5course AS c ON e.courseID = c.courseID
58     WHERE e.courseID = 'CSF3402';
59
60 ●    SELECT matricNo, stuName, courseID, cname FROM lab5student
61     JOIN lab5enrollment USING( matricNo )
62     JOIN lab5course USING(courseID)
63     WHERE courseID = 'CSF3402';
64

```

'ON' clause

Result Grid			
	matricNo	stuName	courseID
▶	S12457	Faturalrhman	CSF3402

'USING' clause

Result Grid				
	matricNo	stuName	courseID	cname
▶	S12457	Faturalrhman	CSF3402	Database Systems

OUTPUT

#	Time	Action	Message	Duration / Fetch
1	18:18:04	CREATE TABLE lab5student(matricNo VARCHAR(10) PRIMARY KEY NOT NULL, stuName VARCHAR(20) NOT NULL, hpNo INT, cgpa DECIMAL(3,2))	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.016 sec
2	18:18:05	CREATE TABLE lab5course(courseID VARCHAR(15) PRIMARY KEY NOT NULL, cname VARCHAR(20) NOT NULL, faculty VARCHAR(20), credit INT)	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.016 sec
3	18:18:08	CREATE TABLE lab5enrollment(matricNo VARCHAR(10) NOT NULL FOREIGN KEY matricNo REFERENCES lab5student(matricNo), courseID VARCHAR(15) NOT NULL FOREIGN KEY courseID REFERENCES lab5course(courseID), semester VARCHAR(10), result INT, grade CHAR(1))	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.032 sec
4	18:18:13	INSERT INTO lab5student (matricNo, stuName, hpNo, cgpa) VALUES ('S12457', 'Faturalrhman', '0123456789', 3.5)	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.015 sec
5	18:18:16	INSERT INTO lab5course (courseID, cname, faculty, credit) VALUES ('CSF3402', 'Database Systems', 'FTKKI', 4)	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.016 sec
6	18:18:19	INSERT INTO lab5enrollment (matricNo, courseID, semester, result, grade) VALUES ('S12457', 'CSF3402', '2021-2022', 70, 'B')	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.000 sec
7	18:18:25	SELECT * FROM lab5student AS s INNER JOIN lab5enrollment AS e ON s.matricNo = e.matricNo INNER JOIN lab5course AS c ON e.courseID = c.courseID	1 row(s) returned	0.000 sec / 0.000 sec
8	18:18:29	SELECT * FROM lab5student AS s INNER JOIN lab5enrollment AS e ON s.matricNo = e.matricNo INNER JOIN lab5course AS c ON e.courseID = c.courseID	1 row(s) returned	0.016 sec / 0.000 sec

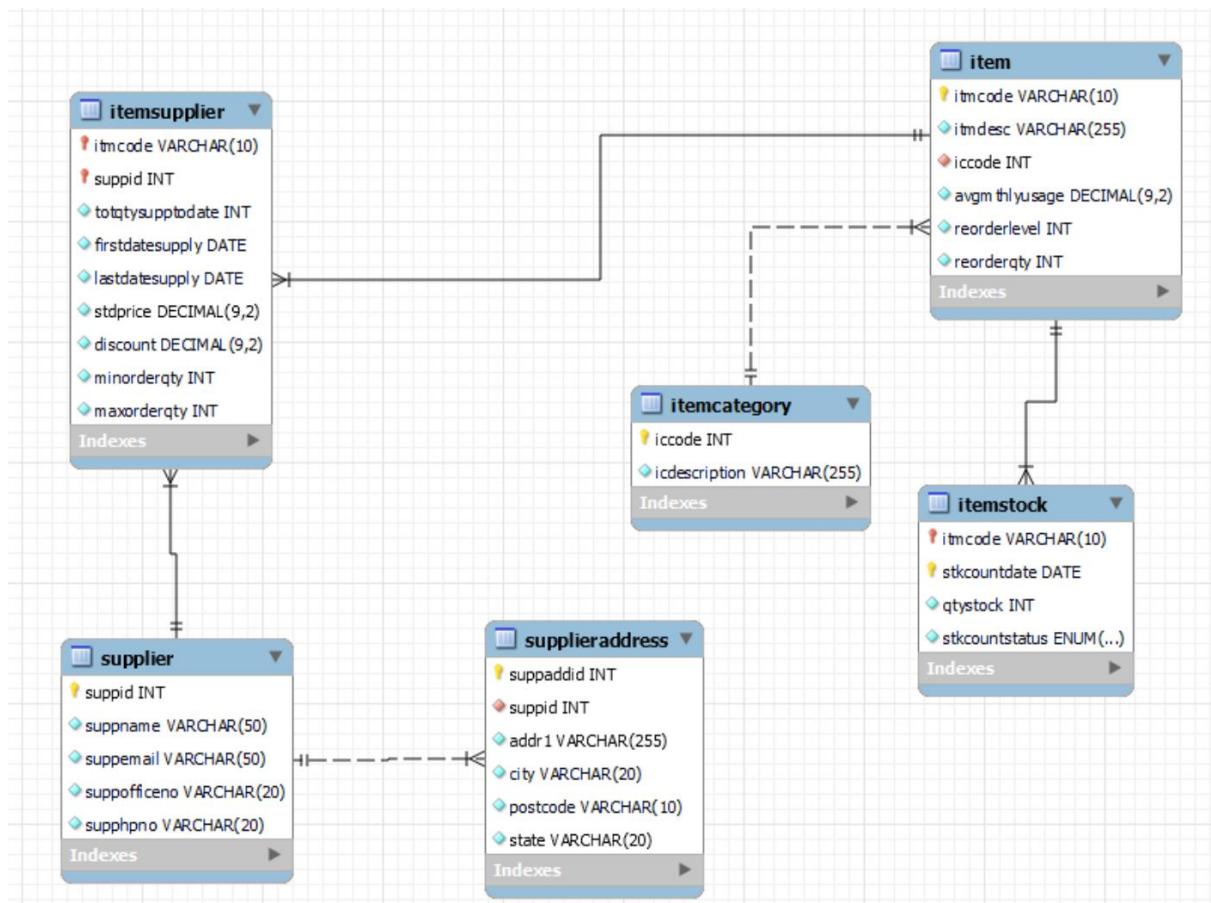
JUSTIFICATION:

No, there is no difference for using either 'ON' or 'USING' clauses in this particular problem since the attributes have the same names. However, if the attributes have different names then that is another case for 'USING' clause and it won't be applicable unless the names(attributes) are identical.

Lab Exercise

Task 1

Draw and show the relationships of ERD diagram for this case study



Task 2

Create a table for each entities by applying referential integrity and all the requirements stated in the a table. You should include SQL script and the output print screen of creating a table in your answer.

