

EXPT.
NO. 3

NAME: LAB ASSIGNMENT - 03

M	T	W	T	F	S	S
					12	
					DATE: 4/11/22	YOUVA

1. Given below Employee Database which has 5 relation schemas namely EMPLOYEE, PROJECT, EMPLOYEE_PROJECT, DEPARTMENT, DEPENDENT as given below.

CREATE TABLE EMPLOYEE (

EmpID varchar(10) NOT NULL,

EName varchar(20) NOT NULL,

BaseID varchar(10),

DeptID varchar(5) NOT NULL,

Basic int(10),

GradePay int(10),

Specialization varchar(15),

PhoneNo bigint(10),

PRIMARY KEY (EmpID));

CREATE TABLE PROJECT (

ProjID varchar(10) NOT NULL,

ProjName varchar(15),

FundingAgency varchar(20),

ProjToestID varchar(6),

DeptID varchar(5),

CostOfProj int(10),

DateOfStart date,

Status varchar(15),

PRIMARY KEY (ProjID));

Teacher's Signature:

CREATE TABLE EMPLOYEE_PROJECT (

EmpID varchar(10),

ProjID varchar(10),

DateOfJoin date);

CREATE TABLE DEPARTMENT (

DeptID varchar(5),

DeptName varchar(15),

Location varchar(15),

HOD varchar(6),

PRIMARY KEY (DeptID);

CREATE TABLE DEPENDENT (

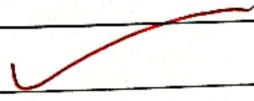
DepID varchar(7),

EmpID varchar(10),

DepName varchar(15),

Relation varchar(15),

PhoneNo bigint(10));



EXPT.
NO.

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EMPLOYEE								
EmpId	EName	BossID	DeptID	Basic	Grade Pay	Specialization	PhoneNo	
E001	R. K. Pali	E004	D01	27000	2000	Sr. Manager	9338250001	
E002	D. K. Mallik	E001	D01	12000	1000	Ex. Officer	9338250002	
E003	P. K. Patra	E005	D02	12000	1000	Ex. Officer	9338250003	
E004	A. Nanda	---	D01	50000	2000	General Mgr.	9338250004	
E005	A. Bag	E004	D02	26000	2000	Sr. Manager	9338250005	
E006	B. P. Nag	E004	D03	26000	2000	Sr. Manager	9338250006	
E007	S. K. Sawri	E001	D01	16000	1200	Ex. Officer	9338250007	
E008	D. J. Das	E005	D02	18000	1200	Ex. Officer	9338250008	
E009	R. K. Jaden	E006	D03	20000	1200	Jr. Manager	9338250009	
E010	R. R. Suman	E006	D04	25000	2000	Jr. Manager	9338250010	
E011	S. J. Kumar	E010	D04	17000	1200	Ex. Officer	9338250011	
E012	K. K. Tuli	E006	D03	11000	800	Finance Offcr	9338250012	

INSERT INTO EMPLOYEE (EmpID, EName, BossID, DeptID, Basic, GradePay, Specialization, PhoneNo) VALUES
(‘E001’, ‘R.K. Pati’, ‘E004’, ‘D01’, 27000, 2000, ‘Sr. Manager’,
9388500001),
(‘E002’, ‘D.K. Mallick’, ‘E001’, ‘D01’, 12000, 1000, ‘Ex. Officer’,
9388500002),
(‘E003’, ‘P.K. Patra’, ‘E005’, ‘D02’, 12000, 1000, ‘Ex. Officer’,
9388500003),
(‘E004’, ‘A. Nanda’, NULL, ‘D01’, 22000, 2000, ‘General Manager’,
9388500004),
(‘E005’, ‘A. Bag’, ‘E004’, ‘D02’, 26000, 2000, ‘Sr. Manager’,
9388500005),
(‘E006’, ‘B.P. Nag’, ‘E004’, ‘D03’, 28000, 2000, ‘Sr. Manager’,
9388500006),
(‘E007’, ‘S.K. Sauri’, ‘E001’, ‘D01’, 16000, 1200, ‘Sr. Ex. Officer’,
9388500007),
(‘E008’, ‘D.J. Das’, ‘E005’, ‘D02’, 18000, 1200, ‘Sr. Ex. Officer’,
9388500008),
(‘E009’, ‘R.K. Jader’, ‘E006’, ‘D03’, 20000, 1200, ‘Jr. Manager’,
9388500009),
(‘E010’, ‘R.R. Kumar’, ‘E007’, ‘D04’, 25000, 2000, ‘Jr. Manager’,
9388500010),
(‘E011’, ‘S.J. Kumar’, ‘E010’, ‘D04’, 17000, 1200, ‘Ex. Officer’,
9388500011),
(‘E012’, ‘K.K. Till’, ‘E006’, ‘D03’, 11000, 500, ‘Finance Offcr.’,
9388500012);

