***mICROsOFT* sQL sERVER**

PROJECT FILE

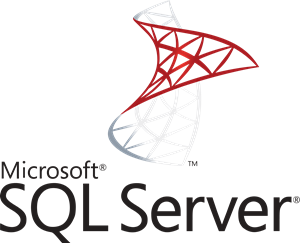
BHARAT SINGH RAJPUT

ID: 717042

***BCA iiI SEMESTER***

NATIONAL POST GRADUATE COLLEGE,

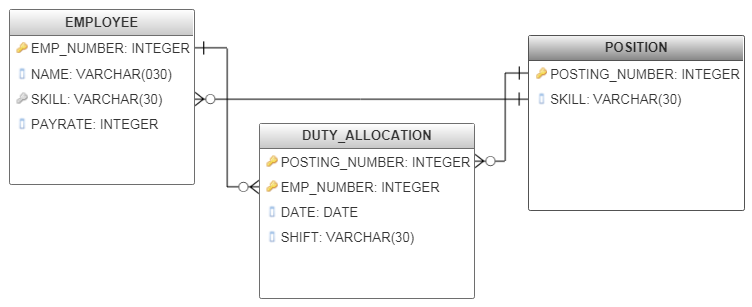
LUCKNOW



SUBMITTED TO:

RESPECTED AMIT SIR

Q1. Consider the following database:



Creating tables:

CREATE TABLE POSITION (

POSTING\_NUMBER INT PRIMARY KEY,

SKILL VARCHAR(30)

);

CREATE TABLE EMPLOYEE (

EMP\_NUMBER INT PRIMARY KEY,

NAME VARCHAR(30),

SKILL VARCHAR(30),

PAYRATE INT

);

CREATE TABLE DUTY\_ALLOCATION (

POSTING\_NUMBER INT PRIMARY KEY,

EMP\_NUMBER INT PRIMARY KEY,

DATE DATETIME,

SHIFT VARCHAR(20)

);

Inserting data into tables:

-- Position table

INSERT INTO POSITION VALUES(10011, 'PROGRAMMING')

INSERT INTO POSITION VALUES(10021, 'DATA ANALYSIS')

INSERT INTO POSITION VALUES(10031, 'GRAPHIC DESIGN')

INSERT INTO POSITION VALUES(10041, 'PROGRAMMING')

INSERT INTO POSITION VALUES(10051, 'DATA ANALYSIS')

INSERT INTO POSITION VALUES(10061, 'PROGRAMMING')

INSERT INTO POSITION VALUES(10071, 'DATABASE MANAGEMENT')

INSERT INTO POSITION VALUES(10081, 'SOFTWARE TESTING')

INSERT INTO POSITION VALUES(10091, 'SOFTWARE TESTING')

INSERT INTO POSITION VALUES(10101, 'HARDWARE DESIGN')

-- Employee Table

INSERT INTO EMPLOYEE VALUES(100, 'RAJESH KUMER', 'WEB DESIGNING', 1000)

INSERT INTO EMPLOYEE VALUES(102, 'KAPIL MATHUR', 'DATA ANALYSIS', 2000)

INSERT INTO EMPLOYEE VALUES(103, 'SATVIK MISHRA', 'DATA ANALYSIS', 1500)

INSERT INTO EMPLOYEE VALUES(104, 'SARVESH PRAJAPATI', 'PROGRAMMING', 3000)

INSERT INTO EMPLOYEE VALUES(105, 'CHIRAG SINGH', 'PROGRAMMING', 6000)

INSERT INTO EMPLOYEE VALUES(106, 'VIMLESH YADAV', 'SOFTWARE TESTING', 4000)

INSERT INTO EMPLOYEE VALUES(107, 'SALONI SINGH', 'WEB DESIGNING', 5800)

INSERT INTO EMPLOYEE VALUES(108, 'MAYA SINGH', 'DATABASE MANAGEMENT', 1200)

INSERT INTO EMPLOYEE VALUES(109, 'MITHILESH KUMAR', 'DATA ANALYSIS', 1700)

INSERT INTO EMPLOYEE VALUES(110, 'SWARNIMA GUPTA', 'BACKEND DEVELOPMENT', 1600)

INSERT INTO EMPLOYEE VALUES(111, 'RAVI SHANKAR KUMAR', 'DATABASE MANAGEMENT', 2600)

INSERT INTO EMPLOYEE VALUES(112, 'ABHAY SINGH', 'HARDWARE DESIGN', 3300)