```
9 • Ⓜ CREATE TABLE itemcategory ( -- /
10    iccode INT PRIMARY KEY AUTO_INCREMENT,
11    icdescription VARCHAR(255) NOT NULL
12 );
13 •   ALTER TABLE itemcategory AUTO_INCREMENT = 101;
14 -----
15 • Ⓜ CREATE TABLE item ( -- /
16    itmcode VARCHAR(10) PRIMARY KEY,
17    itmdesc VARCHAR(255) NOT NULL,
18    iccode INT NOT NULL,
19    avgmthlyusage DECIMAL(9,2) NOT NULL,
20    reorderlevel INT NOT NULL,
21    reorderqty INT NOT NULL,
22    FOREIGN KEY (iccode) REFERENCES itemcategory(iccode) ON UPDATE CASCADE
23 );
24 -----
25 • Ⓜ CREATE TABLE itemstock ( -- /
26    itmcode VARCHAR(10) NOT NULL,
27    stkcountdate DATE NOT NULL,
28    qtystock INT NOT NULL,
29    stkcountstatus ENUM('Closed', 'Opened') NOT NULL,
30    PRIMARY KEY (itmcode, stkcountdate),
31    FOREIGN KEY (itmcode) REFERENCES item(itmcode) ON UPDATE CASCADE
32 );
33 -----
34 • Ⓜ CREATE TABLE supplier ( -- /
35    suppid INT PRIMARY KEY AUTO_INCREMENT,
36    suppname VARCHAR(50) NOT NULL,
37    suppemail VARCHAR(50) NOT NULL,
38    suppofficeno VARCHAR(20) NOT NULL,
39    supphphno VARCHAR(20) NOT NULL
40 );
41 -----
42 •   ALTER TABLE supplier AUTO_INCREMENT = 300001;
43 -----
44 • Ⓜ CREATE TABLE itemsupplier ( -- /
45    itmcode VARCHAR(10) NOT NULL,
46    suppid INT NOT NULL,
47    totqtysupptodate INT NOT NULL,
48    firstdatesupply DATE NOT NULL,
49    lastdatesupply DATE NOT NULL,
50    stdprice DECIMAL(9,2) NOT NULL,
51    discount DECIMAL(9,2) NOT NULL,
52    minorderqty INT NOT NULL,
53    maxorderqty INT NOT NULL,
54    PRIMARY KEY (itmcode, suppid),
55    FOREIGN KEY (itmcode) REFERENCES item(itmcode) ON UPDATE CASCADE,
56    FOREIGN KEY (suppid) REFERENCES supplier(suppid) ON UPDATE CASCADE
57 );
58 -----
```