PROJECT

<u>ProjID</u>	<u>ProjName</u>	<u>FundingAgency</u>	<u>ProjInvestID</u>	<u>DeptID</u>	<u>CostOfProj</u>	<u>DateOfStart</u>	<u>Status</u>
P001	Project 1	AM Steels.	E001	D01	650000	13-JUN-2009	Running
P002	Project 2	KP Production	E005	D02	1040000	15-JAN-2009	Running
P003	Project 3	RP Traders.	E006	D03	820000	20-AUG-2010	Complete
P004	Project 4	AM Steels	E006	D03	1510000	31-DEC-2011	Running
P005	Project 5	KP Traders.	E010	D04	2020000	10-OCT-2012	Running
P006	Project 6	RP Traders	E005	D02	1840000	10-JUL-2013	Proposed

EMPLOYEE_PROJECT

<u>EmpID</u>	<u>ProjID</u>	<u>DateOfJoin</u>
E001	P001	13-JUN-2009
E002	P001	13-JUN-2009
E007	P001	10-AUG-2009
E006	P001	10-AUG-2009
E005	P002	15-JAN-2009
E008	P002	15-JAN-2009
E003	P002	15-MAR-2009
E004	P002	15-MAR-2009
E001	P003	01-APR-2009
E006	P003	20-AUG-2010
E002	P003	20-SEP-2010

EXPT. NO.	NAME:	M	T	W	T	F	S	S
							Page No.:	15

Date: YOUVA

INSERT INTO PROJECT (ProjID, ProjName, FundingAgency,
 ProjInvestID, CostOfProj, DateOfStart, Status) VALUES
 ('P001', 'Project 1', 'AM Steels', 'E001', 'D01', 650000,
 '2009-06-13', 'Running'),
 ('P002', 'Project 2', 'KP Production', 'E005', 'D02', 1040000,
 '2009-01-15', 'Running'),
 ('P003', 'Project 3', 'RP Traders', 'E006', 'D03', 820000,
 '2010-08-20', 'Complete'),
 ('P004', 'Project 4', 'AM Steels', 'E006', 'D03', 1510000,
 '2011-12-31', 'Running'),
 ('P005', 'Project 5', 'KP Traders', 'E010', 'D04', 2020000,
 '2012-10-10', 'Running'),
 ('P006', 'Project 6', 'RP Traders', 'E005', 'D02', 1840000, NULL,
 'Proposed');

INSERT INTO EMPLOYEE_PROJECT (EmpID, ProjID,
 DateOfJoin) VALUES

('E001', 'P001', '2009-06-18'),
 ('E002', 'P001', '2009-06-13'),
 ('E007', 'P001', '2009-08-10'),
 ('E006', 'P001', '2009-02-10'),
 ('E005', 'P002', '2009-01-15'),
 ('E008', 'P002', '2009-01-15'),
 ('E003', 'P002', '2009-03-15'),
 ('E007', 'P002', '2009-03-15'),
 ('E001', 'P002', '2009-04-01'),
 ('E006', 'P003', '2010-08-20'),

Teacher's Signature:

E004	P003	20-SEP-2010
E004	P003	20-SEP-2010
E006	P004	21-DEC-2011
E005	P004	25-DEC-2011
E001	P004	25-DEC-2011
E010	P005	10-AUG-2012
E011	P005	20-AUG-2012
E009	P005	20-AUG-2012
E008	P005	10-SEP-2012

DEPARTMENT			
DeptID	DeptName	Location	HOD
D01	Production - I	East Block	E001
D02	Design	West Block	E005
D03	Production - II	SE Block	E006
D04	Production - III	NE Block	E010

DEPENDENT				
DepID	EmpID	DeptName	Relation	Phone No.
DEP01	E001	S. Saha	WIFE	9861303628
DEP02	E001	R. K. Dali	FATHER	9861313628
DEP03	E001	G. Pati	MOTHER	9896312620
DEP01	E003	S. Devi	WIFE	9437303628
DEP01	E004	S. Nanda	FATHER	9737363628
DEP01	E006	K. Nag	WIFE	9717863629
DOP02	E006	G. Nag	SON	9077003649
DEP01	E008	B.K. Mahanty	WIFE	