INSERT INTO EMPLOYEE VALUES(113, 'AMIT KUMAR DUBEY', 'HARDWARE DESIGN', 3300)

INSERT INTO EMPLOYEE VALUES(114, 'ARYAN SRIVASTAVA', 'PROGRAMMING', 5400)

INSERT INTO EMPLOYEE VALUES(115, 'GAJENDRA RAJPUT', 'GRAPHIC DESIGN', 4300)

INSERT INTO EMPLOYEE VALUES(116, 'XYZ', 'WEB DESIGNING', 3400)

INSERT INTO EMPLOYEE VALUES(123461, 'SHIKHAR THAKUR', 'PROGRAMMING', 3700)

-- Duty Allocation Table

INSERT INTO DUTY\_ALLOCATION VALUES(10011, 100, '1986-04-01', 'MORNING')

INSERT INTO DUTY\_ALLOCATION VALUES(10011, 123461, '1986-04-01', 'EVENING')

INSERT INTO DUTY\_ALLOCATION VALUES(10021, 101, '1986-05-01', 'EVENING')

INSERT INTO DUTY\_ALLOCATION VALUES(10031, 102, '1986-06-01', 'AFTERNOON')

INSERT INTO DUTY\_ALLOCATION VALUES(10041, 103, '1986-07-01', 'NIGHT')

INSERT INTO DUTY\_ALLOCATION VALUES(10051, 104, '1986-08-01', 'MORNING')

INSERT INTO DUTY\_ALLOCATION VALUES(10061, 105, '1986-09-01', 'MORNING')

INSERT INTO DUTY\_ALLOCATION VALUES(10071, 106, '1986-10-01', 'AFTERNOON')

INSERT INTO DUTY\_ALLOCATION VALUES(10081, 107, '1986-11-01', 'NIGHT')

INSERT INTO DUTY\_ALLOCATION VALUES(10091, 108, '1986-12-01', 'EVENING')

INSERT INTO DUTY\_ALLOCATION VALUES(10091, 109, '1987-01-01', 'MORNING')

INSERT INTO DUTY\_ALLOCATION VALUES(10101, 110, '1987-02-01', 'NIGHT')

INSERT INTO DUTY\_ALLOCATION VALUES(10021, 111, '1987-03-01', 'EVENING')

INSERT INTO DUTY\_ALLOCATION VALUES(10021, 112, '1987-04-01', 'EVENING')

INSERT INTO DUTY\_ALLOCATION VALUES(10051, 113, '1987-05-01', 'NIGHT')

INSERT INTO DUTY\_ALLOCATION VALUES(10061, 114, '1987-06-01', 'MORNING')

INSERT INTO DUTY\_ALLOCATION VALUES(10031, 115, '1987-07-01', 'AFTERNOON')

INSERT INTO DUTY\_ALLOCATION VALUES(10031, 115, '1987-07-01', 'AFTERNOON')

INSERT INTO DUTY\_ALLOCATION VALUES(10041, 116, '1987-08-01', 'EVENING')

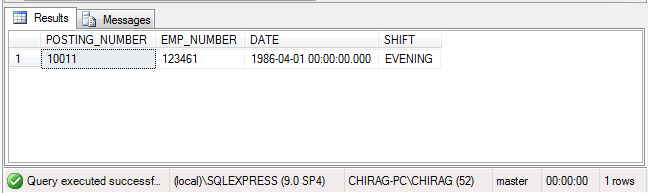
Queries:

1. Get duty allocation details for employee number 123461 for the month of april 1986.

SELECT A.\* FROM DUTY\_ALLOCATION A INNER JOIN EMPLOYEE B

ON A.EMP\_NUMBER = B.EMP\_NUMBER

WHERE DATE = '1986-04-01' AND A.EMP\_NUMBER = 123461

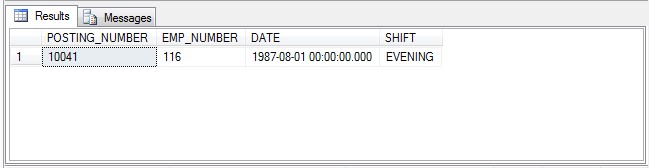


2. Find the shift details for employee ‘XYZ’.

SELECT A.\* FROM DUTY\_ALLOCATION A INNER JOIN EMPLOYEE B

ON A.EMP\_NUMBER = B.EMP\_NUMBER

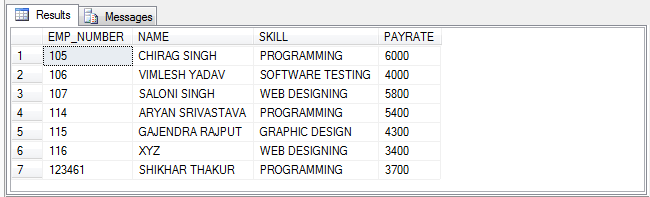
WHERE NAME = 'XYZ'



1. Get details of employees whose rate of pay is more than or equal to the rate of pay of employee ‘XYZ’.

SELECT \* FROM EMPLOYEE

WHERE PAYRATE >= (SELECT PAYRATE FROM EMPLOYEE WHERE NAME = 'XYZ')



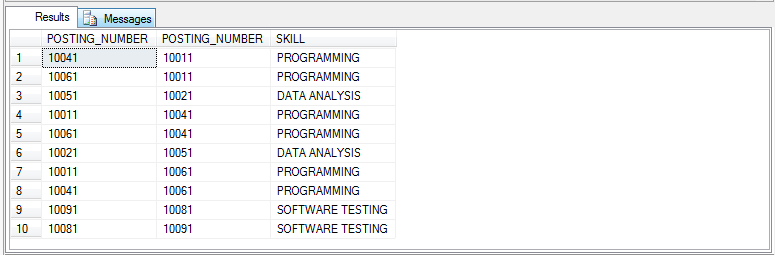
1. Compile all the pairs of posting number requiring the same skill.

SELECT A.POSTING\_NUMBER, B.POSTING\_NUMBER, A.SKILL

FROM POSITION A, POSITION B

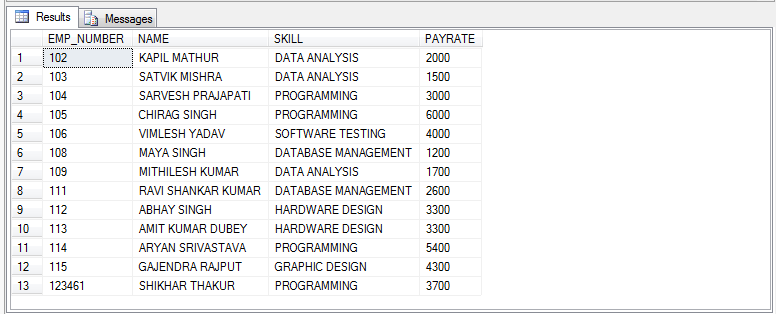
WHERE A.SKILL = B.SKILL

AND A.POSTING\_NUMBER <> B.POSTING\_NUMBER

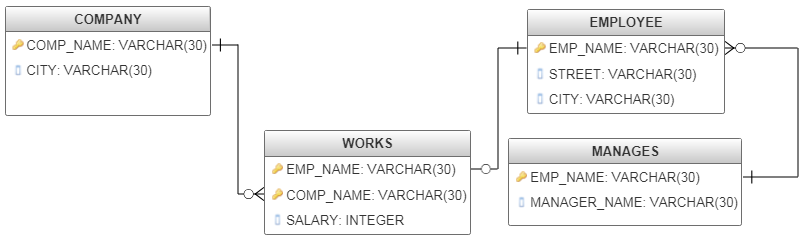


1. Find all the employees eligible to fill a position.

SELECT \* FROM EMPLOYEE WHERE SKILL = ANY(SELECT SKILL FROM POSITION)



Q2. Consider the following database:



Creating tables:

CREATE TABLE EMPLOYEE (

EMP\_NAME VARCHAR(30),

STREET VARCHAR(30),

CITY VARCHAR(30)

);

CREATE TABLE WORKS (

EMP\_NAME VARCHAR(30),

COMP\_NAME VARCHAR(30),

SALARY INT

);

CREATE TABLE COMPANY (

COMP\_NAME VARCHAR(30) PRIMARY KEY,

CITY VARCHAR(30)

);

CREATE TABLE MANAGES (

EMP\_NAME VARCHAR(30),

MANAGER\_NAME VARCHAR(30)

);

Inserting data into tables:

-- Employee Table

INSERT INTO EMPLOYEE VALUES('HARI', 'VIKAS NAGAR', 'LUCKNOW')

INSERT INTO EMPLOYEE VALUES('SUBHASH', 'JUHU', 'MUMBAI')

INSERT INTO EMPLOYEE VALUES('AJIT', 'GOREGAON', 'DELHI')

INSERT INTO EMPLOYEE VALUES('CHIRAG', 'KHURRAM NAGAR', 'LUCKNOW')

INSERT INTO EMPLOYEE VALUES('VISHAL', 'CHANDNI CHAUK', 'DELHI')

INSERT INTO EMPLOYEE VALUES('SURESH', 'HAZRATGANJ', 'LUCKNOW')

INSERT INTO EMPLOYEE VALUES('RAJESH', 'GOREGAON', 'DELHI')

INSERT INTO EMPLOYEE VALUES('KIRAN', 'RAJENDRA NAGAR', 'KANPUR')

INSERT INTO EMPLOYEE VALUES('KAPIL', 'LALBAGH', 'LUCKNOW')

INSERT INTO EMPLOYEE VALUES('RAM', 'TILAK NAGAR', 'DELHI')

-- Works Table

INSERT INTO WORKS VALUES('HARI', 'SBI', 20000)

INSERT INTO WORKS VALUES('SUBHASH', 'PNB', 35500)

INSERT INTO WORKS VALUES('AJIT', 'PNB', 45000)

INSERT INTO WORKS VALUES('CHIRAG', 'HDFC', 60000)

INSERT INTO WORKS VALUES('VISHAL', 'HDFC', 45000)

INSERT INTO WORKS VALUES('SURESH', 'SBI', 27000)

INSERT INTO WORKS VALUES('RAJESH', 'SBI', 25000)

INSERT INTO WORKS VALUES('KIRAN', 'UBI', 30000)

INSERT INTO WORKS VALUES('KAPIL', 'UBI', 40000)

INSERT INTO WORKS VALUES('RAM', 'ICICI', 30000)

-- Company Table

INSERT INTO COMPANY VALUES('SBI', 'LUCKNOW')

INSERT INTO COMPANY VALUES('UBI', 'DELHI')

INSERT INTO COMPANY VALUES('HDFC', 'MUMBAI')

INSERT INTO COMPANY VALUES('PNB', 'PUNE')

INSERT INTO COMPANY VALUES('ICICI', 'BHOPAL')

-- Manages Table

INSERT INTO MANAGES VALUES('HARI', 'MAYANK')

INSERT INTO MANAGES VALUES('SUBHASH', 'PRASHANT')

INSERT INTO MANAGES VALUES('AJIT', 'PRABHASH')

INSERT INTO MANAGES VALUES('CHIRAG', 'SHIVAM')

INSERT INTO MANAGES VALUES('VISHAL', 'PARAS')

INSERT INTO MANAGES VALUES('SURESH', 'PULKIT')

INSERT INTO MANAGES VALUES('RAJESH', 'PUSHP')

INSERT INTO MANAGES VALUES('KIRAN', 'MOHIT')

INSERT INTO MANAGES VALUES('KAPIL', 'SHALEEN')

INSERT INTO MANAGES VALUES('RAM', 'FAIZ')

Queries:

1. Find the name of all the employees who work for SBI.

SELECT A.EMP\_NAME FROM EMPLOYEE A INNER JOIN WORKS B

ON A.EMP\_NAME = B.EMP\_NAME

WHERE B.COMP\_NAME = 'SBI'



1. Find the names and cities of recidence of all the employees who work for SBI.

SELECT A.EMP\_NAME, A.CITY FROM EMPLOYEE A INNER JOIN WORKS B

ON A.EMP\_NAME = B.EMP\_NAME

WHERE B.COMP\_NAME = 'SBI'

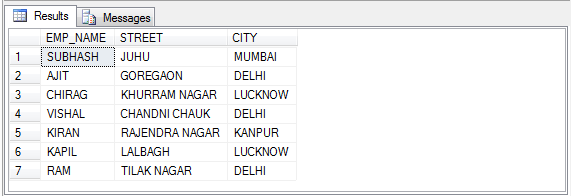


1. Find all the employees in the database who do not work for SBI.

SELECT A.\* FROM EMPLOYEE A INNER JOIN WORKS B

ON A.EMP\_NAME = B.EMP\_NAME

WHERE B.COMP\_NAME <> 'SBI'



1. Modify the database so that Hari now lives in Pune.

UPDATE EMPLOYEE SET CITY = 'PUNE', STREET = 'XYZ'

WHERE EMP\_NAME = 'HARI'

SELECT \* FROM EMPLOYEE WHERE EMP\_NAME = 'HARI'



1. Delete all touples in works relation for employees of SBI

DELETE FROM WORKS WHERE COMP\_NAME = 'SBI'