

Assignment 2

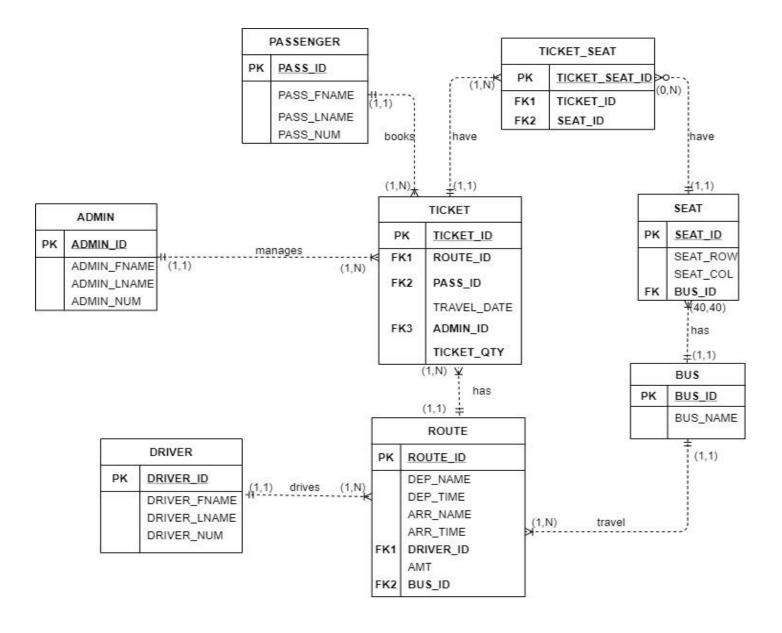
Lecturer: Linda Chua Sook Ling

< Bus Ticketing and Management System >

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Corrected ERD diagram



Data Dictionary

TABLE NAME	ATTRIBUTES NAME	CONTENTS	ТҮРЕ	FORMAT	RANGE	REQUIRED	PK OR FK	FK REFERENCED TABLE
ADMIN	ADMIN_ID ADMIN_FNAME ADMIN_LNAME ADMIN_NUM	Admin Code Admin First Name Admin Last Name Admin Phone Number	INT VARCHAR(15) VARCHAR(15) VARCHAR(15)	9999 Xxxxxxxx Xxxxxxxx 6013-6573150	1000-9999	Y Y Y Y	PK	
PASSENGER	PASS_ID PASS_FNAME PASS_LNAME PASS_NUM	Passenger Code Passenger First Name Passenger Last Name Passenger Phone Number	INT VARCHAR(15) VARCHAR(15) VARCHAR(15)	999999 Xxxxxxx Xxxxxxx 99999	100000-999999	Y Y Y	PK	
DRIVER	DRIVER_ID DRIVER_FNAME DRIVER_LNAME DRIVER_NUM	Driver Code Driver First Name Driver Last Name Driver Phone Number	INT VARCHAR(15) VARCHAR(15) VARCHAR(15)	999999 Xxxxxxxx Xxxxxxx 6013-6573150	40500-40599	Y Y Y Y	PK	
BUS	BUS_ID BUS_NAME	Bus Code Bus Name	CHAR(2) VARCHAR(20)	A1 Xxxxxxxx		Y Y	PK	
ROUTE	ROUTE_ID DEP_NAME DEP_TIME ARR_NAME ARR_TIME DRIVER_ID AMT BUS_ID	Route Code Departure Address Departure Time Arrival Address Arrival Time Driver Code Ticket Amount Bus Code	CHAR(7) VARCHAR(20) CHAR(5) VARCHAR(20) CHAR(5) INT DECIMAL(5,2) CHAR(2)	0123456 Xxxxxxxx 06:30 Xxxxxxxx 23:30 99999 129.25 B1	0 - 999.99	Y Y Y Y Y Y Y	PK FK FK	DRIVER_ID BUS_ID
TICKET	TICKET_ID ROUTE_ID PASS_ID TRAVEL_DATE ADMIN_ID TICKET_QTY	Ticket Code Route Code Passenger Code Travel Date Admin Code Ticket Quantity	INT CHAR(7) INT DATE INT INT	99999 Xxxxx-X 99999 '1842-12-31' 99999 99	101-999	Y Y Y Y Y	PK FK FK	ROUTE_ID PASS_ID ADMIN_ID
TICKET_SEAT	TICKET_SEAT_ID TICKET_ID SEAT_ID	Ticket and seat Code Ticket Code Seat Code	CHAR(4) INT CHAR(4)	Xxxx 99999 Xxxx		Y Y Y	PK FK FK	TICKET_ID SEAT_ID
SEAT	SEAT_ID SEAT_ROW SEAT_COL BUS_ID	Seat Code Seat Row Number Seat Column Number Bus Code	CHAR(4) CHAR(1) CHAR(1) CHAR(2)	Xxxx X X X		Y Y Y Y	PK FK	BUS_ID