EXPT. NO.	NAME:	M T W T F S
		Page No.: 16
	Date:	YOUVA

('E002', 'P003', '2010-09-20'),
 ('E007', 'P003', '2010-09-20'),
 ('E008', 'P003', '2010-09-20'),
 ('E006', 'P004', '2011-12-21'),
 ('E005', 'P004', '2011-12-25'),
 ('E001', 'P004', '2011-12-25'),
 ('E010', 'P005', '2012-08-10'),
 ('E011', 'P005', '2012-08-20'),
 ('E009', 'P005', '2012-08-20'),
 ('E008', 'P005', '2012-09-10');

~~INSERT INTO DEPARTMENT (DeptID, DeptName, Location, HOD) VALUES~~

('D01', 'Production - I', 'East Block', 'E001'),
 ('D02', 'Design', 'West Block', 'E005'),
 ('D03', 'Production - II', 'SE Block', 'E006'),
 ('D04', 'Production - III', 'NE Block', 'E010');

~~INSERT INTO DEPENDENT (DepID, EmpID, DepName, Relation, PhoneNo) VALUES~~

('DEP01', 'E001', 'S. Saba', 'WIFE', 9861803628),
 ('DEP02', 'E001', 'R. K. Pati', 'FATHER', 9861313628),
 ('DEP03', 'E001', 'G. Pati', 'MOTHER', 9863126209),
 ('DEP01', 'E003', 'S. Devi', 'WIFE', 9437303628),
 ('DEP01', 'E004', 'S. Nanda', 'FATHER', 9737368628),
 ('DEP01', 'E006', 'K. Nag', 'WIFE', 9777363629),
 ('DEP02', 'E006', 'G. Nag', 'SON', 9077003649),

Teacher's Signature:

DEP02	E008	G. Das	FATHER	9977883669
DEP01	E010	V. Sudheela	MOTHER	8899883669
DEP01	E011	S. Naik	WIFE	9090003669
DEP02	E011	P. Naik	MOTHER	
DEP03	E011	R. Naik	SON	

EXPT.
NO.

1)

EName	Salary	PhoneNo
D.K. Mallick	18000	9338250002
S. K. Sauri	17200	9338250007
R. K. Pati	29000	9338250001
A. Nanda	52000	9338250004

2)

EName
A. Nanda

3)

ProjectName	No-of-Employees
Project 1	4
Project 2	5
Project 3	4
Project 4	3
Project 5	4

EXPT. NO.	NAME:	M T W T F S
		Page No.: 17 Date: YOUVA

(‘DEP01’, ‘FO08’, ‘B.K. Mhatre’, ‘WIFE’, NULL),
 (‘DEP02’, ‘FO08’, ‘G. Dap’, ‘FATHER’, 8877883669),
 (‘DEP01’, ‘FO10’, ‘V. Suresh’, ‘MOTHER’, 9090003669),
 (‘DEP01’, ‘FO11’, ‘S. Naik’, ‘WIFE’, 9977883669),
 (‘DEP02’, ‘FO11’, ‘P. Naik’, ‘MOTHER’, NULL),
 (‘DEP03’, ‘FO11’, ‘R. Naik’, ‘SON’, NULL);

Answer the queries using above relational database.

- 1) List all employees' Name, their salary, Phone numbers who are working in Production-I order by their basic salary.

~~SELECT EName, (Basic + GradePay) Salary, PhoneNo FROM EMPLOYEE WHERE DeptID = ‘D01’ ORDER BY Basic;~~

- 2) Display the name of employee who is boss of the entire system.

~~SELECT EName FROM EMPLOYEE WHERE BossID IS NULL;~~

- 3) Display ProjectName and no. of Employees working under it

~~SELECT P.ProjectName, COUNT(E.EmpID) No.of.Employees FROM PROJECT P, EMPLOYEE_PROJECT E WHERE P.ProjID = E.ProjID GROUP BY ProjName;~~

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4)

EName	No. of Employees
A. Nanda	3
R. K. Pali	2
A. Bag	2
B. P. Nag	3
R. R. Suman	1

5)

EName	No. of Projects
A. Bag	2
B. P. Nag	2.

6)

EName
D. K. Mallick
A. Bag
S. K. Sawri
R. K. Jader
K. K. Telli

7)

DeptName	Total Cost
Design	880000
Production - I	650000
Production - II	2330000
Production - III	2020000

4) Display the Employee name and no. of employees working under them.

