Shengyang Guan Final Project

MIS 370

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**SQL CODE FOR EACH QUERY**

CREATE TABLE CLIENT

(CLIENT\_NUM CHAR(4) NOT NULL,

CLIENT\_FNAME varchar(10),

CLIENT\_Int varchar(10),

CLIENT\_LNAME varchar(10),

CLIENT\_REGION varchar(10),

PRIMARY KEY(CLIENT\_NUM));

Drop TABLE CONTRACT

CREATE TABLE CONTRACT

(CONTRACT\_NUMBER CHAR(4) NOT NULL,

CLIENT\_NUM CHAR(4) NOT NULL,

CONTRACT\_DATE DATETIME,

CONTRACT\_AMOUNT MONEY,

CONSULT\_CLASS\_1 varchar(30),

CONSULT\_CLASS\_2 varchar(30),

CONSULT\_CLASS\_3 varchar(30),

CONSULT\_CLASS\_4 varchar(30),

CONSULTANT\_NUM\_1 CHAR(4) NOT NULL,

CONSULTANT\_NUM\_2 CHAR(4) NOT NULL,

CONSULTANT\_NUM\_3 CHAR(4) NOT NULL,

CONSULTANT\_NUM\_4 CHAR(4) NOT NULL,

PRIMARY KEY(CONTRACT\_NUMBER));

CREATE TABLE CONSULTANT

(CONSULTANT\_NUM CHAR(4) NOT NULL,

CONSULTANT\_FNAME varchar(10),

CONSULTANT\_INT varchar(10),

CONSULTANT\_LNAME

varchar(10),

CONSULTANT\_REGION varchar(10),

CONSULTANT\_CLASS\_1 varchar(30),

CONSULTANT\_CLASS\_2 varchar(30),

CONSULTANT\_CLASS\_3 varchar(30),

CONSULTANT\_CLASS\_4 varchar(30),

PRIMARY KEY(CONSULTANT\_NUM));

insert into CLIENT values('289','Marianne','R.','Brown','Midwest');

insert into CLIENT values('298','James','D.','Smith','Southeast');

insert into CLIENT values('299','Gerald','A.','Gallega','Midwest');

insert into CLIENT values('300','Alice','B.','VanderVoort','West');

insert into CLIENT values('301','Willaker','C.','Mary','West');

insert into CLIENT values('302','Jill','D.','Martin','Southeast');

insert into CLIENT values('303','Gerald','A.','Martin','Midwest');

insert into CLIENT values('304','Hank','B.','Jones','Southeast');

insert into CLIENT values('305','JoAnne','C.','Rightonit','Midwest');

insert into CLIENT values('306','McGuire','D.','Bryana','West');

insert into CLIENT values('307','George','A.','Brown','West');

insert into CONTRACT values('5841','298','10-Feb-2008','$2,985,000.00','Database Administration','Web Applications',' ',' ','29','56','22',' ');

insert into CONTRACT values('5842','289','15-Feb-2008','$670,300.00','Internet Servies',' ',' ',' ','34','38','45','18');

insert into CONTRACT values('5843','289','12-Feb-2008','$1,250,000.00','Database Design','Database Administration','Network Installation',' ','25','34',' ',' ');

insert into CONTRACT values('5844','300','11-Feb-2008','$3,250,000.00','Internet Servies','Network Installation',' ',' ','22','29',' ',' ');

insert into CONTRACT values('5845','301','12-Oct-2008','$650,300.00','Network Installation','Web Applications',' ',' ','34','56',' ',' ');

insert into CONTRACT values('5846','301','12-Dec-2008','$2,988,000.00','Database Administration','Database Design',' ',' ','18',' ',' ',' ');

insert into CONTRACT values('5847','307','5-Oct-2008','$6,023,300.00','Database Administration','Web Applications',' ',' ','26','28','34','29');

insert into CONTRACT values('5848','308','2-Aug-2008','$3,085,000.00','Internet Servies',' ',' ',' ','25','27',' ',' ');

insert into CONTRACT values('5849','302','24-Jul-2008','$2,670,300.00','Database Design','Database Administration','Network Installation',' ','34','22',' ',' ');