```

142 -----+
143 • CREATE TABLE supplieraddress ( -- /
144     suppaddr INT PRIMARY KEY AUTO_INCREMENT,
145     suppaddr NOT NULL,
146     addr1 VARCHAR(255) NOT NULL,
147     city VARCHAR(20) NOT NULL,
148     postcode VARCHAR(10) NOT NULL,
149     state VARCHAR(20) NOT NULL,
150     FOREIGN KEY (suppaddr) REFERENCES supplier(suppaddr)
151 );
152 • ALTER TABLE supplieraddress AUTO_INCREMENT =2001;

```

Output

#	Time	Action	Message	Duration / Fetch
1	01:32:13	CREATE TABLE itemcategory (-- / icode INT PRIMARY KEY AUTO_INCREMENT, icdescription VA...	0 row(s) affected	0.015 sec
2	01:32:15	ALTER TABLE itemcategory AUTO_INCREMENT = 101	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec
3	01:32:32	CREATE TABLE item (-- / itmcode VARCHAR(10) PRIMARY KEY, itmdesc VARCHAR(255) NOT NU...	0 row(s) affected	0.016 sec
4	01:32:48	CREATE TABLE itemstock (-- / frcode VARCHAR(10) NOT NULL, stckountdate DATE NOT NULL, ...	0 row(s) affected	0.032 sec
5	01:32:56	CREATE TABLE supplier (-- / suppaddr INT PRIMARY KEY AUTO_INCREMENT, suppname VARCHAR...	0 row(s) affected	0.032 sec
6	01:32:58	ALTER TABLE supplier AUTO_INCREMENT = 300001	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec
7	01:33:16	CREATE TABLE itemsupplier (-- / itmcode VARCHAR(10) NOT NULL, suppaddr INT NOT NULL, totqt...	0 row(s) affected	0.031 sec
8	01:33:21	CREATE TABLE supplieraddress (-- / suppaddr INT PRIMARY KEY AUTO_INCREMENT, suppaddr I...	0 row(s) affected	0.015 sec
9	01:33:24	ALTER TABLE supplieraddress AUTO_INCREMENT =2001	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec

Task 3

Insert the minimum FIVE (5) records for all tables except for item, itemsupplier and itemstock. For these three tables, you are required to create minimum TEN (10) records.

```

20 • INSERT INTO itemcategory (icdescription)
21     VALUES
22         ('Electronics'),
23         ('Clothing'),
24         ('Toys'),
25         ('Beauty Products'),
26         ('Home Appliances');
27 -----
41 • INSERT INTO item (itmcode, itmdesc, iccode, avgmthlyusage, reorderlevel, reorderqty)
42     VALUES ('A001', 'Item 1', 101, 50, 100, 200),
43             ('B002', 'Item 2', 102, 75, 150, 300),
44             ('C003', 'Item 3', 103, 100, 200, 400),
45             ('D004', 'Item 4', 104, 125, 250, 500),
46             ('E005', 'Item 5', 105, 150, 300, 600),
47             ('F006', 'Item 6', 101, 175, 350, 700),
48             ('G007', 'Item 7', 102, 200, 400, 800),
49             ('G008', 'Item 8', 103, 225, 450, 900),
50             ('G009', 'Item 9', 104, 250, 500, 1000),
51             ('H010', 'Item 10', 105, 275, 550, 1100);
52 -----

```

```

69 •    INSERT INTO itemstock (itmcode, stkcountdate, qtystock, stkcountstatus)
70     VALUES ('A001', '2022-01-01', 164, 'Opened'),
71         ('B002', '2022-01-02', 150, 'Opened'),
72         ('C003', '2022-01-03', 200, 'Opened'),
73         ('D004', '2022-01-04', 500, 'Closed'),
74         ('E005', '2022-01-05', 300, 'Opened'),
75         ('F006', '2022-01-06', 350, 'Opened'),
76         ('G007', '2022-01-07', 400, 'Opened'),
77         ('G008', '2022-01-08', 450, 'Opened'),
78         ('G009', '2022-01-09', 800, 'Opened'),
79         ('H010', '2022-01-10', 550, 'Opened');
80
81
82
83
84 •    INSERT INTO supplier (suppname, suppemail, suppofficeno, supphphno)
85     VALUES ('GDEX', 'GDEX@example.com', '123-456-7890', '098-765-4321'),
86         ('POSLAJU', 'POSLAJU@example.com', '234-567-8901', '210-987-6543'),
87         ('HDEX', 'HDEX@example.com', '345-678-9012', '321-098-7654'),
88         ('IDEX', 'IDEX@example.com', '456-789-0123', '432-109-8765'),
89         ('ADEX', 'ADEX@example.com', '567-890-1234', '543-210-9876');
90
91
92
93
94 •    INSERT INTO itemsupplier (itmcode, suppid, totqtsupptodate, firstdatesupply,
95     lastdatesupply, stdprice, discount, minorderqty, maxorderqty)
96     VALUES
97         ('A001', 300001, 100, '2022-01-01', '2022-01-31', 500, 0.1, 50, 200),
98         ('B002', 300002, 200, '2022-02-01', '2022-02-28', 250, 0.05, 100, 300),
99         ('C003', 300003, 300, '2022-03-01', '2022-03-31', 130, 0.05, 150, 600),
100        ('D004', 300004, 400, '2022-04-01', '2022-04-30', 240, 0.05, 200, 350),
101        ('E005', 300005, 500, '2022-05-01', '2022-05-31', 550, 0.05, 250, 250),
102        ('F006', 300002, 600, '2022-06-01', '2022-06-30', 460, 0.06, 300, 300),
103        ('G007', 300003, 700, '2022-07-01', '2022-07-31', 370, 0.07, 350, 500),
104        ('G008', 300003, 800, '2022-08-01', '2022-08-31', 480, 0.1, 400, 360),
105        ('G009', 300001, 900, '2022-09-01', '2022-09-30', 390, 0.1, 450, 600),
106        ('H010', 300004, 1000, '2022-10-01', '2022-10-31', 600, 0.06, 500, 485);
107
108
109
110
111 •    INSERT INTO supplieraddress (suppid, addr1, city, postcode, state)
112     VALUES (300001, '123 Jalan Tun Razak', 'Kuala Lumpur', '50400', 'Kuala Lumpur'),
113         (300002, '456 Jalan Dato Onn', 'Johor Bahru', '80990', 'Johor'),
114         (300003, '789 Jalan Tunku Abdul Rahman', 'Kota Kinabalu', '88999', 'Sabah'),
115         (300004, '246 Jalan Perak', 'Kuala Terengganu', '20200', 'Terengganu'),
116         (300005, '369 Jalan Sultan Ismail', 'Petaling Jaya', '47300', 'Selangor');
117
118
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148

```

Output

#	Time	Action	Message	Duration / Fetch
✓	10 02:02:30	INSERT INTO itemcategory (icdescription) VALUES ('Electronics'), ('Clothing'), ('Toys'), ('Beauty Prod...')	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.000 sec
✓	11 02:02:39	INSERT INTO item (itmcode, itmdesc, iccode, avgmthlyusage, reorderlevel, reordering) VALUES ('A001', ...)	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.016 sec
✗	12 02:02:43	INSERT INTO itemstock (itmcode, stkcountdate, qtystock, stkcountstatus) VALUES ('A001', '2022-01-01', ...)	Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails ('zyz_hypermarket'.itemstock: ...)	0.032 sec
✓	13 02:04:24	INSERT INTO itemstock (itmcode, stkcountdate, qtystock, stkcountstatus) VALUES ('A001', '2022-01-01', ...)	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.015 sec
✓	14 02:04:36	INSERT INTO supplier (suppname, suppemail, suppofficeno, supphphno) VALUES ('GDEX', 'GDEX@exa...')	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.016 sec
✓	15 02:04:44	INSERT INTO itemsupplier (itmcode, suppid, totqtsupptodate, firstdatesupply, lastdatesupply, stdprice, ...)	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.016 sec
✓	16 02:04:47	INSERT INTO supplieraddress (suppid, addr1, city, postcode, state) VALUES (300001, '123 Jalan Tun ...')	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.016 sec

Task 4

Using Data Manipulation Language (DML) command, complete the following tasks;

```

156      -- 1. Retrieve item code, item description, last stock count date and stock quantity that take place
157      -- from the system for item code which the first character start from 'G'.
158 •  SELECT i.itmcode, i.itmdesc, s.stkcountdate,s.qtystock FROM item AS i
159      INNER JOIN itemstock AS s ON i.itmcode = s.itmcode
160      WHERE i.itmcode LIKE 'G%';
161

```

	itmcode	itmdesc	stkcountdate	qtystock
▶	G007	Item 7	2022-01-07	400
	G008	Item 8	2022-01-08	450
	G009	Item 9	2022-01-09	800

Result 7								
Output								
Action Output <table border="1"> <thead> <tr> <th>#</th><th>Time</th><th>Action</th></tr> </thead> <tbody> <tr> <td>1</td><td>02:21:19</td><td>SELECT i.itmcode, i.itmdesc, s.stkcountdate,s.qtystock FROM item AS i INNER JOIN itemstock AS s O... 3 row(s) returned</td></tr> </tbody> </table>			#	Time	Action	1	02:21:19	SELECT i.itmcode, i.itmdesc, s.stkcountdate,s.qtystock FROM item AS i INNER JOIN itemstock AS s O... 3 row(s) returned
#	Time	Action						
1	02:21:19	SELECT i.itmcode, i.itmdesc, s.stkcountdate,s.qtystock FROM item AS i INNER JOIN itemstock AS s O... 3 row(s) returned						
161	--							
162	-- 2. Display supplier name and details address for supplier code 300001.							

All info about suppliers with their ids.

```

163 •  SELECT s.suppid, s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode
164      FROM supplier AS s
165      INNER JOIN supplieraddress AS a ON s.suppid = a.suppid;
166

```

	suppid	Name	Address	city	state	postcode
	300001	GDEX	123 Jalan Tun Razak	Kuala Lumpur	Kuala Lumpur	50400
	300002	POSLAJU	456 Jalan Dato Onn	Johor Bahru	Johor	80990
	300003	HDEX	789 Jalan Tunku Abdul Rahman	Kota Kinabalu	Sabah	88999
	300004	IDEX	246 Jalan Perak	Kuala Terengganu	Terengganu	20200
	300005	ADEX	369 Jalan Sultan Ismail	Petaling Jaya	Selangor	47300

Result 13																
Output																
Action Output <table border="1"> <thead> <tr> <th>#</th><th>Time</th><th>Action</th></tr> </thead> <tbody> <tr> <td>1</td><td>02:29:51</td><td>SELECT s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM supplier AS s ... 5 row(s) returned</td></tr> <tr> <td>2</td><td>02:31:41</td><td>SELECT s.suppid, s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM suppli... 5 row(s) returned</td></tr> <tr> <td>3</td><td>02:32:28</td><td>SELECT s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM supplier AS s ... 1 row(s) returned</td></tr> </tbody> </table>					#	Time	Action	1	02:29:51	SELECT s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM supplier AS s ... 5 row(s) returned	2	02:31:41	SELECT s.suppid, s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM suppli... 5 row(s) returned	3	02:32:28	SELECT s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM supplier AS s ... 1 row(s) returned
#	Time	Action														
1	02:29:51	SELECT s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM supplier AS s ... 5 row(s) returned														
2	02:31:41	SELECT s.suppid, s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM suppli... 5 row(s) returned														
3	02:32:28	SELECT s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode FROM supplier AS s ... 1 row(s) returned														
162	-- 2. Display supplier name and details address for supplier code 300001.															
163	• SELECT s.suppname AS 'Name', a.addr1 AS Address, a.city,a.state, a.postcode															
164	FROM supplier AS s															
165	INNER JOIN supplieraddress AS a ON s.suppid = a.suppid															
166	WHERE s.suppid = 300001;															
167	--															

300001 is the only record displayed in the result

```

168  --
169  -- 3. Find the suppliers who supplied the item for every item code that exist in the system. You
170  -- should display supplier id, name, item code, item description and last date supply for that item.
171  -- [Hint: use right outer join]
172 •  SELECT s.suppid, s.suppname, isu.itmcode, i.itmdesc, isu.lastdatesupply FROM supplier AS s
173    RIGHT JOIN itemsupplier AS isu ON s.suppid = isu.suppid
174    RIGHT JOIN item AS i ON isu.itmcode = i.itmcode;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

suppid	suppname	itmcode	itmdesc	lastdatesupply
300001	GDEX	A001	Item 1	2022-01-31
300002	POSLAJU	B002	Item 2	2022-02-28
300003	HDEX	C003	Item 3	2022-03-31
300004	IDEX	D004	Item 4	2022-04-30
300005	ADEX	E005	Item 5	2022-05-31
300002	POSLAJU	F006	Item 6	2022-06-30
300003	HDEX	G007	Item 7	2022-07-31
300003	HDEX	G008	Item 8	2022-08-31
300001	GDEX	G009	Item 9	2022-09-30
300004	IDEX	H010	Item 10	2022-10-31

Result 19 ×

Output

Action Output

#	Time	Action	Message
✓	1 02:55:13	SELECT s.suppid, s.suppname, isu.itmcode, i.itmdesc, isu.lastdatesupply FROM supplier AS s RIGHT JO... 10 row(s) returned	

```

175  --
176  -- 4. Display item category, description, item code, description, and reorder quantity where all the
177  -- item details must reflect to all item category that exist in the system. [Hint: use left outer join].
178 •  SELECT ic.iccode, ic.icdescription, i.itmcode, i.itmdesc, i.reorderqty FROM itemcategory AS ic
179    LEFT OUTER JOIN item AS i ON ic.iccode = i.iccode;
180 •  insert into itemcategory (icdescription) values('Testing'); -- to check if the outer join work or not ↴
181

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

iccode	icdescription	itmcode	itmdesc	reorderqty
101	Electronics	A001	Item 1	200
101	Electronics	F006	Item 6	700
102	Clothing	B002	Item 2	300
102	Clothing	G007	Item 7	800
103	Toys	C003	Item 3	400
103	Toys	G008	Item 8	900
104	Beauty Products	D004	Item 4	500
104	Beauty Products	G009	Item 9	1000
105	Home Appliances	E005	Item 5	600
105	Home Appliances	H010	Item 10	1100
106	Testing	NULL	NULL	NULL

Result 21 ×

Output

Action Output

#	Time	Action	Message
✓	3 03:02:18	insert into itemcategory (icdescription) values('Testing')	1 row(s) affected
✓	4 03:02:21	SELECT ic.iccode, ic.icdescription, i.itmcode, i.itmdesc, i.reorderqty FROM itemcategory AS ic LEFT O... 11 row(s) returned	

```

181      -- -----
182      -- 5. Retrieve supplier code, supplier name, item code, description and last date supply for supplier
183      -- code 300005. You should use USING operator in constructing SQL DML command.
184 •   SELECT suppid, suppname, itmcode, itmdesc, lastdatesupply FROM supplier
185     INNER JOIN itemsupplier USING (suppid)
186     INNER JOIN item USING (itmcode)
187     WHERE suppid = 300005;
188

```

Result Grid					
	suppid	suppname	itmcode	itmdesc	lastdatesupply
▶	300005	ADEX	E005	Item 5	2022-05-31

Result 25 ×

Output :

Action Output

#	Time	Action	Message
✓ 1	03:12:42	SELECT suppid, suppname, itmcode, itmdesc, lastdatesupply FROM supplier INNER JOIN itemsupplier U...	1 row(s) returned

```

188      -- -----
189      -- 6. Display item code, description and current stock for item category that belong to 'Home
190      -- Appliances'. Rename the header of each attribute as ProductCode, ProductName and
191      -- StockOnHand when populating your records.
192 •   SELECT itmcode, itmdesc, icdescription FROM item
193     INNER JOIN itemcategory USING (iccode)
194     WHERE icdescription = 'Home Appliances';
195

```

Result Grid				
	itmcode	itmdesc	icdescription	
▶	E005	Item 5	Home Appliances	
	H010	Item 10	Home Appliances	

Result 28 ×

Output :

Action Output

#	Time	Action	Message
✓ 1	03:17:28	SELECT itmcode, itmdesc, icdescription FROM item INNER JOIN itemcategory USING (iccode) WHER...	2 row(s) returned

```

188      --
189      -- 6. Display item code, description and current stock for item category that belong to 'Home
190      -- Appliances'. Rename the header of each attribute as ProductCode, ProductName and
191      -- StockOnHand when populating your records.
192  ●  SELECT
193      itmcode AS 'ProductCode',
194      itmdesc AS 'ProductName',
195      qtystock AS 'StockOnHand'
196  FROM itemcategory
197  RIGHT JOIN item USING (iccode) RIGHT JOIN itemstock USING(itmcode)
198  WHERE icdescription ='Home Appliances';
199

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	ProductCode	ProductName	StockOnHand
▶	E005	Item 5	300
	H010	Item 10	550

Result 31 ×

Output

Action Output

#	Time	Action	Message
1	03:24:49	SELECT itmcode AS 'ProductCode', itmdesc AS 'ProductName', qtystock AS 'StockOnHand' FROM itemcategory	2 row(s) returned

```

199      --
200      -- 7. Retrieve supplier address id, supplier id, address and state for all supplier that located at the
201      -- same state and posses different supplier address id. You should sorting the records based on
202      -- state, followed by supplier id.
203  ●  SELECT suppaddid, suppid, addr1, state
204  FROM supplier right outer JOIN supplieraddress USING (suppid)
205  WHERE state IN (SELECT state FROM supplieraddress GROUP BY state HAVING COUNT(*) > 1)
206  AND suppaddid IN (SELECT suppaddid FROM supplieraddress GROUP BY suppaddid HAVING COUNT(*) = 1)
207  ORDER BY state, suppaddid;

```

Sorry sir for this activity I forgot to insert two address from the same state and If I want to do so, I will have to repeat the whole process so I had to add new address to get result. this is the insert statement:

```

209  ●  INSERT INTO supplieraddress values (DEFAULT,300005, '123 Jalan Mohemed', 'Kuala Lumpur', '50140', 'Kuala Lumpur');
210

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	suppaddid	suppid	addr1	state
▶	2001	300001	123 Jalan Tun Razak	Kuala Lumpur
	2006	300005	123 Jalan Mohemed	Kuala Lumpur

Result 37 ×

Output

Action Output

#	Time	Action	Message
✓	6 03:31:09	SELECT suppaddid, suppid, addr1, state FROM supplier right outer JOIN supplieraddress USING (suppid)	0 row(s) returned
✗	7 03:34:10	INSERT INTO supplieraddress values (300005, '123 Jalan Mohemed', 'Kuala Lumpur', '50140', 'Kuala Lumpur')	Error Code: 1136. Column count doesn't match value count at row 1
✓	8 03:34:31	INSERT INTO supplieraddress values (DEFAULT,300005, '123 Jalan Mohemed', 'Kuala Lumpur', '50140', 'Kuala Lumpur')	1 row(s) affected
✓	9 03:34:35	SELECT suppaddid, suppid, addr1, state FROM supplier right outer JOIN supplieraddress USING (suppid)	2 row(s) returned