SELECT E.FName, COUNT(E.EmpID) as No_of_Employees
FROM EMPLOYEE E, EMPLOYEE A WHERE E.EmpID = A.BossID
GROUP BY FName;

5) List employees name who are principal investigator of at least two projects.

SELECT F.FName FROM EMPLOYEE E, PROJECT P WHERE
E.EmpID = P.PriInvstID GROUP BY FName HAVING
COUNT(E.EmpID) >= 2;

6) Display the name of all employees who doesn't have any dependent.

SELECT F.FName FROM EMPLOYEE E WHERE E.EmpID
NOT IN (SELECT D.EmpID FROM DEPENDENT D);

7) List the department names and sum of cost of all projects running under it.

SELECT D.DeptName, SUM(DISTINCT P.CostOfProj) TotalCost
FROM DEPARTMENT D, PROJECT P WHERE P.DeptID = D.DeptID
GROUP BY DeptName;

8)

DeptName	Location	EName
Production-I	East Block	R.K. Pati
Design	West Block	A. Bag
Production-II	OE Block	B.P. Nag
Production-III	NE Block	R.R. Suman

9)

EName	DeptName	Relation
R.K. Pati	S. Saha	WIFE
R.K. Pati	R.K. Pati	FATHER
R.K. Pati	G. Pati	MOTHER
B.P. Nag	K. Nag	WIFE
B.P. Nag	G. Nag	SON
R.R. Suman	V. Sushma	MOTHER

10)

EName	EmpID
A. Nanda	E004
K.K. Tell	E012

EXPT. NO.	NAME:	M T W T F S S
		Page No.: 19
		Date: YOUVA

g) List all department names, their location and their HOD's name.

SELECT D.DeptName, D.Location, E.EName FROM DEPARTMENT D, EMPLOYEE E WHERE D.HOD = E.EmpID;

g) List the name of all employees who are HOD of different department, their dependents and relationship with the dependent.

SELECT E.EName, D.DeptName, D.Relation FROM EMPLOYEE E, DEPENDENT D, DEPARTMENT H WHERE D.EmpID = E.EmpID AND E.EmpID = H.HOD;



10) List the names of all the employees who are not associated with any project.

SELECT DISTINCT E.EName FROM EMPLOYEE E WHERE E.EmpID NOT IN (SELECT P.EmpID FROM EMPLOYEE PROJECT P);



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11)

EName	BossName	DeptName
R.K. Pati	A. Nanda	Production - I
D.K. Mallick	R.K. Pati	Production - I
P.K. Patra	A. Bag	Design
A. Bag	A. Nanda	Production - I
B.P. Nag	A. Nanda	Production - I
S.K. Sauri	R.K. Pati	Production - I
D.J. Das	A. Bag	Design
R.K. Jader	B.P. Nag	Production - II
R.R. Suman	B.P. Nag	Production - II
S.J. Kumar	R.R. Suman	Production - III
K.K. Telli	B.P. Nag	Production - II

12)

EName	ProjName	FundingAgency	CostOfProj	Status
R.K. Pati	Project 1	AM Steels	650000	Running
A. Bag	Project 2	KP Productions	1040000	Running
B.P. Nag	Project 3	RP Traders	820000	Complete
B.P. Nag	Project 4	AM Steels	1510000	Running
R.R. Suman	Project 5	KP Traders	2020000	Running
A. Bag	Project 6	RP Traders	1840000	Proposed

EXPT. NO.	NAME:	M	T	W	T	F	S	S
						Page No.:	20	YOUVA
						Date:		

- 1) List the names of all the employees, their bosename and department name where they work.

```
SELECT B.EName, E.EName AS BossName, D.DeptName FROM
EMPLOYEE B, EMPLOYEE E, DEPARTMENT D WHERE
E.EmpID = B.BossID AND E.DeptID = D.DeptID;
```

- 2) List the names of all the employees who are the principal investigator of different projects, their project name, Funding Agency of the project, Cost of project and status of the project.

```
SELECT E.EName, P.ProjName, P.FundingAgency, P.CostOfProj,
P.Status FROM EMPLOYEE E, PROJECT P WHERE E.EmpID =
P.PrinInvestID;
```

Teacher's Signature:

13>	<table border="1"> <thead> <tr> <th>EName</th></tr> </thead> <tbody> <tr> <td>S.K. Sauri</td></tr> <tr> <td>B.P. Nag</td></tr> </tbody> </table>	EName	S.K. Sauri	B.P. Nag
EName				
S.K. Sauri				
B.P. Nag				