insert into CONTRACT values('5850','304','30-Oct-2008','$22,250,000.00','Network Installation',' ',' ',' ','45','56',' ',' ');

insert into CONTRACT values('5851','304','15-Jun-2008','$870,300.00','Database Design','Web Applications',' ',' ','38',' ',' ',' ');

insert into CONSULTANT values('29','Rachel','G.','Carson','Midwest','Internet Servies','Database Administration',' ',' ');

insert into CONSULTANT values('56','Karl','M.','Spenser','Midwest','Database Administration','Web Applications',' ',' ');

insert into CONSULTANT values('22','Julian','H.','Donatello','Midwest','Database Design',' ',' ',' ');

insert into CONSULTANT values('34','Gerald','K.','Ricardo','Southeast','Network Installation','Database Administration',' ',' ');

insert into CONSULTANT values('38','Anne','T.','Dimarco','Southeast','Internet Servies','Network Installation',' ',' ');

insert into CONSULTANT values('45','Geraldo','J.','Rivera','Southeast','Network Installation','Web Applications',' ',' ');

insert into CONSULTANT values('18','Donald',' ','Chen','West','Database Administration','Database Design','Network Installation',' ');

insert into CONSULTANT values('25','Angela','M.','Jamison','Southeast','Database Administration','Web Applications',' ',' ');

insert into CONSULTANT values('26','JoAnne','A.','Martin','Midwest','Internet Servies','Web Applications',' ',' ');

insert into CONSULTANT values('28','Alice','S.','VanderVoort','Southeast','Database Design',' ',' ',' ');

insert into CONSULTANT values('27','James',' ','Brown','West','Network Installation','Database Design',' ',' ');

**Reasons for Report**

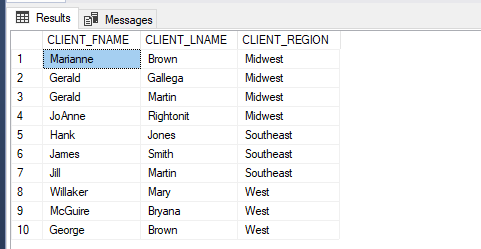
1. Showing the number of customers by region, so that marketing manager could make strategy base on region.
2. Showing the active consultants that decide promotion or demotion them.
3. Showing the contact total price of all region, so that manager could know how much profit the company make.
4. Showing the all consultants of all region, so that manager could sent trained consultants to where lack of consultants.
5. Listing the consultants has same classifications that manager know the strengths of classifications.
6. Listing the first name and last name of all client who has more than one contact. Consider them as VIP clients.
7. Showing all consultants and their location, so that we can assign them to same location client.
8. Listing all contracts sign in the first season and the price. Company can decide strategy for next year.
9. Showing consultants who has more than two special classifications and included 'Database Administration' to find the skillful consultants.
10. Listing all client and their information that we can assign new contract to fit them needs.

**10 Query Reports**

1.SELECT  CLIENT\_FNAME,CLIENT\_LNAME,CLIENT\_REGION

FROM CLIENT

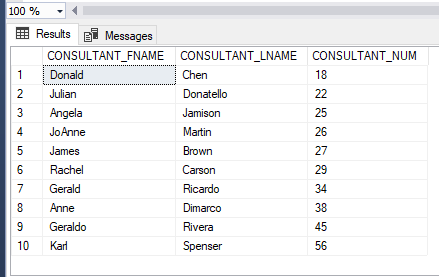
ORDER BY CLIENT\_REGION ASC



2.SELECT CONSULTANT\_FNAME,CONSULTANT\_LNAME,CONSULTANT\_NUM

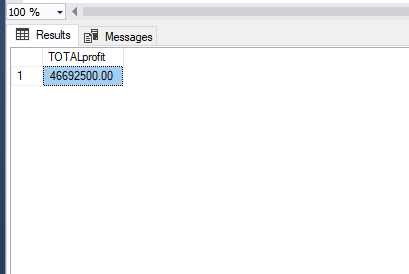
FROM CONSULTANT

WHERE EXISTS(SELECT \* FROM CONTRACT WHERE CONSULTANT\_NUM=CONSULTANT\_NUM\_1 OR CONSULTANT\_NUM=CONSULTANT\_NUM\_2 OR CONSULTANT\_NUM=CONSULTANT\_NUM\_3 OR CONSULTANT\_NUM=CONSULTANT\_NUM\_4)



3.SELECT SUM(CONTRACT\_AMOUNT)AS TOTALprofit

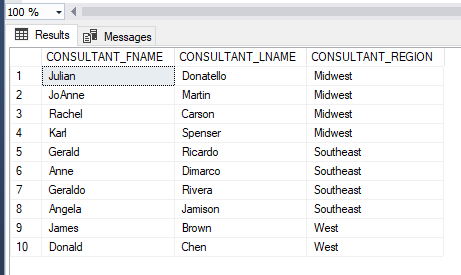
FROM CONTRACT



4.SELECT CONSULTANT\_FNAME,CONSULTANT\_LNAME,CONSULTANT\_REGION

FROM CONSULTANT

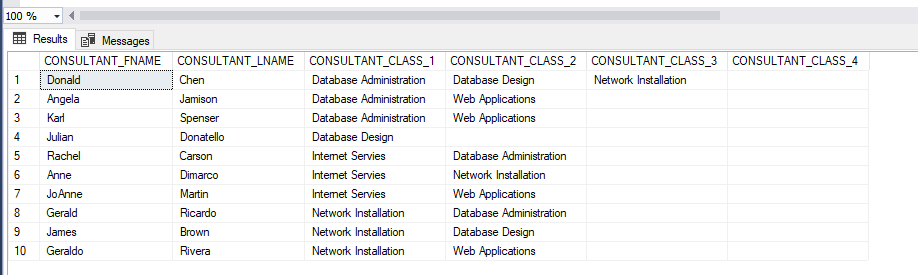
ORDER BY CONSULTANT\_REGION ASC



5.SELECT CONSULTANT\_FNAME,CONSULTANT\_LNAME,CONSULTANT\_CLASS\_1,CONSULTANT\_CLASS\_2,CONSULTANT\_CLASS\_3,CONSULTANT\_CLASS\_4

FROM CONSULTANT

ORDER BY CONSULTANT\_CLASS\_1,CONSULTANT\_CLASS\_2,CONSULTANT\_CLASS\_3,CONSULTANT\_CLASS\_4 ASC



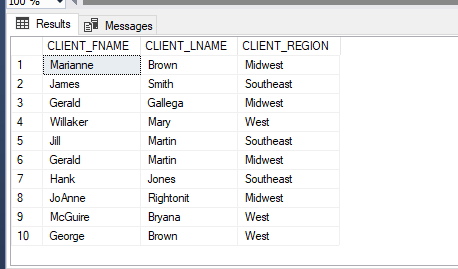
6.SELECT  CLIENT\_FNAME,CLIENT\_LNAME,CLIENT\_REGION

FROM CLIENT CLIENT\_NUM

WHERE EXISTS (SELECT \*

                 FROM CONTRACT CLIENT\_NUM

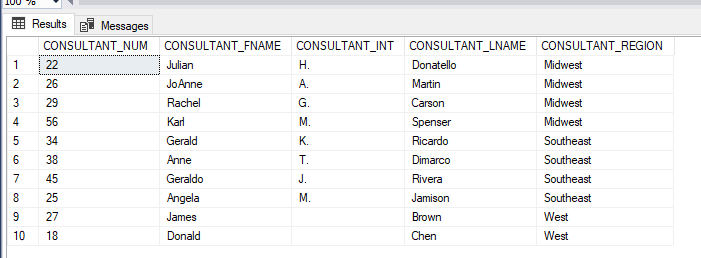
                 WHERE CLIENT\_NUM=CLIENT\_NUM HAVING count(\*) > 1);



7.SELECT  CONSULTANT\_NUM,CONSULTANT\_FNAME,CONSULTANT\_INT,CONSULTANT\_LNAME,CONSULTANT\_REGION

FROM CONSULTANT

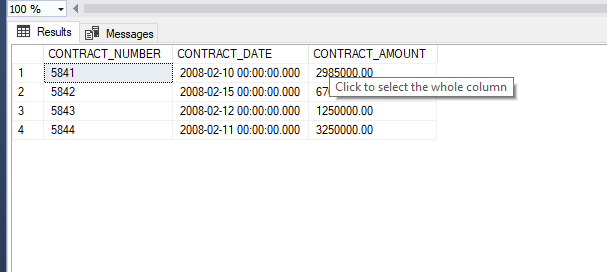
ORDER BY CONSULTANT\_REGION ASC



8.SELECT  CONTRACT\_NUMBER,CONTRACT\_DATE,CONTRACT\_AMOUNT

FROM CONTRACT

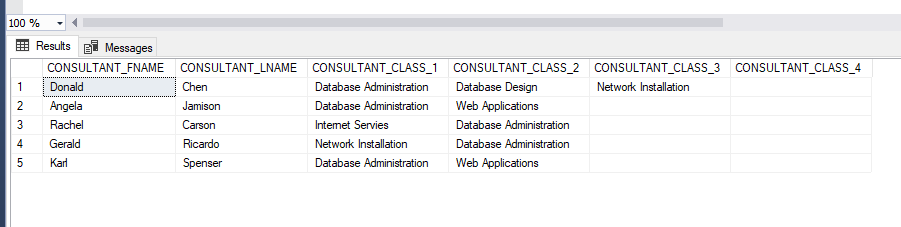
WHERE CONTRACT\_DATE<='2008-03-01'



9.SELECT  CONSULTANT\_FNAME,CONSULTANT\_LNAME,CONSULTANT\_CLASS\_1,CONSULTANT\_CLASS\_2,CONSULTANT\_CLASS\_3,CONSULTANT\_CLASS\_4

FROM CONSULTANT

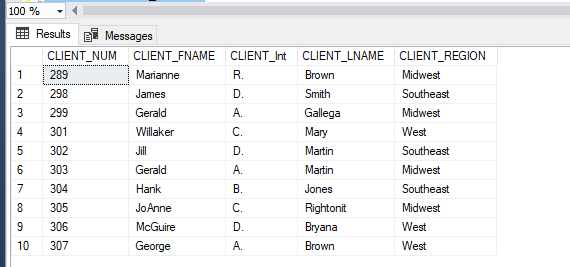
WHERE CONSULTANT\_CLASS\_1='Database Administration' OR CONSULTANT\_CLASS\_2='Database Administration'



10.SELECT  CLIENT\_NUM,CLIENT\_FNAME,CLIENT\_Int,CLIENT\_LNAME,CLIENT\_REGION

FROM CLIENT

ORDER BY CLIENT\_NUM ASC



**Relational Schema**

CLIENT

CLIENT\_NUM,CLIENT\_FNAME,CLIENT\_Int,CLIENT\_LNAME,CLIENT\_REGION

CONTRACT

CONTRACT\_NUMBER,CLIENT\_NUM,CONTRACT\_DATE,CONTRACT\_AMOUNT,

CONSULT\_CLASS\_1,CONSULT\_CLASS\_2,

CONSULT\_CLASS\_3,CONSULT\_CLASS\_4,

CONSULTANT\_NUM\_1,CONSULTANT\_NUM\_2,

CONSULTANT\_NUM\_3,CONSULTANT\_NUM\_4,

CONSULTANT

CONSULTANT\_NUM,CONSULTANT\_FNAME CONSULTANT\_INT, CONSULTANT\_LNAME, CONSULTANT\_REGION, CONSULTANT\_CLASS\_1, CONSULTANT\_CLASS\_2,CONSULTANT\_CLASS\_3, CONSULTANT\_CLASS\_4