Admin Table:

ADMIN_ID	ADMIN_FNAME	ADMIN_LNAME	ADMIN_NUM
1011	Amir	Rahman	6011-69750208
1012	Shariff	Muhammad	6017-53225643
1013	Nurul	Mahmud	6018-77239016
1014	Nur	Fatimah	6011-79532270
1015	Abdullah	Ahmed	6017-00022254
1016	Alya	Aisha	6018-42132411
1017	Aminah	Khan	6011-44552233
1018	Sharifa	Hossain	6018-66655321
1019	Sulaiman	Ali	6019-82736543
1010	Khairul	Hani	6017-60999436

Passenger table:

PASS_ID	PASS_FNAME	PASS_LNAME	PASS_NUM
101911	Eric	Jensen	6010-27228863
101922	Avinash	Natt	6016-11473532
101933	Savitra	Tella	6013-44400244
101944	Meghan	Reilly	6018-36505759
101955	Emilia	Hopkins	6011-13162886
101966	Fuzail	Illias	6011-62038127
101977	Tan	Shupei	6019-73630813
101988	Xannvern	Cheok	6016-47513562
101999	Ashraf	Ahmed	6019-39211661
101900	Irfan	Khan	6016-67457307

Driver Table:

DRIVER_ID	DRIVER_FNAME	DRIVER_LNAME	DRIVER_NUM
40512	Malone	Roy	6011-12366186
40513	Johnson	Velvet	6013-73651333
40514	Lucas	Paula	6018-38956589
40515	Merrill	Angel	6017-11117160
40516	Wagner	Sarah	6018-79774847
40517	Pearson	Dawn	6017-18122706
40518	Gore	Kathy	6017-34134602

Bus Table:

BUS_ID	BUS_NAME
B1	Greyhound1
B2	Greyhound2
В3	MegaBus1
B4	MegaBus2
B5	RedCoach1
В6	RedCoach2

Route Table:

ROUTE_ID	DEP_NAME	DEP_TIME	ARR_NAME	ARR_TIME	DRIVER_ID	AMT	BUS_ID
Route-A	Cyberjaya	06:35	KL Sentral	07:30	40512	15.00	B1
Route-B	Cyberjaya	10:00	KL Sentral	10:55	40518	15.00	B1
Route-C	KL Sentral	08:00	Cyberjaya	09:00	40512	15.00	B1
Route-D	KL Sentral	17:00	Cyberjaya	19:00	40518	15.00	B1
Route-E	Cyberjaya	05:00	Kepong	06:45	40515	20.50	B2
Route-F	Kepong	17:30	Cyberjaya	19:15	40515	20.50	B2
Route-G	Cyberjaya	04:30	Melaka	08:00	40514	30.90	В3
Route-H	Cyberjaya	16:00	Melaka	19:30	40517	30.90	B4
Route-I	Melaka	08:30	Cyberjaya	12:00	40514	30.90	В3
Route-J	Melaka	17:00	Cyberjaya	20:30	40516	30.90	B5
Route-K	Cyberjaya	05:15	Seremban	07:00	40513	26.30	В6
Route-L	Seremban	17:00	Cyberjaya	18:45	40513	26.30	В6

Ticket Table:

TICKET_ID	ROUTE_ID	PASS_ID	TRAVEL_DATE	ADMIN_ID	TICKET_QTY
101	Route-A	101911	2020-09-02	1011	2
102	Route-B	101922	2020-09-02	1012	5
103	Route-C	101933	2020-09-02	1013	3
104	Route-D	101944	2020-09-02	1013	6
105	Route-E	101955	2020-09-02	1013	4
106	Route-F	101966	2020-09-02	1014	1
107	Route-G	101977	2020-09-02	1015	2
108	Route-H	101988	2020-09-02	1016	2

109	Route-I	101999	2020-09-02	1017	1
110	Route-J	101900	2020-09-02	1018	7
111	Route-K	101900	2020-09-03	1019	1
112	Route-L	101988	2020-09-03	1019	1
113	Route-K	101922	2020-09-03	1019	1
114	Route-A	101999	2020-09-03	1016	2
115	Route-K	101933	2020-09-03	1013	3
116	Route-A	101944	2020-09-03	1014	9
117	Route-K	101955	2020-09-03	1015	3
118	Route-A	101966	2020-09-03	1016	1
119	Route-K	101977	2020-09-03	1017	1
120	Route-A	101933	2020-09-04	1017	1

Ticket_Seat Table:

TICKET_SEAT_ID	TICKET_ID	SEAT_ID
A001	101	B1A1
A002	102	B1A2
A003	103	B1B1
A004	104	B1B2
A005	105	B1C2
A006	106	B2D2
A007	107	B2D1
A008	108	B2A1
A009	109	B3B2
B001	110	B3E1

B002	111	B4F2
B003	112	B5G1
B004	113	B6G2
B005	114	B1A1
B006	114	B6G2
B007	101	B3B2

Seat Table:

SEAT_ID	SEAT_ROW	SEAT_COL	BUS_ID
B1A1	A	1	B1
B1A2	A	2	B1
B1B1	В	1	B1
B1B2	В	2	B1
B1C2	С	2	B1
B2D2	D	2	B2
B2D1	D	1	B2
B2A1	A	1	B2
B3B2	В	2	В3
B3E1	Е	1	В3
B4F2	F	2	B4
B5G1	G	1	B5
B6G2	G	2	В6

Data Manipulation with SQL:

i) Aggregate function

Count: To calculate the number of tickets bought by a single passenger.

```
DB2 CLP - DB2COPY1 - C:\PROGRA~2\IBM\SQLLIB\BIN\db2setcp.bat DB2SETCP.BAT DB2.EXE
db2 => select * from ticket
TICKET ID
              ROUTE ID PASS ID
                                        TRAVEL DATE ADMIN ID
                               101911 09/02/2020
101922 09/02/2020
101933 09/02/2020
                                                               1012
1013
         102 Route-B
         103 Route-C
         104 Route-D
                               101944 09/02/2020
                                                               1013
         105 Route-E
                               101955 09/02/2020
101966 09/02/2020
                                                               1013
         106 Route-F
                                                               1014
         107 Route-G
                               101977 09/02/2020
                                                               1015
         108 Route-H
                               101988 09/02/2020
                                                               1016
                               101999 09/02/2020
101900 09/03/2020
         109 Route-I
                                                               1017
         110 Route-K
                                                               1018
         111 Route-K
                               101900 09/03/2020
                                                               1019
                               101988 09/03/2020
101922 09/03/2020
         112 Route-L
                                                               1019
         113 Route-K
                                                               1019
                               101999 09/03/2020
         114 Route-A
                                                               1016
         115 Route-K
                               101933 09/03/2020
                                                               1013
                               101944 09/03/2020
101955 09/03/2020
         116 Route-A
                                                               1014
         117 Route-K
                                                               1015
                               101966 09/03/2020
         118 Route-A
                                                               1016
                               101977 09/03/2020
101933 09/04/2020
         119 Route-K
         120 Route-A
                                                               1017
  20 record(s) selected.
db2 => select count(Pass_ID) from Ticket where Pass_ID = 101933
  1 record(s) selected.
db2 => _
```

Max: To get the maximum price of a route where the price is less than 30.

```
db2 => select * from route
ROUTE_ID DEP_NAME
                                 DEP TIME ARR NAME
                                                                    ARR TIME DRIVER ID
                                                                                           AMT
                                                                                                     BUS ID
Route-A Cyberjaya
                                  06:35
                                            KL Sentral
                                                                    07:30
                                                                                     40512
                                                                                              15.00 B1
                                  10:00
                                            KL Sentral
                                                                    10:55
                                                                                     40518
                                                                                              15.00 B1
Route-C KL Sentral
                                                                    09:00
19:00
                                  08:00
                                            Cyberjaya
                                                                                     40512
                                                                                              15.00 B1
                                                                                              15.00 B1
20.50 B2
Route-D KI Sentral
                                  17:00
                                                                                     40518
                                            Cyberjava
Route-E Cyberjaya
Route-F Kepong
                                  05:00
                                                                    06:45
                                                                                     40515
                                            Kepong
Route-F
                                            Cyberjaya
                                                                                     40515
                                                                                              20.50 B2
Route-G Cyberjaya
                                  04:30
                                            Melaka
                                                                    08:00
                                                                                     40514
                                                                                              30.90 B3
Route-H Cyberjaya
Route-I Melaka
                                                                                              30.90 B4
30.90 B3
                                  16:00
                                            elaka
                                                                    19:30
                                                                                     40517
                                  08:30
                                            Cyberjaya
Cyberjaya
                                                                    12:00
                                                                                     40514
Route-J Melaka
                                                                                     40516
                                                                                              30.90 B5
                                                                    20:30
                                  05:15
17:00
Route-K Cyberjaya
Route-L Seremban
                                                                                     40513
                                            Cyberjaya
                                                                    18:45
                                                                                     40513
                                                                                              26.30 B6
  12 record(s) selected.
db2 => select MAX(AMT) from route where amt<30
  26.30
  1 record(s) selected.
db2 =>
```

Average: To get average price of the route

OOLE_ID	DEP_NAME	DEP_TIM	E ARR_NAME	ARR_TIME D	RIVER_ID	AMT	BUS_ID
loute-A	Cyberjaya	06:35	KL Sentral	07:30	40512	15.00	B1
Route-B	Cyberjaya	10:00	KL Sentral	10:55	40518	15.00	B1
Route-C	KL Sentral	08:00	Cyberjaya	09:00	40512	15.00	B1
loute-D	KL Sentral	17:00	Cyberjaya	19:00	40518	15.00	B1
loute-E	Cyberjaya	05:00	Kepong	06:45	40515	20.50	B2
loute-F	Kepong	17:30	Cyberjaya	19:15	40515	20.50	B2
Route-G	Cyberjaya	04:30	Melaka	08:00	40514	30.90	B3
Route-H	Cyberjaya	16:00	elaka	19:30	40517	30.90	B4
loute-I	Melaka	08:30	Cyberjaya			30.90	B3
loute-J	Melaka	17:00	Cyberjaya	20:30	40516	30.90	B5
loute-K	Cyberjaya	05:15	Seremban	07:00	40513	26.30	B6
Route-L	Seremban	17:00	Cyberjaya	18:45	40513	26.30	B6
	ord(s) selected. elect Avg(Amt) fr	rom route					
22 100	0000000000000000000	000000000					
23.100							

Group by and having clause: To get the grouping data of the column route_id with a having clause so that we can find the average amount from the grouped data.

```
db2 => select * from route
ROUTE_ID DEP_NAME
                               DEP_TIME ARR_NAME
                                                              ARR_TIME DRIVER_ID
                                                                                    AMT
                                                                                            BUS_ID
Route-A Cyberjaya
                               06:35
                                                                              40512
                                                                                      15.00 B1
                                        KL Sentral
                                                              07:30
                                                              10:55
Route-B Cyberjaya
                               10:00
                                        KL Sentral
                                                                              40518
                                                                                      15.00 B1
Route-C
                               08:00
                                                              09:00
                                                                                      15.00 B1
        KL Sentral
                                        Cyberjaya
                                                                              40512
Route-D KL Sentral
                               17:00
                                        Cyberjaya
                                                              19:00
                                                                              40518
                                                                                      15.00 B1
Route-E Cyberjaya
                               05:00
                                        Kepong
                                                              06:45
                                                                              40515
                                                                                      20.50 B2
Route-F
        Kepong
                               17:30
                                        Cyberjaya
                                                              19:15
                                                                              40515
                                                                                      20.50 B2
                                                                                      30.90 B3
Route-G Cyberjaya
                               04:30
                                        Melaka
                                                              08:00
                                                                              40514
                                                                                      30.90 B4
Route-H Cyberjaya
                               16:00
                                        elaka
                                                              19:30
                                                                              40517
                                                                                      30.90 B3
Route-I
        Melaka
                               08:30
                                        Cyberjaya
                                                              12:00
                                                                              40514
Route-J
        Melaka
                               17:00
                                        Cyberjaya
                                                              20:30
                                                                              40516
                                                                                      30.90 B5
Route-K Cyberjaya
                               05:15
                                        Seremban
                                                              07:00
                                                                              40513
                                                                                      26.30 B6
Route-L Seremban
                               17:00
                                        Cyberjaya
                                                                              40513
                                                                                      26.30 B6
                                                              18:45
 12 record(s) selected.
db2 => select route_ID, MAX(AMT) from route group by route_ID having avg(AMT) < 30
ROUTE ID 2
Route-A
           15.00
           15.00
Route-B
           15.00
Route-C
           15.00
Route-D
           20.50
Route-E
           20.50
Route-F
Route-K
           26.30
Route-L
           26.30
 8 record(s) selected.
db2 =>
```

View: To view the stored table.

```
db2 => create view bus view as select bus id, bus name from bus
DB20000I The SQL command completed successfully.
db2 => select * from bus_view
BUS ID BUS NAME
B1
       Greyhound1
B2
       Greyhound
B3
      MegaBus1
B4
      MegaBus2
B5
       RedCoach1
B6
       RedCoach2
 6 record(s) selected.
db2 =>
```

Top n records: To get the first 10 records of the ticket_seat table.

```
db2 => select * from ticket_seat order by ticket_seat_id fetch first 10 rows only
TICKET_SEAT_ID TICKET_ID SEAT_ID
A001
                       101 B1A1
A002
                       102 B1A2
A003
                       103 B1B1
A004
                       104 B1B2
A005
                       105 B1C2
A006
                       106 B2D2
A007
                       107 B2D1
A008
                       108 B2A1
A009
                       109 B3B2
B001
                       110 B3E1
 10 record(s) selected.
db2 =>
```

Trigger: when ticket quantity is 5 or greater than 5 trigger will update the discount column with 5% discount after insert or update ticket quantity.

T_ID	ROUTE_ID PASS	_ID	TRAVEL_DATE	ADMIN_ID	TICKET_QTY	DISCOUNT
101	Route-A	101911	09/02/2020	1011	9	0%
102	Route-B	101922	09/02/2020	1012	5	0%
103	Route-C	101933	09/02/2020	1013	3	0%
104	Route-D	101944	09/02/2020	1013	6	0%
105	Route-E	101955	09/02/2020	1013	4	0%
106	Route-F	101966	09/02/2020	1014	1	0%
107	Route-G	101977	09/02/2020	1015	2	0%
108	Route-H	101988	09/02/2020	1016	2	0%
109	Route-I	101999	09/02/2020	1017	1	0%
110	Route-K	101900	09/03/2020	1018	7	0%
111	Route-K	101900	09/03/2020	1019	1	0%
112	Route-L	101988	09/03/2020	1019	1	0%
113	Route-K	101922	09/03/2020	1019	1	0%
114	Route-A	101999	09/03/2020	1016	2	0%
115	Route-K	101933	09/03/2020	1013	3	0%
116	Route-A	101944	09/03/2020	1014	9	0%
117	Route-K	101955	09/03/2020	1015	3	0%
118	Route-A	101966	09/03/2020	1016	1	0%
119	Route-K	101977	09/03/2020	1017	1	0%
120	Route-A	101933	09/04/2020	1017	1	0%

After update

```
db2 => create trigger t1 after update of ticket_qty on ticket for each row mode db2sql update ticket set
discount= '5%' where ticket_qty >= 5
DB20000I The SQL command completed successfully.
db2 => select * from ticket
TICKET_ID
            ROUTE_ID PASS_ID
                                  TRAVEL_DATE ADMIN_ID
                                                           TICKET_QTY DISCOUNT
                           101911 09/02/2020
                                                                     9 0%
        101 Route-A
                                                      1011
                           101922 09/02/2020
                                                                     5 0%
        102 Route-B
                                                      1012
                           101933 09/02/2020
                                                      1013
                                                                     3 0%
        103 Route-C
                                                                     6 0%
4 0%
                           101944 09/02/2020
                                                      1013
        104 Route-D
        105 Route-E
                           101955 09/02/2020
                                                      1013
                           101966 09/02/2020
                                                                     1 0%
        106 Route-F
                                                      1014
                                                                     2 0%
2 0%
                                                      1015
        107 Route-G
                           101977 09/02/2020
        108 Route-H
                           101988 09/02/2020
                                                      1016
                                                                     1 0%
        109 Route-I
                           101999 09/02/2020
                                                      1017
                                                                     7 0%
        110 Route-K
                           101900 09/03/2020
                                                      1018
                           101900 09/03/2020
        111 Route-K
                                                      1019
                                                                     1 0%
                                                                     1 0%
                           101988 09/03/2020
        112 Route-L
                                                      1019
        113 Route-K
                           101922 09/03/2020
                                                      1019
                                                                     1 0%
                           101999 09/03/2020
                                                                     2 0%
        114 Route-A
                                                      1016
                                                                     3 0%
                           101933 09/03/2020
        115 Route-K
                                                      1013
        116 Route-A
                           101944 09/03/2020
                                                      1014
                                                                     9 0%
        117 Route-K
                           101955 09/03/2020
                                                      1015
                                                                     3 0%
                                                                     1 0%
        118 Route-A
                           101966 09/03/2020
                                                      1016
        119 Route-K
                           101977 09/03/2020
                                                      1017
                                                                     1 0%
                           101933 09/04/2020
                                                                     1 0%
        120 Route-A
                                                      1017
  20 record(s) selected.
```

DB2 CLP - DB2COPY1 - C:\PROGRA~2\IBM\SQLLIB\BIN\db2setcp.bat DB2SETCP.BAT DB2.EXE db2 => update ticket set ticket_qty = 5 where ticket_id = 101 DB20000I The SQL command completed successfully. db2 => select * from ticket TICKET_ID ROUTE_ID PASS_ID TRAVEL DATE ADMIN ID TICKET_QTY DISCOUNT 5 5% 101 Route-A 101911 09/02/2020 101922 09/02/2020 1012 5 5% 102 Route-B 101933 09/02/2020 103 Route-C 1013 3 0% 101944 09/02/2020 104 Route-D 1013 6 5% 105 Route-E 101955 09/02/2020 1013 4 0% 106 Route-F 101966 09/02/2020 1014 1 0% 107 Route-G 101977 09/02/2020 1015 2 0% 108 Route-H 101988 09/02/2020 1016 2 0% 109 Route-I 101999 09/02/2020 1017 1 0% 110 Route-K 101900 09/03/2020 1018 7 5% 111 Route-K 101900 09/03/2020 1019 1 0% 112 Route-L 101988 09/03/2020 1019 1 0% 113 Route-K 101922 09/03/2020 1019 1 0% 114 Route-A 101999 09/03/2020 1016 2 0% 115 Route-K 101933 09/03/2020 1013 3 0% 9 5% 116 Route-A 101944 09/03/2020 1014 117 Route-K 101955 09/03/2020 1015 3 0% 118 Route-A 101966 09/03/2020 1016 1 0% 1 0% 119 Route-K 101977 09/03/2020 1017 120 Route-A 101933 09/04/2020 1 0% 1017 20 record(s) selected.

20 record(s) selected.

db2 => create trigger t2 after insert on ticket for each row mode db2sql update ticket set discount= '5%' where ticket_qty >= 5
DB20000I The SQL command completed successfully.

After insert

```
db2 => Insert into TICKET values(121, 'Route-A', 101933, '2020-09-04', 1019, 8,'0%')
DB20000I The SQL command completed successfully.
db2 => select * from ticket
TICKET ID
             ROUTE ID PASS ID
                                   TRAVEL DATE ADMIN ID
                                                             TICKET QTY DISCOUNT
                           101911 09/02/2020
        101 Route-A
                                                                        5 5%
                                                        1011
        102 Route-B
                            101922 09/02/2020
                                                        1012
                                                                        5 5%
                           101933 09/02/2020
                                                                        3 0%
        103 Route-C
                                                        1013
        104 Route-D
                           101944 09/02/2020
                                                       1013
                                                                        6 5%
                           101955 09/02/2020
                                                       1013
        105 Route-E
                           101966 09/02/2020
                                                                        1 0%
        106 Route-F
                                                       1014
        107 Route-G
                           101977 09/02/2020
                                                       1015
                                                                        2 0%
        108 Route-H
                           101988 09/02/2020
                                                        1016
                                                                        2 0%
        109 Route-I
                           101999 09/02/2020
                                                        1017
                                                                          0%
        110 Route-K
                           101900 09/03/2020
                                                        1018
                                                                          5%
                           101900 09/03/2020
        111 Route-K
                                                       1019
                                                                        1 0%
        112 Route-L
                           101988 09/03/2020
                                                       1019
                                                                        1 0%
        113 Route-K
                           101922 09/03/2020
                                                       1019
                                                                        1 0%
        114 Route-A
                           101999 09/03/2020
                                                        1016
                                                                        2 0%
        115 Route-K
                           101933 09/03/2020
                                                        1013
                                                                        3 0%
                           101944 09/03/2020
                                                                        9
                                                                          5%
        116 Route-A
                                                        1014
                           101955 09/03/2020
        117 Route-K
                                                        1015
                                                                        3 0%
                           101966 09/03/2020
                                                        1016
        118 Route-A
                           101977 09/03/2020
                                                        1017
                                                                        1 0%
        119 Route-K
                            101933 09/04/2020
                                                        1017
                                                                        1 0%
        120 Route-A
        121 Route-A
                            101933 09/04/2020
                                                        1019
                                                                        8 5%
  21 record(s) selected.
```

Subqueries:

Views the ticket id passenger name, number and purchased quantity for selected passenger id

CKET_ID	PASS_FNAME	PASS_NUM	TICKET_QTY
103	Savitra	6013-44400244	3
115	Savitra	6013-44400244	3
120	Savitra	6013-44400244	1
121	Savitra	6013-44400244	8

Sets the route amount to maximum amount for the routes which has route amount less than average

db2 => update route set amt = (select max(amt) from route) where amt < (select avg(amt) from route) DB20000I The SQL command completed successfully. db2 => select * from route ROUTE_ID DEP_NAME DEP_TIME ARR_NAME BUS_ID ARR_TIME DRIVER_ID AMT 30.90 B1 Route-A Cyberjaya 06:35 KL Sentral 07:30 40512 Route-B Cyberjaya 10:00 KL Sentral 10:55 40518 30.90 B1 Route-C KL Sentral 08:00 Cyberjaya 09:00 40512 30.90 B1 Route-D KL Sentral 17:00 Cyberjaya 19:00 40518 30.90 B1 Route-E Cyberjaya Route-F Kepong Route-G Cyberjaya 05:00 06:45 40515 30.90 B2 Kepong 17:30 Cyberjaya 19:15 40515 30.90 B2 04:30 Melaka 08:00 40514 30.90 B3 Route-H Cyberjaya Route-I Melaka Route-J Melaka Route-K Cyberjaya Route-L Seremban 16:00 elaka 19:30 40517 30.90 B4 08:30 Cyberjaya 12:00 40514 30.90 B3 17:00 Cyberjaya 20:30 40516 30.90 B5 05:15 Seremban 07:00 40513 26.30 B6 17:00 Cyberjaya 18:45 40513 26.30 B6 12 record(s) selected. db2 => _

Stored procedure: to store query that will show discount amount offer by B1 bus company

UTE_ID DEP_NAME 	DEP_TIME ARR_NAME		DRIVER_ID		
					_ID
ute-B Cvberiava	06:35 KL Sentral	07:30	40512	29.35 B1	
	10:00 KL Sentral	10:55	40518	29.35 B1	
ite-C KL Sentral	08:00 Cyberjaya	09:00	40512	29.35 B1	
ute-D KL Sentral	17:00 Cyberjaya	19:00	40518	29.35 B1	
ute-E Cyberjaya	05:00 Kepong	06:45	40515	30.90 B2	
ute-F Kepong	17:30 Cyberjaya	19:15	40515	30.90 B2	
ute-G Cyberjaya	04:30 Melaka	08:00	40514	30.90 B3	
ute-H Cyberjaya	16:00 elaka	19:30	40517	30.90 B4	
ute-I Melaka	08:30 Cyberjaya	12:00	40514		
ute-J Melaka	17:00 Cyberjaya	20:30	40516		
ute-K Cyberjaya	05:15 Seremban	07:00	40513		
ute-L Seremban	17:00 Cyberjaya	18:45	40513	26.30 B6	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0)) begin update ro	ute set amt =	= amt *(1- d	isc
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou	nd completed successfully.				
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	nd completed successfully. ute DEP_TIME ARR_NAME	ARR_TIME	DRIVER_ID	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME 	nd completed successfully. ute DEP_TIME ARR_NAME 06:35 KL Sentral	ARR_TIME 07:30	DRIVER_ID 40512	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral	ARR_TIME 07:30 10:55	DRIVER_ID 40512 40518	AMT BUS27.88 B1 27.88 B1	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME ute-A Cyberjaya ute-C KL Sentral	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya	ARR_TIME 07:30 10:55 09:00	DRIVER_ID 40512 40518 40512	AMT BUS 27.88 B1 27.88 B1 27.88 B1	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya 17:00 Cyberjaya	ARR_TIME 07:30 10:55 09:00 19:00	DRIVER_ID 40512 40518 40512 40518	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya 17:00 Cyberjaya 05:00 Kepong	ARR_TIME 07:30 10:55 09:00 19:00 06:45	DRIVER_ID 40512 40518 40512 40518 40515	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya 17:00 Cyberjaya 05:00 Kepong 17:30 Cyberjaya	ARR_TIME 07:30 10:55 09:00 19:00 06:45 19:15	DRIVER_ID 40512 40518 40512 40518 40515 40515	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya 17:00 Cyberjaya 05:00 Kepong 17:30 Cyberjaya 04:30 Melaka	ARR_TIME 07:30 10:55 09:00 19:00 06:45 19:15 08:00	DRIVER_ID 40512 40518 40512 40518 40515 40515	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya 17:00 Cyberjaya 05:00 Kepong 17:30 Cyberjaya 04:30 Melaka 16:00 elaka	ARR_TIME 07:30 10:55 09:00 19:00 06:45 19:15 08:00 19:30	DRIVER_ID 40512 40518 40512 40518 40515 40515 40514 40517	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME ute-A Cyberjaya ute-B Cyberjaya ute-C KL Sentral ute-D KL Sentral ute-E Cyberjaya ute-F Kepong ute-G Cyberjaya ute-H Cyberjaya ute-H Cyberjaya	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya 17:00 Cyberjaya 05:00 Kepong 17:30 Cyberjaya 04:30 Melaka 16:00 elaka 08:30 Cyberjaya	ARR_TIME 07:30 10:55 09:00 19:00 06:45 19:15 08:00 19:30 12:00	DRIVER_ID 40512 40518 40512 40518 40515 40515 40514 40517 40514	AMT BUS	
s_id = 'B1'; end 20000I The SQL commar 2 => call procR (0.05) Return Status = 0 2 => select * from rou UTE_ID DEP_NAME	DEP_TIME ARR_NAME 06:35 KL Sentral 10:00 KL Sentral 08:00 Cyberjaya 17:00 Cyberjaya 05:00 Kepong 17:30 Cyberjaya 04:30 Melaka 16:00 elaka	ARR_TIME 07:30 10:55 09:00 19:00 06:45 19:15 08:00 19:30	DRIVER_ID 40512 40518 40512 40518 40515 40515 40514 40517	AMT BUS	