14>	<table border="1"> <thead> <tr> <th>EName</th></tr> </thead> <tbody> <tr> <td>A. Bag</td></tr> <tr> <td>D.J. Das</td></tr> </tbody> </table>	EName	A. Bag	D.J. Das
EName				
A. Bag				
D.J. Das				

15>	<table border="1"> <thead> <tr> <th>EName</th></tr> </thead> <tbody> <tr> <td>D.K. Mallick</td></tr> <tr> <td>S.K. Sauri</td></tr> <tr> <td>D.J. Das.</td></tr> </tbody> </table>	EName	D.K. Mallick	S.K. Sauri	D.J. Das.
EName					
D.K. Mallick					
S.K. Sauri					
D.J. Das.					

16>	<table border="1"> <thead> <tr> <th>EName</th><th>DepName</th></tr> </thead> <tbody> <tr> <td>R.K. Pati</td><td>R.K. Pati</td></tr> <tr> <td>R.K. Pati</td><td>G. Pati</td></tr> </tbody> </table>	EName	DepName	R.K. Pati	R.K. Pati	R.K. Pati	G. Pati
EName	DepName						
R.K. Pati	R.K. Pati						
R.K. Pati	G. Pati						

13) List the name of all the employees who are working in Project-1 but joined later to the project.

~~SELECT EName FROM EMPLOYEE WHERE EmpID IN (SELECT EmpID FROM EMPLOYEE_PROJECT WHERE date(DateOfJoin) > '2009-06-15' and ProjID = 'P001');~~

14) List the name of all the employees who are working in Project-2 but joined on same date when the project starts.

~~SELECT E.EName FROM EMPLOYEE E, PROJECT P, EMPLOYEE_PROJECT EP WHERE E.EmpID = EP.EmpID AND P.DateOfStart = EP.DateOfJoin AND P.ProjID = 'P002';~~

15) List the name of all the employees who are working in Project-3 but not belong to the same department.

~~SELECT E.EName FROM EMPLOYEE E, EMPLOYEE_PROJECT EP WHERE E.EmpID = EP.EmpID AND EP.ProjID = 'P003' AND E.DeptID <> 'D03' GROUP BY EName;~~

16) Display the name of employee and dependent's name where surname is 'Pati'.

~~SELECT E.EName, D.DepName FROM EMPLOYEE E, DEPENDENT D WHERE E.EmpID = D.EmpID AND DepName regexp '^(EE:space:)]|Pati([E:space:]|\\$)';~~

17)

EName	DepName	PhoneNo
R. K. Pali	S. Saha	9861303628
R. K. Pali	R. K. Pali	9861313628
R. K. Pali	G. Pali	9896313620

18)

EName	DepName
R. K. Pali	R. K. Pali
R. K. Pali	G. Pali
A. Nanda	S. Nanda
D. J. Das	G. Das
R. R. Suman	V. Sastrea
S. J. Kumar	P. Naik

19)

Query OK, 1 rows affected

Rows matched: 1 Changed: 1 Warnings: 0

17) Display the name of employee and their dependent with their phone number in which dependent's phone number starts with 98.

~~SELECT E.FName, D.DepName, D.PhoneNo FROM EMPLOYEE E, DEPENDENT D WHERE E.EmpID = D.EmpID AND D.PhoneNo LIKE '98%';~~

18) Display the list of all employees and their Father's name or Mother's name (if records are available).

~~SELECT E.FName, D.DepName FROM EMPLOYEE E, DEPENDENT D WHERE E.EmpID = D.EmpID AND (D.Relation = 'FATHER' OR D.Relation = 'MOTHER');~~

19) Update/Change the location of department to 'South Block' where 'P.K. Patra' works.

~~UPDATE DEPARTMENT D, EMPLOYEE E SET D.Location = 'South Block' WHERE E.FName = 'P.K. Patra' AND E.DeptID = D.DeptID;~~

Teacher's Signature:

20>

EName	NewSal.
R.K. Jodan	20200

M	T	W	T	F	S	S
Page No.:	23					
Date:	YOUVA					

Q) Add 200 bucks extra to all 'Jr. Manager' who works in a department whose HOD is 'B.P. Nag'.

~~SELECT E.FName, (E.Basic + E.GradePay + 200) NewSal FROM EMPLOYEE E, DEPARTMENT D WHERE E.DeptID = D.DeptID AND D.HOD = "E006" AND E.Specialization = "Jr. Manager";~~

15/2/22

Teacher's Signature: