1.CREATE TABLE country_tb (COUNTRY_ID varchar(2) NOT NULL UNIQUE DEFAULT '',COUNTRY_NAME varchar(40) DEFAULT NULL,REGION_ID decimal(10,0) NOT NULL,PRIMARY KEY (COUNTRY_ID));

INSERT INTO Country_tb VALUES ('CA','Canada',2),('DE','Germany',1),('UK','United Kingdom',1),('US','United States of America',2);

+ Options

COUNTRY_ID	COUNTRY_NAME	REGION_ID
CA	CANADA	2
DE	GERMANY	1
UK	UNITED KINGDOM	1
US	UNITED STATES OF AMERICA	2

2.CREATE TABLE department_tb (DEPARTMENT_ID decimal(4) NOT NULL,DEPARTMENT_NAME varchar(30) NOT NULL,MANAGER_ID decimal(6,0),LOCATION_ID decimal(4,0),PRIMARY KEY (DEPARTMENT_ID,MANAGER_ID));

INSERT INTO department_tb VALUES ('10','Administration',200,1700),('20','Marketing',20,1800),('50','Shipping',124,1500),('60','IT',103,1400),('80','Sales',149,2500),('90','Executive',100,1700),('110','Accounting',205,1700),('190','Contracting',0,1700);

+ Options

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
10	ADMINISTRATION	200	1700
20	MARKETING	201	1800
50	SHIPPING	124	1500
60	IT	103	1400
80	SALES	149	2500
90	EXECUTIVE	100	1700
110	ACCOUNTING	205	1700
190	CONTRACTING	0	1700

3.CREATE TABLE EMPLOYEE_tb (EMPLOYEE_ID NUMERIC(6) NOT NULL, FIRST_NAME VARCHAR(20), LAST_NAME VARCHAR(25) not NULL, EMAIL VARCHAR(25) NOT NULL, PHONE_NUMBBER VARCHAR(20), HIRE_DATE DATE NOT NULL, JOB_ID VARCHAR(20),SALARY NUMERIC(8,2), COMMISSION_PCT NUMERIC(2,2),MANAGER_ID decimal(6),DEPARTMENT_ID decimal(4));

INSERT INTO employee_tb VALUES(100,'Steven','King','SKING','515.123.4567','1987-06-17','AD_PRES',24000,null,0,90),(101,'Neena','Kochhar','NKOCHHAR','515.123.4568','1889-09-21','AD_VP',17000,0,100,90),(102,'Lex','De haan','LDEHAAN','515.123.4569','1993-01-13','AD_VP',17000,0,100,90),(103,'Alexander','Hunlod','AHUNLOD','590.423.4567','1990-01-03','IT_PROG',9000,0,102,60),(104,'Bruce','Ernst','BERNST','590.423.4568','1991-05-21','IT_PROG',6000,0,103,60),(107,'Diana','Lorentz','DLORENTZ','590.423.5567','1999-02-07','IT_PROG',4200,0,103,60);

+ Options

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE ▲ 1	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1889-09-21	AD_VP	17000	0	100	90
100	Steven	King	SKING	515.123.4567	1987-06-17	AD_PRES	24000	0	0	90
103	Alexander	Hunlod	AHUNLOD	590.423.4567	1990-01-03	IT_PROG	9000	0	102	60
104	Bruce	Ernst	BERNST	590.423.4568	1991-05-21	IT_PROG	6000	0	103	60
102	Lex	De haan	LDEHAAN	515.123.4569	1993-01-13	AD_VP	17000	0	100	90
107	Diana	Lorentz	DLORENTZ	590.423.5567	1999-02-07	IT_PROG	4200	0	103	60

4.CREATE TABLE job_tb (JOB_ID varchar(10) NOT NULL, JOB_TITLE varchar(35) NOT NULL, MIN_SALARY decimal(6), MAX_SALARY decimal(6),PRIMARY KEY (JOB_ID));

INSERT INTO job_tb VALUES ('AD_PRES','President',20000,40000),('AD_VP','Administration Vice President',15000,30000),('AD_ASST','Administration Assistant',3000,6000),('AC_MGR','Accounting Manager',8200,16000),('AC_ACCOUNT','Public Accountant',4200,9000),('SA_MAN','Sales Manager',10000,20000),('SA_REP','Sales Representatives',6000,12000),('ST_MAN','Stock Manager',5500,8500),('ST_CLERK','Stock Clerk',2000,5000),('IT_PROG','Programmer',4000,10000),('MK_MAN','Marketing Manager',9000,15000),('MK_REP','Marketing Representative',4000,9000);

+ Options

JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
AD_PRES	PRESIDENT	20000	40000
AD_VP	ADMINISTRATION VICE PRESIDENT	15000	30000
AD_ASSST	ADMINISTRATION ASSISTANT	3000	6000
AC_MGR	ACCOUNTING MANAGER	8200	16000
AC_ACCOUNT	PUBLIC ACCOUNTANT	4200	9000
SA_MAN	SALES MANAGER	10000	20000
SA_REP	SALES REPRESENTATIVE	6000	12000

5.CREATE TABLE job_history_tb (EMPLOYEE_ID decimal(6,0) NOT NULL PRIMARY KEY, START_DATE date NOT NULL, END_DATE date NOT NULL, JOB_ID varchar(10) NOT NULL, DEPARTMENT_ID decimal(4,0) DEFAULT NULL, FOREIGN KEY (job_id) REFERENCES jobs(job_id));

INSERT INTO job_history_tb VALUES (102,'1993-01-13','1998-07-24','IT_PROG',60),(101,'1989-09-21','1993-10-27','AC_ACCOUNT',110);

+ Options

EMPLOYEE_ID	START_DATE	END_DATE	JOB_ID	DEPARTMENT_ID
102	1993-01-13	1998-07-24	IT_PROG	60
101	1989-09-21	1993-10-27	AC_ACCOUNT	110

6.CREATE TABLE location_tb (LOCATION_ID decimal(4) NOT NULL, STREET_ADDRESS varchar(40), POSTAL_CODE varchar(12), CITY varchar(30), STATE_PROVINCE varchar(25) NOT NULL, COUNTRY_ID char(2), PRIMARY KEY (LOCATION_ID));

INSERT into location_tb values (1400,'2014 jabberwocky Rd',26192,'sothlake','texas','US'), (1500,'2011inteririosRd',99236,'south san franscisco','california','US'), (1700,'2004 Charade Rd',98199,'seattle','washington','US');

+ Options

LOCATION_ID	STREET_ADDRESS	POSTAL_CODE	CITY	STATE_PROVINCE	COUNTRY_ID
1400	2014 JABBERWOCKY RD	26192	SOUTHLAKE	TEXAS	US
1500	2011 INTERIORS BLVD	99236	SOUTH SAN FRANCISCO	CALIFORNIA	US
1700	2014 CHARADE RD	98199	SEATTLE	WASHINGTON	US
1800	460 BLOOR ST.W	ON M5S IX8	TORONTO	ONTARIO	CA
2500	MAGDALEN CENTER	THE OXFOARD	OX9 9ZB	OXFOARD	OX

7.CREATE TABLE regions (region_id DECIMAL,region_name VARCHAR(25));

INSERT INTO regions VALUES (1,'EUROPE'),(2,'AMERICA'),(3,'ASIA'),(4,'MIDDLE EAST AND AFRICA');

+ Options

REGION_ID	REGION_NAME
1	EUROPE
2	AMERICAS
3	ASIA
4	MIDDLE EAST AND AFRICA

1)SELECT * FROM employee_tb WHERE job_id = 'IT_PROG' AND hire_date > '1997-12-31';

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
107	Diana	Lorentz	DLORENTZ	590.423.5567	1999-02-07	IT_PROG	4200	0	103	60

2)select LAST_NAME,JOB_ID,SALARY,COMMISSION_PCT from employee_tb where COMMISSION_PCT=0 ORDER by SALARY desc;

LAST_NAME	JOB_ID	SALARY ▾ 1	COMMISSION_PCT
King	AD_PRES	24000	0
Kochhar	AD_VP	17000	0
De haan	AD_VP	17000	0
Hunlod	IT_PROG	9000	0
Ernst	IT_PROG	6000	0
Lorentz	IT_PROG	4200	0

3) SELECT last_name,salary,COMMISSION_PCT,ROUND(salary+(salary*.10),2) "New salary" FROM employee_tb WHERE commission_pct=0;

last_name	salary	COMMISSION_PCT	New salary
King	24000	0	26400.00
Kochhar	17000	0	18700.00
De haan	17000	0	18700.00
Hunlod	9000	0	9900.00
Ernst	6000	0	6600.00
Lorentz	4200	0	4620.00

4)SELECT last_name FROM employee_tb WHERE SUBSTR(last_name, 1,1) IN ('J', 'K', 'L', 'M');

last_name
King
Kochhar
Lorentz

5)SELECT d.department_name, d.location_id, e.last_name,

e.job_id, e.salary

FROM employee_tb e, department_tb d

WHERE e.department_id = d.department_id

AND d.location_id = location_id;

department_name	location_id	last_name	job_id	salary
IT	1400	Hunlod	IT_PROG	9000
IT	1400	Ernst	IT_PROG	6000
IT	1400	Lorentz	IT_PROG	4200
EXECUTIVE	1700	King	AD_PRES	24000
EXECUTIVE	1700	Kochhar	AD_VP	17000
EXECUTIVE	1700	De haan	AD_VP	17000

6)SELECT COUNT (*)

FROM employee_tb

WHERE last_name LIKE '%n';

SELECT COUNT(*)

FROM employee_tb

WHERE SUBSTR(last_name, -1) = 'n';

+ Options

COUNT(*)
1

7) select last_name,round(DATEDIFF(SYSDATE(),hire_date)/365) AS " Number of Years " from employee_tb order by " Number of Years " desc;

+ Options

last_name	Number of Years
King	34
Kochhar	132
De haan	28
Hunlod	31
Ernst	30
Lorentz	22