DB Implementation Project

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**Team 6**

**PART II A – Script #1**

Additional constraints defined by us included in our tables:

* [Employee table] Check to ensure that emp\_num does not equal super\_id; entitled employee\_emp\_num\_ck
* [Assignment table] Employees are not charging more than 180 hours per month to a project (assuming a 45-hour work week for 4 weeks); entitled assignment\_hours\_used\_ck

-- dropping all tables

DROP TABLE skill CASCADE CONSTRAINTS;

DROP TABLE department CASCADE CONSTRAINTS;

DROP TABLE employee CASCADE CONSTRAINTS;

DROP TABLE training CASCADE CONSTRAINTS;

DROP TABLE client CASCADE CONSTRAINTS;

DROP TABLE project CASCADE CONSTRAINTS;

DROP TABLE assignment CASCADE CONSTRAINTS;

--SKILL (Code, Description)

CREATE TABLE skill

( code VARCHAR2(5) PRIMARY KEY,

description VARCHAR2(50) NOT NULL);

-- DEPARTMENT (Dept\_Code, Name, Location, Phone, Manager\_ID@)

CREATE TABLE department

( dept\_code NUMBER(3) PRIMARY KEY,

name VARCHAR2(20),

location VARCHAR2(20),

phone VARCHAR2(12),

manager\_id NUMBER(10));

--EMPLOYEE (Emp\_Num, Emp\_Last, Emp\_First, DOB, Hire\_DATE, Super\_ID@, Dept\_Code@)

CREATE TABLE employee

( emp\_num NUMBER(10) PRIMARY KEY,

emp\_last VARCHAR2(20),

emp\_first VARCHAR2(20),

dob DATE,

hire\_date DATE DEFAULT sysDATE,

super\_id NUMBER(10),

dept\_code NUMBER(2),

FOREIGN KEY (dept\_code) REFERENCES department(dept\_code),

FOREIGN KEY (super\_id) REFERENCES employee(emp\_num),

CONSTRAINT employee\_hire\_date\_ck CHECK (((hire\_DATE-dob)/365)>=17),

CONSTRAINT employee\_emp\_num\_super\_id\_ck CHECK (emp\_num != super\_id));

-- TRAINING (Train\_Num, Code@, Emp\_Num@, Date\_Acquired, Name, Comments)

CREATE TABLE training

( train\_num NUMBER(3) PRIMARY KEY,

code VARCHAR2(5) NOT NULL,

emp\_num NUMBER(10)NOT NULL,

date\_acquired DATE NOT NULL,

name VARCHAR2(50),

comments VARCHAR2(50),

FOREIGN KEY (code) REFERENCES skill(code),

FOREIGN KEY (emp\_num) REFERENCES employee(emp\_num));

-- CLIENT (Client\_ID, Name, Street, City, State, Zip\_Code, Industry,

-- Web\_Address, Phone, Contact\_Name)

CREATE TABLE client

( client\_ID VARCHAR2(5) PRIMARY KEY,

name VARCHAR2(30) NOT NULL,

street VARCHAR2(30) NOT NULL,

city VARCHAR2(20) NOT NULL,

state VARCHAR2(20) NOT NULL,

zip\_code NUMBER(5) NOT NULL,

industry VARCHAR2(20),

web\_address VARCHAR2(20),

phone VARCHAR2(12) NOT NULL,

contact\_name VARCHAR2(20) NOT NULL);

-- PROJECT (Proj\_number, Name, Start\_date, Total\_Cost, Dept\_Code@, Client\_ID@)

CREATE TABLE project

( proj\_number VARCHAR2(7) PRIMARY KEY,

name VARCHAR2(30) NOT NULL,

start\_DATE DATE DEFAULT sysdate,

total\_cost NUMBER(10,2),

dept\_code NUMBER(2),

client\_ID VARCHAR2(5),

FOREIGN KEY (dept\_code) REFERENCES department(dept\_code),

FOREIGN KEY (client\_id) REFERENCES client(client\_id));

-- ASSIGNMENT (Assign\_Num, Proj\_NUMBER@, Emp\_Num@, DATE\_Assigned, DATE\_Ended,

-- Hours\_Used)

CREATE TABLE assignment

( assign\_num NUMBER(4) PRIMARY KEY,

proj\_number VARCHAR2(7),

emp\_num NUMBER(10),

date\_assigned DATE DEFAULT sysdate,

date\_ended DATE,

hours\_used NUMBER(5),

FOREIGN KEY (proj\_number) REFERENCES project(proj\_number),

CONSTRAINT assignment\_hours\_used\_ck CHECK (hours\_used<=180),

CONSTRAINT assignment\_DATE\_ended\_ck CHECK (DATE\_ended>=DATE\_assigned));

ALTER TABLE assignment

ADD CONSTRAINT assignment\_emp\_num\_FK

FOREIGN KEY (emp\_num) REFERENCES employee(emp\_num);

**PART II A – Script #2**

--Adding values into the tables

INSERT INTO skill VALUES (1,'Project management');

INSERT INTO skill VALUES (2,'Negotiation');

INSERT INTO skill VALUES (3,'Data analyst');

INSERT INTO skill VALUES (4,'Financial management');

INSERT INTO skill VALUES (5,'Programming');

INSERT INTO skill VALUES (6,'Database administrator');

INSERT INTO skill VALUES (7,'Digital marketing');

INSERT INTO department

VALUES (1,'Executive management','New York City','7185432345', 2015071401);

INSERT INTO department

VALUES (3,'Human resources','New York City','718-217-8932', 2016012911);

INSERT INTO department

VALUES (5,'Finance','Boston','774-790-9182',2007030122);

INSERT INTO department

VALUES (6,'Accounting','Boston','774-813-9013',2004011708);

INSERT INTO department

VALUES (8,'Production','Chicago','312-212-6378', 2017110318);

INSERT INTO department

VALUES (12,'Purchasing','Boston','774-124-8456', 2009031713);

INSERT INTO department

VALUES (16,'R and D','San Francisco','415-890-1234',2010110401);

INSERT INTO employee

VALUES(2015071401,'Aguilera','Christina','18-DEC-1980','14-JUL-2015',NULL,1);

INSERT INTO employee

VALUES(2016012911,'Timberlake','Justin','31-DEC-1981','29-JAN-2016',2015071401,3);

INSERT INTO employee

VALUES(2007030122,'Spears','Britney','2-DEC-1981','1-MAR-2007',2015071401,5);

INSERT INTO employee

VALUES(2004011708,'Knowles','Beyonce','04-SEP-1981','17-JAN-2004',2015071401,6);

INSERT INTO employee

VALUES(2017110318,'McKnight','Brian','05-JUN-1969','3-NOV-2017',2015071401,8);

INSERT INTO employee

VALUES(2009031713,'Lachey','Nick','9-NOV-1973','17-MAR-2009',2015071401,12);

INSERT INTO employee

VALUES(2010110401,'Carter','Aaron','7-DEC-1987','04-NOV-2010',2015071401,16);

INSERT INTO employee

VALUES(2008110514,'Martin','Ricky','24-OCT-1971','5-NOV-2008',2015071401,12);

INSERT INTO employee

VALUES(2012041513,'Lopez','Jennifer','24-DEC-1969','15-APR-2012',2015071401,3);

INSERT INTO employee

VALUES(2011011012,'Smith','Will','25-SEP-1968','10-JAN-2011',2015071401,16);

INSERT INTO employee

VALUES(2012112604,'Chenna','Sathwik','19-AUG-1983','26-NOV-2012',2016012911,3);

INSERT INTO employee

VALUES(2013121601,'Jilla','Karthik','29-NOV-1984','16-DEC-2013',2016012911,3);

INSERT INTO employee

VALUES(2014062401,'Baba','Naseer','22-NOV-1984','24-JUN-2014',2016012911,3);

INSERT INTO employee

VALUES(2015010611,'Gupta','Chetna','09-JUL-1982','6-JAN-2015',2007030122,5);

INSERT INTO employee

VALUES(2017031204,'Chilkuri','Nagarjuna','22-JAN-1980','12-MAR-2017',2007030122,5);

INSERT INTO employee

VALUES(2016082803,'Arora','Abhilahsa','10-FEB-1981','28-AUG-2016',2007030122,5);

INSERT INTO employee

VALUES(2014111611,'Yerragopu','Chandu','19-APR-1980','16-NOV-2014',2004011708,6);

INSERT INTO employee

VALUES(2015010605,'Nanduri','Poojitha','25-SEP-1982','6-JAN-2015',2004011708,6);

INSERT INTO employee

VALUES(2016022204,'Varma','Aditya','06-MAR-1981','22-FEB-2016',2004011708,6);

INSERT INTO employee

VALUES(2012032505,'Kowkuntla','Venky','29-APR-1989','25-MAR-2012',2017110318,8);

INSERT INTO employee

VALUES(2013041613,'KSS','Harish','23-MAY-1988','16-APR-2013',2017110318,8);

INSERT INTO employee

VALUES(2014050821,'Kothakota','Aditya','22-FEB-1980','8-MAY-2014',2017110318,8);

INSERT INTO employee

VALUES(2015062807,'Turlapati','Prabhat','09-JAN-1981','28-JUN-2015',2009031713,12);

INSERT INTO employee

VALUES(2015071803,'Krishna','Priyusha','18-JUL-1982','18-JUL-2015',2009031713,12);

INSERT INTO employee

VALUES(2016081411,'Devnani','Nikhil','16-JUN-1981','14-AUG-2016',2009031713,12);

INSERT INTO employee

VALUES(2017091708,'Boone','Breah','11-JAN-1980','17-SEP-2017',2010110401,16);

INSERT INTO employee

VALUES(2015100506,'William','Taft','12-DEC-1981','5-OCT-2015',2010110401,16);

INSERT INTO training

VALUES(11,'6',2011011012,'26-NOV-2013','Introduction to database management','One day course');

INSERT INTO training

VALUES(12,'6',2009031713,'26-NOV-2013','Introduction to database management','One day course');

INSERT INTO training

VALUES(13,'6',2008110514,'26-NOV-2013','Introduction to database management','One day course');

INSERT INTO training

VALUES(14,'6',2007030122,'26-NOV-2013','Introduction to database management','One day course');

INSERT INTO training

VALUES(15,'6',2010110401,'26-NOV-2013','Introduction to database management','One day course');

INSERT INTO training

VALUES(16,'6',2012032505,'26-NOV-2013','Introduction to database management','One day course');

INSERT INTO training

VALUES(25,'6',2012032505,'16-DEC-2014','Advanced database management','Pre-requisite: DB1');

INSERT INTO training

VALUES(36,'2',2009031713,'16-APR-2015','Negotiations with clients','Weekend intensive');

INSERT INTO training

VALUES(37,'2',2014111611,'16-APR-2015','Negotiations with clients','Weekend intensive');

INSERT INTO training

VALUES(38,'2',2004011708,'16-APR-2015','Negotiations with clients','Weekend intensive');

INSERT INTO training

VALUES(39,'2',2010110401,'16-APR-2015','Negotiations with clients','Weekend intensive');

INSERT INTO training

VALUES(42,'1',2014111611,'24-JUN-2015','Project management essentials','Three-part series');

INSERT INTO training

VALUES(43,'1',2014050821,'24-JUN-2015','Project management essentials','Three-part series');

INSERT INTO training

VALUES(44,'1',2013041613,'24-JUN-2015','Project management essentials','Three-part series');

INSERT INTO training

VALUES(55,'7',2013041613,'6-JAN-2016','Social media marketing','Lunchtime session');

INSERT INTO training

VALUES(56,'7',2015071803,'6-JAN-2016','Social media marketing','Lunchtime session');

INSERT INTO training

VALUES(57,'7',2015010611,'6-JAN-2016','Social media marketing','Lunchtime session');

INSERT INTO training

VALUES(58,'7',2014062401,'6-JAN-2016','Social media marketing','Lunchtime session');

INSERT INTO training

VALUES(67,'5',2015062807,'8-MAY-2016','How to be a programmer','Lunchtime session');

INSERT INTO training

VALUES(68,'5',2011011012,'8-MAY-2016','How to be a programmer','Lunchtime session');

INSERT INTO training

VALUES(69,'5',2009031713,'8-MAY-2016','How to be a programmer','Lunchtime session');

INSERT INTO training

VALUES(70,'1',2015071401,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(71,'1',2016012911,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(72,'1',2017110318,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(73,'1',2008110514,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(74,'1',2014111611,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(75,'1',2012032505,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(76,'1',2014050821,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(77,'1',2016081411,'8-MAY-2016','Advanced project management','One day course');

INSERT INTO training

VALUES(80,'3',2012032505,'25-MAY-2016','Analyzing data like a boss','Lunchtime session');

INSERT INTO training

VALUES(81,'3',2012112604,'25-MAY-2016','Analyzing data like a boss','Lunchtime session');

INSERT INTO training

VALUES(82,'3',2007030122,'25-MAY-2016','Analyzing data like a boss','Lunchtime session');

INSERT INTO training

VALUES(85,'7',2015062807,'12-JAN-2017','Marketing for print','Lunchtime session');

INSERT INTO training

VALUES(86,'7',2016081411,'12-JAN-2017','Marketing for print','Lunchtime session');

INSERT INTO training

VALUES(87,'7',2016022204,'12-JAN-2017','Marketing for print','Lunchtime session');

INSERT INTO training

VALUES(90,'2',2015071803,'22-FEB-2017','Negotiations with clients','Weekend intensive');

INSERT INTO training

VALUES(96,'4',2017031204,'28-AUG-2017','Finance for beginners','Half day course');

INSERT INTO training

VALUES(97,'4',2016022204,'28-AUG-2017','Finance for beginners','Half day course');

INSERT INTO training

VALUES(98,'4',2016081411,'28-AUG-2017','Finance for beginners','Half day course');

INSERT INTO client

VALUES('BAC21','Bank of America - ATL','435 Peachtree Avenue','Atlanta','GA',30301,'Banking','bankofamerica.com ','526-526-5555','Warren Buffett');

INSERT INTO client

VALUES('BAC34','Bank of America - PIT','47 Forbes Avenue','Pittsburgh','PA',15213 ,'Banking','bankofamerica.com','475-598-6324',' Jack Bogle');

INSERT INTO client

VALUES('BAC65','Bank of America - SEA','999 Pike Place','Seattle','WA', 98105,'Banking','bankofamerica.com','638-962-4256','Paul Tudor Jones');

INSERT INTO client

VALUES('JPM02','JP Morgan - NYC','785 W 121st ','New York City','NY', 10007,'Finance','jpmorgan.com','345-578-8889','George Soros');

INSERT INTO client

VALUES('JPM05','JP Morgan - CHI','45 Wabash Avenue','Chicago','IL',60612,'Finance','jpmorgan.com','123-526-8579','Ray Dalio');

INSERT INTO client

VALUES('CRS07','Credit Suisse - NYC','57 Fashion Avenue','New York City','NY',10004,'Finance','creditsuisse.com','634-748-9634','Carl Icahn');

INSERT INTO client

VALUES('CRS11','Credit Suisse - SF','5246 Geary Boulevard','San Francisco',' CA',94112,'Finance','creditsuisse.com','410-526-0014','David Swensen');

INSERT INTO client

VALUES('BNY03','Bank of New York Mellon','524354 W 52nd Street','New York City','NY',10020,'Banking','bny.com ','417-859-4689','Mary Callahan');

INSERT INTO client

VALUES('MOS01','Morgan Stanley','5123 Wall Street','New York City','NY',10027,'Finance','morganstanley.com','635-685-7586','Charles Schwab');

INSERT INTO client

VALUES('MOR01','Morningstar','2 Chicago Avenue','Chicago','IL',60176,'Finance','morningstar.com','124-546-8596','John Templeton');

INSERT INTO project

VALUES('145-BAC','BOA Account reconciliation','18-MAY-2016',20000,5,'BAC21');

INSERT INTO project

VALUES('901-BAC','BOA Lean operations','07-JAN-2017',NULL,5,'BAC21');

INSERT INTO project

VALUES('145-JPM','JPM Account reconciliation','16-FEB-2016',200000,6,'JPM02');

INSERT INTO project

VALUES('211-JPM','JPM Financial consolidation','18-MAY-2012',50000, 5,'JPM05');

INSERT INTO project

VALUES('014-CRS','CRS Account rationalization','25-JAN-2011',65000,6,'CRS11');

INSERT INTO project

VALUES('114-CRS','CRS Process improvement','7-JUN-2016',100000,5,'CRS11');

INSERT INTO project

VALUES('122-BNY','BNY Special project','5-OCT-2016',NULL,16,'BNY03');

INSERT INTO project

VALUES('065-MOS','MOS Account reconciliation','18-JUL-2012',150000 ,5,'MOS01');

INSERT INTO project

VALUES('123-MOS','MOS Financial consolidation','5-AUG-2016',750000,6,'MOS01');

INSERT INTO project

VALUES('226-MOS','MOS Strategic tax planning','4-JUN-2016',NULL,5,'MOS01');

INSERT INTO project

VALUES('438-TEC','Big Data Analytics','4-SEP-2016',NULL,16,'JPM05');

INSERT INTO assignment

VALUES(0984,'145-JPM',2012112604,'6-MAR-2016','17-MAR-2017',6);

INSERT INTO assignment

VALUES(0991,'122-BNY',2014111611,'17-OCT-2016','31-OCT-2016',48);

INSERT INTO assignment

VALUES(1000,'901-BAC',2007030122,'1-MAY-2017','31-MAY-2017',82);

INSERT INTO assignment

VALUES(1001,'901-BAC',2015010611,'1-MAY-2017','31-MAY-2017',155);

INSERT INTO assignment

VALUES(1002,'065-MOS',2016012911,'1-MAY-2017','31-MAY-2017',148);

INSERT INTO assignment

VALUES(1010,'145-BAC',2014111611,'4-JUN-2017','30-JUN-2017',111);

INSERT INTO assignment

VALUES(1012,'901-BAC',2007030122,'1-JUN-2017','30-JUN-2017',160);

INSERT INTO assignment

VALUES(1013,'901-BAC',2015010611,'1-JUN-2017','30-JUN-2017',65);

INSERT INTO assignment

VALUES(1020,'145-BAC',2014111611,'1-JUL-2017','31-JUL-2017',65);

INSERT INTO assignment

VALUES(1023,'145-BAC',2012112604,'1-JUL-2017','31-JUL-2017',86);

INSERT INTO assignment

VALUES(1029,'065-MOS',2016012911,'1-JUL-2017','31-JUL-2017',96);

INSERT INTO assignment

VALUES(1034,'901-BAC',2007030122,'1-AUG-2017','31-AUG-2017',24);

INSERT INTO assignment

VALUES(1042,'065-MOS',2016012911,'1-AUG-2017','31-AUG-2017',25);

INSERT INTO assignment

VALUES(1044,'145-BAC',2014111611,'1-AUG-2017','31-AUG-2017',48);

INSERT INTO assignment

VALUES(1045,'145-BAC',2012112604,'1-AUG-2017','31-AUG-2017',96);

INSERT INTO assignment

VALUES(1046,'145-BAC',2009031713,'1-AUG-2017','31-AUG-2017',48);

INSERT INTO assignment

VALUES(1051,'065-MOS',2016012911,'1-SEP-2017','30-SEP-2017',124);

INSERT INTO assignment

VALUES(1054,'438-TEC',2010110401,'10-SEP-2017','30-SEP-2017',95);

INSERT INTO assignment

VALUES(1057,'438-TEC',2009031713,'10-SEP-2017','30-SEP-2017',56);

INSERT INTO assignment

VALUES(1059,'438-TEC',2014111611,'10-SEP-2017','30-SEP-2017',122);

INSERT INTO assignment

VALUES(1072,'438-TEC',2016022204,'10-SEP-2017','30-SEP-2017',74);

INSERT INTO assignment

VALUES(1076,'438-TEC',2008110514,'10-SEP-2017','30-SEP-2017',85);

INSERT INTO assignment

VALUES(1082,'438-TEC',2008110514,'10-OCT-2017','30-OCT-2017',26);

INSERT INTO assignment

VALUES(1084,'438-TEC',2016022204,'10-OCT-2017','31-OCT-2017',52);

INSERT INTO assignment

VALUES(1087,'438-TEC',2014111611,'10-OCT-2017','31-OCT-2017',142);

INSERT INTO assignment

VALUES(1094,'438-TEC',2009031713,'10-OCT-2017','31-OCT-2017',75);

INSERT INTO assignment

VALUES(1097,'438-TEC',2010110401,'10-OCT-2017','31-OCT-2017',81);

INSERT INTO assignment

VALUES(1103,'901-BAC',2007030122,'1-OCT-2017','31-OCT-2017',85);

INSERT INTO assignment

VALUES(1006,'065-MOS',2016012911,'1-OCT-2017','31-OCT-2017',135);

INSERT INTO assignment

VALUES(1109,'065-MOS',2016012911,'1-NOV-2017','30-NOV-2017',51);

INSERT INTO assignment

VALUES(1113,'901-BAC',2015010611,'1-NOV-2017','30-NOV-2017',16);

INSERT INTO assignment

VALUES(1117,'438-TEC',2009031713,'10-NOV-2017','30-NOV-2017',8);

INSERT INTO assignment

VALUES(1119,'438-TEC',2010110401,'10-NOV-2017','30-NOV-2017',10);

INSERT INTO assignment

VALUES(1123,'438-TEC',2014111611,'10-NOV-2017','30-NOV-2017',66);

INSERT INTO assignment

VALUES(1126,'438-TEC',2016022204,'10-NOV-2017','30-NOV-2017',6);

INSERT INTO assignment

VALUES(1127,'438-TEC',2008110514,'10-NOV-2017','30-NOV-2017',14);

INSERT INTO assignment

VALUES(1131,'438-TEC',2008110514,'1-DEC-2017',NULL,NULL);

INSERT INTO assignment

VALUES(1132,'438-TEC',2016022204,'1-DEC-2017',NULL,NULL);

INSERT INTO assignment

VALUES(1133,'438-TEC',2014111611,'1-DEC-2017',NULL,NULL);

INSERT INTO assignment

VALUES(1134,'438-TEC',2009031713,'1-DEC-2017',NULL,NULL);

INSERT INTO assignment

VALUES(1135,'438-TEC',2010110401,'1-DEC-2017',NULL,NULL);

INSERT INTO assignment

VALUES(1136,'065-MOS',2016012911,'1-DEC-2017',NULL,NULL);

**PART II A – Displaying table content**

SQL> SELECT \*

2 FROM skill;

CODE DESCRIPTION

----- --------------------------------------------------

1 Project management

2 Negotiation

3 Data analyst

4 Financial management

5 Programming

6 Database administrator

7 Digital marketing

7 rows selected.

SQL> SELECT \*

2 FROM department;

DEPT\_CODE NAME LOCATION PHONE MANAGER\_ID

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1 Executive management New York City 7185432345 2015071401

3 Human resources New York City 718-217-8932 2016012911

5 Finance Boston 774-790-9182 2007030122

6 Accounting Boston 774-813-9013 2004011708

8 Production Chicago 312-212-6378 2017110318

12 Purchasing Boston 774-124-8456 2009031713

16 R and D San Francisco 415-890-1234 2010110401

7 rows selected.

SQL> select \*

2 from employee;

EMP\_NUM EMP\_LAST EMP\_FIRST DOB HIRE\_DATE SUPER\_ID DEPT\_CODE

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2015071401 Aguilera Christina 18-DEC-80 14-JUL-15 1

2016012911 Timberlake Justin 31-DEC-81 29-JAN-16 2015071401 3

2007030122 Spears Britney 02-DEC-81 01-MAR-07 2015071401 5

2004011708 Knowles Beyonce 04-SEP-81 17-JAN-04 2015071401 6

2017110318 McKnight Brian 05-JUN-69 03-NOV-17 2015071401 8

2009031713 Lachey Nick 09-NOV-73 17-MAR-09 2015071401 12

2010110401 Carter Aaron 07-DEC-87 04-NOV-10 2015071401 16

2008110514 Martin Ricky 24-OCT-71 05-NOV-08 2015071401 12

2012041513 Lopez Jennifer 24-DEC-69 15-APR-12 2015071401 3

2011011012 Smith Will 25-SEP-68 10-JAN-11 2015071401 16

2012112604 Chenna Sathwik 19-AUG-83 26-NOV-12 2016012911 3

2013121601 Jilla Karthik 29-NOV-84 16-DEC-13 2016012911 3

2014062401 Baba Naseer 22-NOV-84 24-JUN-14 2016012911 3

2015010611 Gupta Chetna 09-JUL-82 06-JAN-15 2007030122 5

2017031204 Chilkuri Nagarjuna 22-JAN-80 12-MAR-17 2007030122 5

2016082803 Arora Abhilahsa 10-FEB-81 28-AUG-16 2007030122 5

2014111611 Yerragopu Chandu 19-APR-80 16-NOV-14 2004011708 6

2015010605 Nanduri Poojitha 25-SEP-82 06-JAN-15 2004011708 6

2016022204 Varma Aditya 06-MAR-81 22-FEB-16 2004011708 6

2012032505 Kowkuntla Venky 29-APR-89 25-MAR-12 2017110318 8

2013041613 KSS Harish 23-MAY-88 16-APR-13 2017110318 8

2014050821 Kothakota Aditya 22-FEB-80 08-MAY-14 2017110318 8

2015062807 Turlapati Prabhat 09-JAN-81 28-JUN-15 2009031713 12

2015071803 Krishna Priyusha 18-JUL-82 18-JUL-15 2009031713 12

2016081411 Devnani Nikhil 16-JUN-81 14-AUG-16 2009031713 12

2017091708 Boone Breah 11-JAN-80 17-SEP-17 2010110401 16

2015100506 William Taft 12-DEC-81 05-OCT-15 2010110401 16

27 rows selected.

SQL> select \*

2 from training;

TRAIN\_NUM CODE EMP\_NUM DATE\_ACQUIRED NAME COMMENTS

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11 6 2011011012 26-NOV-13 Introduction to database management One day course

12 6 2009031713 26-NOV-13 Introduction to database management One day course

13 6 2008110514 26-NOV-13 Introduction to database management One day course

14 6 2007030122 26-NOV-13 Introduction to database management One day course

15 6 2010110401 26-NOV-13 Introduction to database management One day course

16 6 2012032505 26-NOV-13 Introduction to database management One day course

25 6 2012032505 16-DEC-14 Advanced database management Pre-requisite: DB1

36 2 2009031713 16-APR-15 Negotiations with clients Weekend intensive

37 2 2014111611 16-APR-15 Negotiations with clients Weekend intensive

38 2 2004011708 16-APR-15 Negotiations with clients Weekend intensive

39 2 2010110401 16-APR-15 Negotiations with clients Weekend intensive

42 1 2014111611 24-JUN-15 Project management essentials Three-part series

43 1 2014050821 24-JUN-15 Project management essentials Three-part series

44 1 2013041613 24-JUN-15 Project management essentials Three-part series

55 7 2013041613 06-JAN-16 Social media marketing Lunchtime session

56 7 2015071803 06-JAN-16 Social media marketing Lunchtime session

57 7 2015010611 06-JAN-16 Social media marketing Lunchtime session

58 7 2014062401 06-JAN-16 Social media marketing Lunchtime session

67 5 2015062807 08-MAY-16 How to be a programmer Lunchtime session

68 5 2011011012 08-MAY-16 How to be a programmer Lunchtime session

69 5 2009031713 08-MAY-16 How to be a programmer Lunchtime session

70 1 2015071401 08-MAY-16 Advanced project management One day course

71 1 2016012911 08-MAY-16 Advanced project management One day course

72 1 2017110318 08-MAY-16 Advanced project management One day course

73 1 2008110514 08-MAY-16 Advanced project management One day course

74 1 2014111611 08-MAY-16 Advanced project management One day course

75 1 2012032505 08-MAY-16 Advanced project management One day course

76 1 2014050821 08-MAY-16 Advanced project management One day course

77 1 2016081411 08-MAY-16 Advanced project management One day course

80 3 2012032505 25-MAY-16 Analyzing data like a boss Lunchtime session

81 3 2012112604 25-MAY-16 Analyzing data like a boss Lunchtime session

82 3 2007030122 25-MAY-16 Analyzing data like a boss Lunchtime session

85 7 2015062807 12-JAN-17 Marketing for print Lunchtime session

86 7 2016081411 12-JAN-17 Marketing for print Lunchtime session

87 7 2016022204 12-JAN-17 Marketing for print Lunchtime session

90 2 2015071803 22-FEB-17 Negotiations with clients Weekend intensive

96 4 2017031204 28-AUG-17 Finance for beginners Half day course

97 4 2016022204 28-AUG-17 Finance for beginners Half day course

98 4 2016081411 28-AUG-17 Finance for beginners Half day course

39 rows selected.

SQL> select \*

2 from client;

CLIENT\_ID NAME STREET CITY STATE ZIP\_CODE INDUSTRY WEB\_ADDRESS PHONE CONTACT\_NAME

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BAC21 Bank of America - ATL 435 Peachtree Avenue Atlanta GA 30301 Banking bankofamerica.com 526-526-5555 Warren Buffett

BAC34 Bank of America - PIT 47 Forbes Avenue Pittsburgh PA 15213 Banking bankofamerica.com 475-598-6324 Jack Bogle

BAC65 Bank of America - SEA 999 Pike Place Seattle WA 98105 Banking bankofamerica.com 638-962-4256 Paul Tudor Jones

JPM02 JP Morgan - NYC 785 W 121st New York City NY 10007 Finance jpmorgan.com 345-578-8889 George Soros

JPM05 JP Morgan - CHI 45 Wabash Avenue Chicago IL 60612 Finance jpmorgan.com 123-526-8579 Ray Dalio

CRS07 Credit Suisse - NYC 57 Fashion Avenue New York City NY 10004 Finance creditsuisse.com 634-748-9634 Carl Icahn

CRS11 Credit Suisse - SF 5246 Geary Boulevard San Francisco CA 94112 Finance creditsuisse.com 410-526-0014 David Swensen

BNY03 Bank of New York Mellon 524354 W 52nd Street New York City NY 10020 Banking bny.com 417-859-4689 Mary Callahan

MOS01 Morgan Stanley 5123 Wall Street New York City NY 10027 Finance morganstanley.com 635-685-7586 Charles Schwab

MOR01 Morningstar 2 Chicago Avenue Chicago IL 60176 Finance morningstar.com 124-546-8596 John Templeton

10 rows selected.

SQL> select \*

2 from project;

PROJ\_NUMBER NAME START\_DATE TOTAL\_COST DEPT\_CODE CLIENT\_ID

--------------- --------------------------------------------- ---------- ---------- ---------- ----------

145-BAC BOA Account reconciliation 18-MAY-16 20000 5 BAC21

901-BAC BOA Lean operations 07-JAN-17 5 BAC21

145-JPM JPM Account reconciliation 16-FEB-16 200000 6 JPM02

211-JPM JPM Financial consolidation 18-MAY-12 50000 5 JPM05

014-CRS CRS Account rationalization 25-JAN-11 65000 6 CRS11

114-CRS CRS Process improvement 07-JUN-16 100000 5 CRS11

122-BNY BNY Special project 05-OCT-16 16 BNY03

065-MOS MOS Account reconciliation 18-JUL-12 150000 5 MOS01

123-MOS MOS Financial consolidation 05-AUG-16 750000 6 MOS01

226-MOS MOS Strategic tax planning 04-JUN-16 5 MOS01

438-TEC Big Data Analytics 04-SEP-16 16 JPM05

11 rows selected.

SQL> select \*

2 from assignment;

ASSIGN\_NUM PROJ\_NUMBER EMP\_NUM DATE\_ASSI DATE\_ENDE HOURS\_USED

---------- --------------- ---------- --------- --------- ----------

984 145-JPM 2012112604 06-MAR-16 17-MAR-17 6

991 122-BNY 2014111611 17-OCT-16 31-OCT-16 48

1000 901-BAC 2007030122 01-MAY-17 31-MAY-17 82

1001 901-BAC 2015010611 01-MAY-17 31-MAY-17 155

1002 065-MOS 2016012911 01-MAY-17 31-MAY-17 148

1010 145-BAC 2014111611 04-JUN-17 30-JUN-17 111

1012 901-BAC 2007030122 01-JUN-17 30-JUN-17 160

1013 901-BAC 2015010611 01-JUN-17 30-JUN-17 65

1020 145-BAC 2014111611 01-JUL-17 31-JUL-17 65

1023 145-BAC 2012112604 01-JUL-17 31-JUL-17 86

1029 065-MOS 2016012911 01-JUL-17 31-JUL-17 96

1034 901-BAC 2007030122 01-AUG-17 31-AUG-17 24

1042 065-MOS 2016012911 01-AUG-17 31-AUG-17 25

1044 145-BAC 2014111611 01-AUG-17 31-AUG-17 48

1045 145-BAC 2012112604 01-AUG-17 31-AUG-17 96

1046 145-BAC 2009031713 01-AUG-17 31-AUG-17 48

1051 065-MOS 2016012911 01-SEP-17 30-SEP-17 124

1054 438-TEC 2010110401 10-SEP-17 30-SEP-17 95

1057 438-TEC 2009031713 10-SEP-17 30-SEP-17 56

1059 438-TEC 2014111611 10-SEP-17 30-SEP-17 122

1072 438-TEC 2016022204 10-SEP-17 30-SEP-17 74

1076 438-TEC 2008110514 10-SEP-17 30-SEP-17 85

1082 438-TEC 2008110514 10-OCT-17 30-OCT-17 26

1084 438-TEC 2016022204 10-OCT-17 31-OCT-17 52

1087 438-TEC 2014111611 10-OCT-17 31-OCT-17 142

1094 438-TEC 2009031713 10-OCT-17 31-OCT-17 75

1097 438-TEC 2010110401 10-OCT-17 31-OCT-17 81

1103 901-BAC 2007030122 01-OCT-17 31-OCT-17 85

1006 065-MOS 2016012911 01-OCT-17 31-OCT-17 135

1109 065-MOS 2016012911 01-NOV-17 30-NOV-17 51

1113 901-BAC 2015010611 01-NOV-17 30-NOV-17 16

1117 438-TEC 2009031713 10-NOV-17 30-NOV-17 8

1119 438-TEC 2010110401 10-NOV-17 30-NOV-17 10

1123 438-TEC 2014111611 10-NOV-17 30-NOV-17 66

1126 438-TEC 2016022204 10-NOV-17 30-NOV-17 6

1127 438-TEC 2008110514 10-NOV-17 30-NOV-17 14

1131 438-TEC 2008110514 01-DEC-17

1132 438-TEC 2016022204 01-DEC-17

1133 438-TEC 2014111611 01-DEC-17

1134 438-TEC 2009031713 01-DEC-17

1135 438-TEC 2010110401 01-DEC-17

1136 065-MOS 2016012911 01-DEC-17

42 rows selected.

**PART II B – Queries**

Query 1

SQL> SET LINESIZE 300

SQL> SET PAGESIZE 50

SQL> COLUMN employee format A35

SQL> COLUMN skill format A25

SQL> COLUMN 'date acquired' format A15

SQL> SELECT e.emp\_num||': '||e.emp\_first||' '||e.emp\_last as "EMPLOYEE",

2 s.description AS "SKILL",

3 COUNT(t.train\_num) as "NUMBER\_OF\_TRAININGS",

4 MAX(t.date\_acquired) as "DATE\_ACQUIRED",

5 ROUND(months\_between(sysdate,max(t.date\_acquired)),0) as "MONTHS\_PASSED"

6 FROM employee e

7 LEFT JOIN (training t left join skill s on t.code=s.code) on t.emp\_num=e.emp\_num

8 GROUP BY e.emp\_num,t.code,s.description,e.emp\_first,e.emp\_last

9 ORDER BY e.emp\_num;

EMPLOYEE SKILL NUMBER\_OF\_TRAININGS DATE\_ACQUIRED MONTHS\_PASSED

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2004011708: Beyonce Knowles Negotiation 1 16-APR-15 32

2007030122: Britney Spears Data analyst 1 25-MAY-16 18

Database administrator 1 26-NOV-13 48

2008110514: Ricky Martin Project management 1 08-MAY-16 19

Database administrator 1 26-NOV-13 48

2009031713: Nick Lachey Negotiation 1 16-APR-15 32

Programming 1 08-MAY-16 19

Database administrator 1 26-NOV-13 48

2010110401: Aaron Carter Negotiation 1 16-APR-15 32

Database administrator 1 26-NOV-13 48

2011011012: Will Smith Programming 1 08-MAY-16 19

Database administrator 1 26-NOV-13 48

2012032505: Venky Kowkuntla Project management 1 08-MAY-16 19

Data analyst 1 25-MAY-16 18

Database administrator 2 16-DEC-14 36

2012041513: Jennifer Lopez 0

2012112604: Sathwik Chenna Data analyst 1 25-MAY-16 18

2013041613: Harish KSS Project management 1 24-JUN-15 29

Digital marketing 1 06-JAN-16 23

2013121601: Karthik Jilla 0

2014050821: Aditya Kothakota Project management 2 08-MAY-16 19

2014062401: Naseer Baba Digital marketing 1 06-JAN-16 23

2014111611: Chandu Yerragopu Project management 2 08-MAY-16 19

Negotiation 1 16-APR-15 32

2015010605: Poojitha Nanduri 0

2015010611: Chetna Gupta Digital marketing 1 06-JAN-16 23

2015062807: Prabhat Turlapati Programming 1 08-MAY-16 19

Digital marketing 1 12-JAN-17 11

2015071401: Christina Aguilera Project management 1 08-MAY-16 19

2015071803: Priyusha Krishna Negotiation 1 22-FEB-17 9

Digital marketing 1 06-JAN-16 23

2015100506: Taft William 0

2016012911: Justin Timberlake Project management 1 08-MAY-16 19

2016022204: Aditya Varma Financial management 1 28-AUG-17 3

Digital marketing 1 12-JAN-17 11

2016081411: Nikhil Devnani Project management 1 08-MAY-16 19

Financial management 1 28-AUG-17 3

Digital marketing 1 12-JAN-17 11

2016082803: Abhilahsa Arora 0

2017031204: Nagarjuna Chilkuri Financial management 1 28-AUG-17 3

2017091708: Breah Boone 0

2017110318: Brian McKnight Project management 1 08-MAY-16 19

42 rows selected.

Query 2

SQL> COLUMN employee format A45

SQL> COLUMN 'department name' format A30

SQL> SELECT LEVEL,

2 LPAD(' ', 3\*(LEVEL - 1)) || emp\_num || ': ' ||

3 emp\_first || ' ' || emp\_last as "EMPLOYEE",

4 d.name as "DEPARTMENT\_NAME"

5 FROM employee e

6 LEFT JOIN department d on e.dept\_code=d.dept\_code

7 START WITH emp\_num = 2015071401

8 CONNECT BY PRIOR emp\_num = super\_id;

LEVEL EMPLOYEE DEPARTMENT\_NAME

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1 2015071401: Christina Aguilera Executive management

2 2004011708: Beyonce Knowles Accounting

3 2014111611: Chandu Yerragopu Accounting

3 2015010605: Poojitha Nanduri Accounting

3 2016022204: Aditya Varma Accounting

2 2007030122: Britney Spears Finance

3 2015010611: Chetna Gupta Finance

3 2016082803: Abhilahsa Arora Finance

3 2017031204: Nagarjuna Chilkuri Finance

2 2008110514: Ricky Martin Purchasing

2 2009031713: Nick Lachey Purchasing

3 2015062807: Prabhat Turlapati Purchasing

3 2015071803: Priyusha Krishna Purchasing

3 2016081411: Nikhil Devnani Purchasing

2 2010110401: Aaron Carter R and D

3 2015100506: Taft William R and D

3 2017091708: Breah Boone R and D

2 2011011012: Will Smith R and D

2 2012041513: Jennifer Lopez Human resources

2 2016012911: Justin Timberlake Human resources

3 2012112604: Sathwik Chenna Human resources

3 2013121601: Karthik Jilla Human resources

3 2014062401: Naseer Baba Human resources

2 2017110318: Brian McKnight Production

3 2012032505: Venky Kowkuntla Production

3 2013041613: Harish KSS Production

3 2014050821: Aditya Kothakota Production

27 rows selected.

Query 3

SQL> COLUMN 'PROJECT START DATE' format A25

SQL> COLUMN month format A12

SQL> BREAK ON REPORT ON "PROJECT NAME" ON "PROJECT START DATE" SKIP 1

SQL> COMPUTE SUM LABEL 'Total' OF "EMPLOYEES ASSIGNED" ON "PROJECT NAME" SKIP 1

SQL> COMPUTE SUM LABEL 'Total ' OF "MONTHLY HOURS" ON "PROJECT NAME" SKIP 1

SQL> SELECT p.name as "PROJECT\_NAME",

2 p.start\_date as "PROJECT\_START\_DATE",

3 TO\_CHAR(a.date\_assigned,'mm')||'-'||initcap(to\_char(a.date\_assigned,'month')) as "MONTH",

4 COUNT(a.emp\_num) as "EMPLOYEES\_ASSIGNED",

5 SUM(a.hours\_used) as "MONTHLY\_HOURS"

6 FROM assignment a

7 JOIN project p on a.proj\_number=p.proj\_number

8 WHERE p.total\_cost is null

9 GROUP BY p.name, p.start\_date, to\_char(a.date\_assigned,'mm')||'-'||initcap(to\_char(a.date\_assigned,'month'))

10 ORDER BY p.name, p.start\_date, MONTH;

PROJECT\_NAME PROJECT\_START\_DATE MONTH EMPLOYEES\_ASSIGNED MONTHLY\_HOURS

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BNY Special project 05-OCT-16 10-October 1 48

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------ -------------

Total 1 48

BOA Lean operations 07-JAN-17 05-May 2 237

06-June 2 225

08-August 1 24

10-October 1 85

11-November 1 16

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------ -------------

Total 7 587

Big Data Analytics 04-SEP-16 09-September 5 432

10-October 5 376

11-November 5 104

12-December 5

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------ -------------

Total 20 912

10 rows selected.

Query 4

SQL> ALTER TABLE employee

2 ADD bonus\_amt number(5);

Table altered.

SQL> UPDATE employee

2 SET bonus\_amt = 200\*

3 (SELECT COUNT(distinct proj\_number)as number\_of\_projects

4 FROM project p

5 WHERE extract(year from start\_date)=extract(year from sysdate)-1

6 AND proj\_number IN

7 (SELECT proj\_number from assignment group BY proj\_number having sum(hours\_used)>40));

27 rows updated.

SQL> SET PAGESIZE 300

SQL> SET LINESIZE 300

SQL> SELECT \*

2 FROM employee;

EMP\_NUM EMP\_LAST EMP\_FIRST DOB HIRE\_DATE SUPER\_ID DEPT\_CODE BONUS\_AMT

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2015071401 Aguilera Christina 18-DEC-80 14-JUL-15 1 600

2016012911 Timberlake Justin 31-DEC-81 29-JAN-16 2015071401 3 600

2007030122 Spears Britney 02-DEC-81 01-MAR-07 2015071401 5 600

2004011708 Knowles Beyonce 04-SEP-81 17-JAN-04 2015071401 6 600

2017110318 McKnight Brian 05-JUN-69 03-NOV-17 2015071401 8 600

2009031713 Lachey Nick 09-NOV-73 17-MAR-09 2015071401 12 600

2010110401 Carter Aaron 07-DEC-87 04-NOV-10 2015071401 16 600

2008110514 Martin Ricky 24-OCT-71 05-NOV-08 2015071401 12 600

2012041513 Lopez Jennifer 24-DEC-69 15-APR-12 2015071401 3 600

2011011012 Smith Will 25-SEP-68 10-JAN-11 2015071401 16 600

2012112604 Chenna Sathwik 19-AUG-83 26-NOV-12 2016012911 3 600

2013121601 Jilla Karthik 29-NOV-84 16-DEC-13 2016012911 3 600

2014062401 Baba Naseer 22-NOV-84 24-JUN-14 2016012911 3 600

2015010611 Gupta Chetna 09-JUL-82 06-JAN-15 2007030122 5 600

2017031204 Chilkuri Nagarjuna 22-JAN-80 12-MAR-17 2007030122 5 600

2016082803 Arora Abhilahsa 10-FEB-81 28-AUG-16 2007030122 5 600

2014111611 Yerragopu Chandu 19-APR-80 16-NOV-14 2004011708 6 600

2015010605 Nanduri Poojitha 25-SEP-82 06-JAN-15 2004011708 6 600

2016022204 Varma Aditya 06-MAR-81 22-FEB-16 2004011708 6 600

2012032505 Kowkuntla Venky 29-APR-89 25-MAR-12 2017110318 8 600

2013041613 KSS Harish 23-MAY-88 16-APR-13 2017110318 8 600

2014050821 Kothakota Aditya 22-FEB-80 08-MAY-14 2017110318 8 600

2015062807 Turlapati Prabhat 09-JAN-81 28-JUN-15 2009031713 12 600

2015071803 Krishna Priyusha 18-JUL-82 18-JUL-15 2009031713 12 600

2016081411 Devnani Nikhil 16-JUN-81 14-AUG-16 2009031713 12 600

2017091708 Boone Breah 11-JAN-80 17-SEP-17 2010110401 16 600

2015100506 William Taft 12-DEC-81 05-OCT-15 2010110401 16 600

27 rows selected.

Query 5

SQL> COLUMN employee format A30

SQL> COLUMN 'hire\_date' format A15

SQL> COLUMN 'training\_name' format A35

SQL> COLUMN 'date\_acquired' format A15

SQL> BREAK ON employee on hire\_date

SQL> SELECT e.emp\_num||': '||e.emp\_first||' '||e.emp\_last as employee,

2 e.hire\_date,

3 nvl2(t.train\_num,t.train\_num||': '||t.name,null) as training\_name,

4 t.date\_acquired,

5 abs(e.hire\_date-t.date\_acquired) as number\_of\_days,

6 COUNT(distinct a.proj\_number) as number\_of\_projects

7 FROM(employee e left join assignment a on e.emp\_num=a.emp\_num)

8 left join training t on e.emp\_num=t.emp\_num

9 left join assignment on e.emp\_num=a.emp\_num

10 WHERE extract(year from hire\_date)=extract(year from sysdate)-1

11 GROUP BY e.emp\_num, e.emp\_first,e.emp\_last,e.hire\_date,t.train\_num,t.name,t.date\_acquired;

EMPLOYEE HIRE\_DATE TRAINING\_NAME DATE\_ACQUIRED NUMBER\_OF\_DAYS NUMBER\_OF\_PROJECTS

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2016012911: Justin Timberlake 29-JAN-16 71: Advanced project management 08-MAY-16 100 1

2016022204: Aditya Varma 22-FEB-16 87: Marketing for print 12-JAN-17 325 1

97: Finance for beginners 28-AUG-17 553 1

2016081411: Nikhil Devnani 14-AUG-16 77: Advanced project management 08-MAY-16 98 0

86: Marketing for print 12-JAN-17 151 0

97: Finance for beginners 28-AUG-17 379 0

2016082803: Abhilahsa Arora 28-AUG-16 97: Finance for beginners 28-AUG-17 365 0

7 rows selected.

Query 6

SQL> COLUMN name format a30

SQL> COLUMN start\_date format a20

SQL> COLUMN status format a20

SQL> SELECT name,start\_date, case

2 WHEN total\_cost IS NULL THEN'on-going'

3 ELSE 'completed' end status

4 FROM project

5 WHERE proj\_number IN (SELECT proj\_number

6 FROM assignment

7 GROUP BY proj\_number

8 HAVING COUNT(distinct date\_assigned) <>

9 CEIL(ABS(months\_between(TRUNC(MIN(date\_assigned)) -

10 (TO\_NUMBER(TO\_CHAR(MIN(date\_assigned),'DD')) - 1),

11 add\_months(TRUNC(MAX(date\_assigned)) -

12 (TO\_NUMBER(TO\_CHAR(MAX(date\_assigned),'DD')) - 1), 1) -1))));

NAME START\_DATE STATUS

------------------------------ -------------------- --------------------

BOA Lean operations 07-JAN-17 on-going

MOS Account reconciliation 18-JUL-12 completed

Query 7

SQL> COLUMN quarter format a8;

SQL> COLUMN average\_number\_of\_hours\_used format a50

SQL> SELECT TO\_CHAR(start\_date,'q') AS Quarter,

2 COUNT(distinct p.proj\_number) AS No\_of\_projects,

3 COUNT(DISTINCT a.emp\_num) AS No\_of\_Employees,

4 TO\_char(round(sum(a.hours\_used)/count( a.emp\_num),2),999.99)

5 AS Average\_number\_of\_hours\_used

6 FROM project p

7 LEFT JOIN assignment a ON p.proj\_number = a.proj\_number

8 WHERE EXTRACT(year from p.start\_date)=EXTRACT(year from sysdate)-1

9 GROUP BY TO\_CHAR(p.start\_date,'q')

10 ORDER BY TO\_CHAR(p.start\_date,'q');

QUARTER NO\_OF\_PROJECTS NO\_OF\_EMPLOYEES AVERAGE\_NUMBER\_OF\_HOURS\_USED

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1 1 1 6.00

2 3 3 75.67

3 2 5 45.60

4 1 1 48.00

Query 8

SQL> COLUMN employee HEADING 'Employee Name' FORMAT a20  
SQL> COLUMN code1date heading 'Latest|Date|Acquired' format a9  
SQL> COLUMN code2date heading 'Latest|Date|Acquired' format a9  
SQL> COLUMN code3date heading 'Latest|Date|Acquired' format a9  
SQL> COLUMN code4date heading 'Latest|Date|Acquired' format a9  
SQL> COLUMN code5date heading 'Latest|Date|Acquired' format a9  
SQL> COLUMN code6date heading 'Latest|Date|Acquired' format a9  
SQL> COLUMN code7date heading 'Latest|Date|Acquired' format a9  
SQL> COLUMN code1 heading 'Project|Management'  
SQL> COLUMN code2 heading 'Negotiation'  
SQL> COLUMN code3 heading 'Data|Analyst'  
SQL> COLUMN code5 heading 'Programming'  
SQL> COLUMN code6 heading 'Database|Administrator'  
SQL> COLUMN code7 heading 'Digital|Marketing'  
SQL> COLUMN code4 heading 'Financial|Management'  
SQL> SELECT main\_table.emp\_num,  
 2 Nvl2(main\_table.emp\_num, e.emp\_first ||' ' ||e.emp\_last, 'Number of Trainings: ') AS employee,  
 3 code1, code1date,  
 4 code2, code2date,  
 5 code3, code2date,  
 6 code4, code4date,  
 7 code5, code5date,  
 8 code6, code6date,  
 9 code7, code7date  
 10 FROM (SELECT t.emp\_num,  
 11 Nvl(SUM(Decode(t.code, '1', 1, 0)), 0) code1,  
 12 Decode(t.emp\_num, NULL, NULL,Max(Decode(t.code, '1', date\_acquired, NULL))) AS code1DATE,  
 13 Nvl(SUM(Decode(t.code, '2', 1,0)), 0) code2,  
 14 Decode(t.emp\_num, NULL, NULL,Max(Decode(t.code, '2', date\_acquired, NULL))) AS code2DATE,  
 15 Nvl(SUM(Decode(t.code, '3', 1, 0)), 0) code3,  
 16 Decode(t.emp\_num, NULL, NULL,Max(Decode(t.code, '3', date\_acquired, NULL))) AS code3DATE,   
 17 Nvl(SUM(Decode(t.code, '4', 1, 0)), 0) code4,  
 18 Decode(t.emp\_num, NULL, NULL,Max(Decode(t.code, '4', date\_acquired, NULL))) AS code4DATE,   
 19 Nvl(SUM(Decode(t.code, '5', 1, 0)), 0) code5,  
 20 Decode(t.emp\_num, NULL, NULL,Max(Decode(t.code, '5', date\_acquired, NULL))) AS code5DATE,   
 21 Nvl(SUM(Decode(t.code, '6', 1, 0)), 0) code6,  
 22 Decode(t.emp\_num, NULL, NULL,Max(Decode(t.code, '6', date\_acquired, NULL))) AS code6DATE,  
 23 Nvl(SUM(Decode(t.code, '7', 1, 0)), 0) code7,  
 24 Decode(t.emp\_num, NULL, NULL,Max(Decode(t.code, '7', date\_acquired, NULL))) AS code7DATE,  
 25 Count(code) AS total  
 26 FROM training t  
 27 GROUP BY grouping sets ( emp\_num, ( ) )) main\_table  
 28 left join employee e  
 29 ON main\_table.emp\_num = e.emp\_num;

Latest Latest Latest Latest Latest Latest Latest

Project Date Date Data Date Financial Date Date Database Date Digital Date

EMP\_NUM Employee Name Management Acquired Negotiation Acquired Analyst Acquired Management Acquired Programming Acquired Administrator Acquired Marketing Acquired

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2015071401 Christina Aguilera 1 08-MAY-16 0 0 0 0 0 0

2016012911 Justin Timberlake 1 08-MAY-16 0 0 0 0 0 0

2007030122 Britney Spears 0 0 1 0 0 1 26-NOV-13 0

2004011708 Beyonce Knowles 0 1 16-APR-15 0 16-APR-15 0 0 0 0

2017110318 Brian McKnight 1 08-MAY-16 0 0 0 0 0 0

2009031713 Nick Lachey 0 1 16-APR-15 0 16-APR-15 0 1 08-MAY-16 1 26-NOV-13 0

2010110401 Aaron Carter 0 1 16-APR-15 0 16-APR-15 0 0 1 26-NOV-13 0

2008110514 Ricky Martin 1 08-MAY-16 0 0 0 0 1 26-NOV-13 0

2011011012 Will Smith 0 0 0 0 1 08-MAY-16 1 26-NOV-13 0

2012112604 Sathwik Chenna 0 0 1 0 0 0 0

2014062401 Naseer Baba 0 0 0 0 0 0 1 06-JAN-16

2015010611 Chetna Gupta 0 0 0 0 0 0 1 06-JAN-16

2017031204 Nagarjuna Chilkuri 0 0 0 1 28-AUG-17 0 0 0

2014111611 Chandu Yerragopu 2 08-MAY-16 1 16-APR-15 0 16-APR-15 0 0 0 0

2016022204 Aditya Varma 0 0 0 1 28-AUG-17 0 0 1 12-JAN-17

2012032505 Venky Kowkuntla 1 08-MAY-16 0 1 0 0 2 16-DEC-14 0

2013041613 Harish KSS 1 24-JUN-15 0 0 0 0 0 1 06-JAN-16

2014050821 Aditya Kothakota 2 08-MAY-16 0 0 0 0 0 0

2015062807 Prabhat Turlapati 0 0 0 0 1 08-MAY-16 0 1 12-JAN-17

2015071803 Priyusha Krishna 0 1 22-FEB-17 0 22-FEB-17 0 0 0 1 06-JAN-16

2016081411 Nikhil Devnani 1 08-MAY-16 0 0 1 28-AUG-17 0 0 1 12-JAN-17

Number of Trainings: 11 5 3 3 3 7 7

22 rows selected.

Query 9

SQL>

SQL> SELECT a.dept\_code|| ': ' || a.NAME AS Department,

2 a.code|| ': '|| a.description AS skill,

3 Nvl(b.num\_trainings, 0) AS "NUMBER OF TRAININGS",

4 Dense\_rank() OVER ( partition BY a.dept\_code ORDER BY Nvl(b.num\_trainings, 0) DESC ) AS rank

5 FROM (SELECT dept\_code,

6 NAME,

7 code,

8 description

9 FROM department,

10 skill) a

11 LEFT JOIN (SELECT dept\_code, code, Count(\*) num\_trainings

12 FROM training t

13 LEFT JOIN employee e

14 ON t.emp\_num = e.emp\_num

15 GROUP BY dept\_code, code) b

16 ON a.dept\_code = b.dept\_code

17 AND a.code = b.code

18 ORDER BY a.dept\_code, rank;

DEPARTMENT SKILL NUMBER OF TRAININGS RANK

------------------------- --------------------------------------------------------- ------------------- ----------

1: Executive management 1: Project management 1 1

4: Financial management 0 2

2: Negotiation 0 2

3: Data analyst 0 2

6: Database administrator 0 2

7: Digital marketing 0 2

5: Programming 0 2

3: Human resources 7: Digital marketing 1 1

3: Data analyst 1 1

1: Project management 1 1

4: Financial management 0 2

6: Database administrator 0 2

5: Programming 0 2

2: Negotiation 0 2

5: Finance 6: Database administrator 1 1

3: Data analyst 1 1

7: Digital marketing 1 1

4: Financial management 1 1

5: Programming 0 2

2: Negotiation 0 2

1: Project management 0 2

6: Accounting 1: Project management 2 1

2: Negotiation 2 1

7: Digital marketing 1 2

4: Financial management 1 2

6: Database administrator 0 3

3: Data analyst 0 3

5: Programming 0 3

8: Production 1: Project management 5 1

6: Database administrator 2 2

3: Data analyst 1 3

7: Digital marketing 1 3

2: Negotiation 0 4

5: Programming 0 4

4: Financial management 0 4

12: Purchasing 7: Digital marketing 3 1

2: Negotiation 2 2

6: Database administrator 2 2

1: Project management 2 2

5: Programming 2 2

4: Financial management 1 3

3: Data analyst 0 4

16: R and D 6: Database administrator 2 1

2: Negotiation 1 2

5: Programming 1 2

3: Data analyst 0 3

1: Project management 0 3

7: Digital marketing 0 3

4: Financial management 0 3

49 rows selected.

**PART II C – Reporting**

Query 1

SQL>

SQL> CREATE VIEW employee\_information

2 AS

3 SELECT e.emp\_num ||': ' ||e.emp\_first ||' ' ||e.emp\_last AS employee,

4 DECODE(e.super\_id,NULL,NULL,e.super\_id || ': ' ||s.emp\_first ||' '||s.emp\_last) AS supervisor,

5 DECODE(train\_num,NULL,NULL,train\_num ||': ' ||t.name) AS "TRAINING NAME",

6 date\_acquired AS "TRAINING DATE",

7 Trim(To\_char(Round(Months\_between(SYSDATE, date\_acquired), 0))) AS "NUMBER OF MONTHS"

8 FROM employee e

9 left join employee s

10 ON e.super\_id = s.emp\_num

11 left join training t

12 ON e.emp\_num = t.emp\_num;

SQL>

SQL> REM "EMPLOYEE INFORMATION REPORT" created ON december 4 2017

SQL> REM BY USER sathwik

SQL> SET feedback OFF linesize 150 pagesize 70

SQL> REM SET up the appropriate parameters TO increase readability

SQL> COLUMN employee heading 'EMPLOYEE' format A35

SQL> COLUMN supervisor heading 'SUPERVISOR' format A35

SQL> COLUMN "TRAINING NAME" heading 'TRAINING NAME' format A45

SQL> COLUMN "TRAINING DATE" heading 'TRAINING DATE' format A15

SQL> COLUMN "NUMBER OF MONTHS" heading 'NUMBER OF MONTHS' format A16

SQL> TTITLE center 'EMPLOYEE INFORMATION REPORT' SKIP 1

SQL> BTITLE center 'End of Employee Information Report' right 'Run By: ' SQL.USER format A7

SQL> BREAK ON report ON employee skip 1

SQL> COMPUTE count label 'Num of Trainings' OF "TRAINING NAME" ON employee

SQL> SELECT \*

2 FROM employee\_information;

EMPLOYEE INFORMATION REPORT

EMPLOYEE SUPERVISOR TRAINING NAME TRAINING DATE NUMBER OF MONTHS

----------------------------------- ----------------------------------- --------------------------------------------- --------------- ----------------

2011011012: Will Smith 2015071401: Christina Aguilera 11: Introduction to database management 26-NOV-13 48

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2009031713: Nick Lachey 2015071401: Christina Aguilera 12: Introduction to database management 26-NOV-13 48

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2008110514: Ricky Martin 2015071401: Christina Aguilera 13: Introduction to database management 26-NOV-13 48

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2007030122: Britney Spears 2015071401: Christina Aguilera 14: Introduction to database management 26-NOV-13 48

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2010110401: Aaron Carter 2015071401: Christina Aguilera 15: Introduction to database management 26-NOV-13 48

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2012032505: Venky Kowkuntla 2017110318: Brian McKnight 16: Introduction to database management 26-NOV-13 48

2017110318: Brian McKnight 25: Advanced database management 16-DEC-14 36

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 2

2009031713: Nick Lachey 2015071401: Christina Aguilera 36: Negotiations with clients 16-APR-15 32

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2014111611: Chandu Yerragopu 2004011708: Beyonce Knowles 37: Negotiations with clients 16-APR-15 32

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2004011708: Beyonce Knowles 2015071401: Christina Aguilera 38: Negotiations with clients 16-APR-15 32

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2010110401: Aaron Carter 2015071401: Christina Aguilera 39: Negotiations with clients 16-APR-15 32

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2014111611: Chandu Yerragopu 2004011708: Beyonce Knowles 42: Project management essentials 24-JUN-15 29

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

End of Employee Information Report Run By: MARIA

EMPLOYEE INFORMATION REPORT

EMPLOYEE SUPERVISOR TRAINING NAME TRAINING DATE NUMBER OF MONTHS

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2014050821: Aditya Kothakota 2017110318: Brian McKnight 43: Project management essentials 24-JUN-15 29

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2013041613: Harish KSS 2017110318: Brian McKnight 44: Project management essentials 24-JUN-15 29

2017110318: Brian McKnight 55: Social media marketing 06-JAN-16 23

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Num of Trainings 2

2015071803: Priyusha Krishna 2009031713: Nick Lachey 56: Social media marketing 06-JAN-16 23

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2015010611: Chetna Gupta 2007030122: Britney Spears 57: Social media marketing 06-JAN-16 23

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2014062401: Naseer Baba 2016012911: Justin Timberlake 58: Social media marketing 06-JAN-16 23

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2015062807: Prabhat Turlapati 2009031713: Nick Lachey 67: How to be a programmer 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2011011012: Will Smith 2015071401: Christina Aguilera 68: How to be a programmer 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2009031713: Nick Lachey 2015071401: Christina Aguilera 69: How to be a programmer 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2015071401: Christina Aguilera 70: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2016012911: Justin Timberlake 2015071401: Christina Aguilera 71: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2017110318: Brian McKnight 2015071401: Christina Aguilera 72: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

End of Employee Information Report Run By: MARIA

EMPLOYEE INFORMATION REPORT

EMPLOYEE SUPERVISOR TRAINING NAME TRAINING DATE NUMBER OF MONTHS

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2008110514: Ricky Martin 2015071401: Christina Aguilera 73: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2014111611: Chandu Yerragopu 2004011708: Beyonce Knowles 74: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2012032505: Venky Kowkuntla 2017110318: Brian McKnight 75: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2014050821: Aditya Kothakota 2017110318: Brian McKnight 76: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2016081411: Nikhil Devnani 2009031713: Nick Lachey 77: Advanced project management 08-MAY-16 19

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2012032505: Venky Kowkuntla 2017110318: Brian McKnight 80: Analyzing data like a boss 25-MAY-16 18

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Num of Trainings 1

2012112604: Sathwik Chenna 2016012911: Justin Timberlake 81: Analyzing data like a boss 25-MAY-16 18

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Num of Trainings 1

2007030122: Britney Spears 2015071401: Christina Aguilera 82: Analyzing data like a boss 25-MAY-16 18

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2015062807: Prabhat Turlapati 2009031713: Nick Lachey 85: Marketing for print 12-JAN-17 11

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2016081411: Nikhil Devnani 2009031713: Nick Lachey 86: Marketing for print 12-JAN-17 11

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2016022204: Aditya Varma 2004011708: Beyonce Knowles 87: Marketing for print 12-JAN-17 11

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

End of Employee Information Report Run By: MARIA

EMPLOYEE INFORMATION REPORT

EMPLOYEE SUPERVISOR TRAINING NAME TRAINING DATE NUMBER OF MONTHS

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2015071803: Priyusha Krishna 2009031713: Nick Lachey 90: Negotiations with clients 22-FEB-17 10

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2017031204: Nagarjuna Chilkuri 2007030122: Britney Spears 96: Finance for beginners 28-AUG-17 3

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2016022204: Aditya Varma 2004011708: Beyonce Knowles 97: Finance for beginners 28-AUG-17 3

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2016081411: Nikhil Devnani 2009031713: Nick Lachey 98: Finance for beginners 28-AUG-17 3

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 1

2015100506: Taft William 2010110401: Aaron Carter

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Num of Trainings 0

2015010605: Poojitha Nanduri 2004011708: Beyonce Knowles

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 0

2013121601: Karthik Jilla 2016012911: Justin Timberlake

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 0

2012041513: Jennifer Lopez 2015071401: Christina Aguilera

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 0

2017091708: Breah Boone 2010110401: Aaron Carter

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 0

2016082803: Abhilahsa Arora 2007030122: Britney Spears

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ---------------------------------------------

Num of Trainings 0

End of Employee Information Report Run By: MARIA

SQL>

Query 2

SQL> CREATE VIEW table\_info\_view

2 AS

3 SELECT a.table\_name,

4 a.column\_name,

5 b.constraint\_name,

6 Decode(c.constraint\_type, 'C', 'CK or NN', 'P', 'PK', 'R', 'FK', 'U', 'UK', c.constraint\_type)

7 AS constraint\_type,

8 c.search\_condition,

9 Decode(fk\_table.table\_name, NULL, NULL, Trim(fk\_table.table\_name||' and '||fk\_table.column\_name))

10 AS foreign\_table\_column

11 FROM user\_tab\_columns a

12 left join user\_cons\_columns b

13 ON a.table\_name = b.table\_name

14 AND a.column\_name = b.column\_name

15 left join user\_constraints c

16 ON b.constraint\_name = c.constraint\_name

17 left join (SELECT a.constraint\_name,

18 a.r\_constraint\_name,

19 b.table\_name,

20 b.column\_name

21 FROM user\_constraints a

22 left join user\_cons\_columns b

23 ON a.r\_constraint\_name = b.constraint\_name

24 WHERE a.constraint\_type = 'R') fk\_table

25 ON b.constraint\_name = fk\_table.constraint\_name

26 ORDER BY a.table\_name,

27 a.column\_id;

View created.

SQL> REM "TABLES AND COLUMNS CONSTRAINT INFORMATION REPORT" created on December 4 2017

SQL> REM by user SATHWIK

SQL> SET FEEDBACK OFF LINESIZE 150 PAGESIZE 55

SQL> REM set up the appropriate parameters to increase readability

SQL> COLUMN TABLE\_NAME HEADING 'TABLE\_NAME' FORMAT A20

SQL> COLUMN COLUMN\_NAME HEADING 'COLUMN\_NAME' FORMAT A20

SQL> COLUMN CONSTRAINT\_NAME HEADING 'CONSTRAINT\_NAME' FORMAT A30

SQL> COLUMN CONSTRAINT\_TYPE HEADING 'CONSTRAINT\_TYPE' FORMAT A15

SQL> COLUMN SEARCH\_CONDITION HEADING 'SEARCH\_CONDITION' FORMAT A30

SQL> COLUMN FOREIGN\_TABLE\_COLUMN HEADING 'FOREIGN\_TABLE\_COLUMN' FORMAT A25

SQL> TTITLE CENTER 'TABLES AND COLUMNS INFORMATION REPORT'

SQL> BTITLE CENTER 'End of Tables and Columns Information Report' RIGHT 'Run By: ' SQL.USER FORMAT A7

SQL> BREAK ON REPORT ON TABLE\_NAME SKIP 1

SQL> COMPUTE COUNT LABEL 'Num of Constraints' OF CONSTRAINT\_NAME ON TABLE\_NAME

SQL> SELECT \* FROM table\_info\_view;

TABLES AND COLUMNS INFORMATION REPORT

TABLE\_NAME COLUMN\_NAME CONSTRAINT\_NAME CONSTRAINT\_TYPE SEARCH\_CONDITION FOREIGN\_TABLE\_COLUMN

-------------------- -------------------- ------------------------------ --------------- ------------------------------ -------------------------

ASSIGNMENT ASSIGN\_NUM SYS\_C007716 PK

PROJ\_NUMBER SYS\_C007717 FK PROJECT and PROJ\_NUMBER

EMP\_NUM SYS\_C007718 FK EMPLOYEE and EMP\_NUM

DATE\_ASSIGNED ASSIGNMENT\_DATE\_ENDED\_CK CK or NN date\_ended>=date\_assigned

DATE\_ENDED ASSIGNMENT\_DATE\_ENDED\_CK CK or NN date\_ended>=date\_assigned

HOURS\_USED ASSIGNMENT\_HOURS\_USED\_CK CK or NN hours\_used<=180

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 6

CLIENT CLIENT\_ID SYS\_C007709 PK

NAME SYS\_C007702 CK or NN "NAME" IS NOT NULL

STREET SYS\_C007703 CK or NN "STREET" IS NOT NULL

CITY SYS\_C007704 CK or NN "CITY" IS NOT NULL

STATE SYS\_C007705 CK or NN "STATE" IS NOT NULL

ZIP\_CODE SYS\_C007706 CK or NN "ZIP\_CODE" IS NOT NULL

INDUSTRY

WEB\_ADDRESS

PHONE SYS\_C007707 CK or NN "PHONE" IS NOT NULL

CONTACT\_NAME SYS\_C007708 CK or NN "CONTACT\_NAME" IS NOT NULL

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 8

DEPARTMENT DEPT\_CODE SYS\_C007690 PK

NAME

LOCATION

PHONE

MANAGER\_ID

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 1

EMPLOYEE EMP\_NUM SYS\_C007693 PK

EMP\_NUM EMPLOYEE\_EMP\_NUM\_SUPER\_ID\_CK CK or NN emp\_num != super\_id

EMP\_LAST

EMP\_FIRST

DOB EMPLOYEE\_HIRE\_DATE\_CK CK or NN ((hire\_date-dob)/365)>=17

HIRE\_DATE EMPLOYEE\_HIRE\_DATE\_CK CK or NN ((hire\_date-dob)/365)>=17

SUPER\_ID EMPLOYEE\_EMP\_NUM\_SUPER\_ID\_CK CK or NN emp\_num != super\_id

SUPER\_ID SYS\_C007695 FK EMPLOYEE and EMP\_NUM

DEPT\_CODE SYS\_C007694 FK DEPARTMENT and DEPT\_CODE

BONUS\_AMT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 7

EMPLOYEE\_INFORMATION EMPLOYEE

SUPERVISOR

TRAINING NAME

TRAINING DATE

NUMBER OF MONTHS

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 0

End of Tables and Columns Information Report Run By: MARIA

TABLES AND COLUMNS INFORMATION REPORT

TABLE\_NAME COLUMN\_NAME CONSTRAINT\_NAME CONSTRAINT\_TYPE SEARCH\_CONDITION FOREIGN\_TABLE\_COLUMN

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PARTC\_VIEW TABLE\_NAME

COLUMN\_NAME

CONSTRAINT\_NAME

CONSTRAINT\_TYPE

SEARCH\_CONDITION

FOREIGN\_TABLE\_COLUMN

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 0

PROJECT PROJ\_NUMBER SYS\_C007711 PK

NAME SYS\_C007710 CK or NN "NAME" IS NOT NULL

START\_DATE

TOTAL\_COST

DEPT\_CODE SYS\_C007712 FK DEPARTMENT and DEPT\_CODE

CLIENT\_ID SYS\_C007713 FK CLIENT and CLIENT\_ID

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 4

SKILL CODE SYS\_C007689 PK

DESCRIPTION SYS\_C007688 CK or NN "DESCRIPTION" IS NOT NULL

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 2

TABLE\_INFO\_VIEW TABLE\_NAME

COLUMN\_NAME

CONSTRAINT\_NAME

CONSTRAINT\_TYPE

SEARCH\_CONDITION

FOREIGN\_TABLE\_COLUMN

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 0

TRAINING TRAIN\_NUM SYS\_C007699 PK

CODE SYS\_C007700 FK SKILL and CODE

CODE SYS\_C007696 CK or NN "CODE" IS NOT NULL

EMP\_NUM SYS\_C007697 CK or NN "EMP\_NUM" IS NOT NULL

EMP\_NUM SYS\_C007701 FK EMPLOYEE and EMP\_NUM

DATE\_ACQUIRED SYS\_C007698 CK or NN "DATE\_ACQUIRED" IS NOT NULL

NAME

COMMENTS

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ------------------------------

Num of Constraints 6

End of Tables and Columns Information Report Run By: MARIA

SQL>