**Relational Diagram**



**3NF**

Table CONSULTANT

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CONSULTANT\_NUM | CONSULTANT\_FNAME | CONSULTANT\_INT | CONSULTANT\_LNAME | CONSULTANT\_REGION | CONSULTANT\_CLASS\_1 | CONSULTANT\_CLASS\_2 | CONSULTANT\_CLASS\_3 | CONSULTANT\_CLASS\_4 |
| 29 | Rachel | G. | Carson | Midwest | Internet Servies | Database Administration |  |  |
| 56 | Karl | M. | Spenser | Midwest | Database Administration | Web Applications |  |  |
| 22 | Julian | H. | Donatello | Midwest | Database Design |  |  |  |
| 34 | Gerald | K. | Ricardo | Southeast | Network Installation | Database Administration |  |  |
| 38 | Anne | T. | Dimarco | Southeast | Internet Servies | Network Installation |  |  |
| 45 | Geraldo | J. | Rivera | Southeast | Network Installation | Web Applications |  |  |
| 18 | Donald |  | Chen | West | Database Administration | Database Design | Network Installation |  |
| 25 | Angela | M. | Jamison | Southeast | Database Administration | Web Applications |  |  |
| 26 | JoAnne | A. | Martin | Midwest | Internet Servies | Web Applications |  |  |
| 28 | Alice | S. | VanderVoort | Southeast | Database Design |  |  |  |
| 27 | James |  | Brown | West | Network Installation | Database Design |  |  |

Table CLIENT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CLIENT\_NUM | CLIENT\_FNAME | CLIENT\_Int | CLIENT\_LNAME | CLIENT\_REGION |
| 289 | Marianne | R. | Brown | Midwest |
| 298 | James | D. | Smith | Southeast |
| 299 | Gerald | A. | Gallega | Midwest |
| 300 | Alice | B. | VanderVoort | West |
| 301 | Willaker | C. | Mary | West |
| 302 | Jill | D. | Martin | Southeast |
| 303 | Gerald | A. | Martin | Midwest |
| 304 | Hank | B. | Jones | Southeast |
| 305 | JoAnne | C. | Rightonit | Midwest |
| 306 | McGuire | D. | Bryana | West |
| 307 | George | A. | Brown | West |

TABLE CONTRACT

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CONTRACT\_NUMBER | CLIENT\_NUM | CONTRACT\_DATE | CONTRACT\_AMOUNT | CONSULT\_CLASS\_1 | CONSULT\_CLASS\_2 | CONSULT\_CLASS\_3 | CONSULT\_CLASS\_4 | CONSULTANT\_NUM\_1 | CONSULTANT\_NUM\_2 | CONSULTANT\_NUM\_3 | CONSULTANT\_NUM\_4 |
| 5841 | 298 | 10-Feb-2008 | $2,985,000.00 | Database Administration | Web Applications |  |  | 29 | 56 | 22 |  |
| 5842 | 289 | 15-Feb-2008 | $670,300.00 | Internet Servies |  |  |  | 34 | 38 | 45 | 18 |
| 5843 | 289 | 12-Feb-2008 | $1,250,000.00 | Database Design | Database Administration | Network Installation |  | 25 | 34 |  |  |
| 5844 | 300 | 11-Feb-2008 | $3,250,000.00 | Internet Servies | Network Installation |  |  | 22 | 29 |  |  |
| 5845 | 301 | 12-Oct-2008 | $650,300.00 | Network Installation | Web Applications |  |  | 34 | 56 |  |  |
| 5846 | 301 | 12-Dec-2008 | $2,988,000.00 | Database Administration | Database Design |  |  | 18 |  |  |  |
| 5847 | 307 | 5-Oct-2008 | $6,023,300.00 | Database Administration | Web Applications |  |  | 26 | 28 | 34 | 29 |
| 5848 | 308 | 2-Aug-2008 | $3,085,000.00 | Internet Servies |  |  |  | 25 | 27 |  |  |
| 5849 | 302 | 24-Jul-2008 | $2,670,300.00 | Database Design | Database Administration | Network Installation |  | 34 | 22 |  |  |
| 5850 | 304 | 30-Oct-2008 | $22,250,000.00 | Network Installation |  |  |  | 45 | 56 |  |  |
| 5851 | 304 | 15-Jun-2008 | $870,300.00 | Database Design | Web Applications |  |  | 38 |  |  |  |

**Entity Relationship Diagram**

