



Atma Ram Sanatan Dharma College University of Delhi



Database Management Systems Practical File Paper Code:- (BHCS10)

Submitted by:

Chirag Wadhwa

Roll No. 21/18080

B.Sc (Hons) Computer Science

Submitted to:

Ms. Manisha Bagri

Department of Computer Science

Creating EMPLOYEE-DEPARTMENT Schema:

```
1 • CREATE TABLE EMPLOYEE (  
2     Eno CHAR(3) NOT NULL,  
3     Ename VARCHAR(50) NOT NULL,  
4     Job_type VARCHAR(50) NOT NULL,  
5     SupervisorENo CHAR(3),  
6     Hire_date DATE NOT NULL,  
7     Dno INT,  
8     Commission DECIMAL(10, 2),  
9     Salary DECIMAL(7, 2) NOT NULL,  
10    PRIMARY KEY (Eno)  
11 );  
12
```

```
1 • CREATE TABLE DEPARTMENT (  
2     Dno INT NOT NULL,  
3     Dname VARCHAR(50),  
4     Location VARCHAR(50) DEFAULT 'New Delhi',  
5     PRIMARY KEY (Dno)  
6 );  
7
```

```
1 • ALTER TABLE EMPLOYEE  
2 ADD CONSTRAINT SupervisorConstraint  
3 FOREIGN KEY (SupervisorENo) REFERENCES EMPLOYEE (Eno);  
4  
5 • ALTER TABLE EMPLOYEE  
6 ADD CONSTRAINT DepartmentConstraint  
7 FOREIGN KEY (Dno) REFERENCES DEPARTMENT (Dno);
```

Adding data to tables:

```
1  INSERT INTO DEPARTMENT
2  VALUES (10, 'Headquarters', 'Mumbai'),
3          (45, 'Legal', 'Mumbai'),
4          (30, 'IT', 'Bengaluru'),
5          (20, 'Outreach', 'Dallas'),
6          (95, 'Purchase', 'Dallas');
7
```

```
8 • INSERT INTO DEPARTMENT (Dno, Dname)
9  VALUES (90, 'Sales'),
10         (40, 'Administration'),
11         (50, 'Research');
```

```
1 • INSERT INTO EMPLOYEE
2  VALUES ('778', 'John Smith', 'Managing Director', NULL, '1980-06-12', 10, NULL, 5800.23),
3          ('153', 'Andy Beaford', 'Manager', '778', '2000-09-08', 40, NULL, 502.30),
4          ('23', 'Chirag Wadhwa', 'Manager', '778', '1981-11-21', 30, NULL, 2465.92),
5          ('25', 'Anmol Gupta', 'Manager', '778', '1981-09-11', 40, NULL, 2865.92),
6          ('86', 'Tania Chauhan', 'Manager', '778', '1983-08-14', 90, 235.90, 2921.37),
7          ('89', 'Alicia Jones', 'Manager', '778', '1982-10-26', 95, NULL, 980.35),
8          ('232', 'Isa Jaques', 'Manager', '778', '1996-07-23', 45, NULL, 651.05),
9          ('520', 'King Hethron', 'Manager', '778', '2015-10-13', 90, NULL, 497.18),
10         ('188', 'Sherline Harbord', 'Manager', '778', '1995-08-05', 40, NULL, 926.42),
11         ('146', 'Donielle Tuite', 'Intern', '520', '2016-06-12', 90, NULL, 171.60),
12         ('125', 'Gurpreet Singh', 'Intern', NULL, '2008-05-15', NULL, NULL, 521.37),
13         ('243', 'Marie Brahms', 'Engineer', '23', '1983-06-22', 40, NULL, 876.78),
14         ('299', 'Mahala Burtwhistle', 'Analyst', '89', '1990-07-20', 95, NULL, 602.86),
15         ('354', 'Bryna McKenny', 'Analyst', '153', '2001-10-11', 90, NULL, 693.63),
16         ('421', 'Ulberto Gosz', 'Assistant', NULL, '2017-02-07', 10, NULL, 381.64),
17         ('442', 'Netti Dellenbrok', 'Designer', '23', '2014-05-14', 30, NULL, 790.82),
18         ('492', 'Salmon Gough', 'Assistant', '86', '2008-12-13', 90, 148.80, 998.32),
19         ('504', 'Berny Bonas', 'Accountant', '778', '2008-05-24', 40, NULL, 779.34),
20         ('516', 'Lowell Paule', 'Systems Administrator', '23', '2008-03-31', 30, 324.39, 969.66),
21         ('518', 'Nicholas Comelini', 'Accountant', '188', '1997-03-20', 90, 546.04, 882.53);
```

```
1 • INSERT INTO EMPLOYEE
2  VALUES ('763', 'Rodrick Haighton', 'Analyst', '23', '2000-05-08', 30, NULL, 627.74),
3          ('981', 'Nina Fisby', 'Systems Administrator', '23', '2017-07-26', 30, 324.39, 920.84),
4          ('498', 'Skell Woolerton', 'Engineer', '23', '2004-04-04', 30, NULL, 506.44),
5          ('809', 'Cornie Munby', 'Consultant', '23', '1986-06-07', 30, NULL, 688.37),
6          ('915', 'Layton Murrie', 'Designer', '23', '2006-06-24', 30, NULL, 640.31),
7          ('842', 'Rivy Buzek', 'Technician', NULL, '1982-05-25', 30, NULL, 295.31);
```

```

1 • INSERT INTO EMPLOYEE
2   VALUES ('528', 'Laurence Grosvener', 'Intern', '520', '2019-09-06', 90, 125.45, 244.37),
3           ('611', 'Brandtr Wildbore', 'Engineer', '23', '2000-04-14', 30, NULL, 704.23),
4           ('697', 'Druci Sixsmith', 'Technician', NULL, '2005-07-27', 10, 530.53, 387.43),
5           ('718', 'Oneida Hicklingbottom', 'Intern', '89', '2006-03-25', 95, NULL, 789.82),
6           ('732', 'Gannie Quantrell', 'Architect', '23', '2019-04-29', 30, NULL, 174.12),
7           ('783', 'Fran Lening', 'Analyst', '23', '1981-05-27', 30, NULL, 471.17),
8           ('79', 'Rahul Sahay', 'Intern', '23', '2004-08-14', 30, NULL, 2921.37),
9           ('811', 'Shay Restieaux', 'Lawyer', '232', '1999-04-16', 45, 574.68, 500.22),
10          ('823', 'Marcille Occleshaw', 'Lawyer', '232', '2003-12-27', 45, 453.52, 507.10),
11          ('832', 'Desiri Allott', 'Intern', '89', '1997-11-04', 95, 239.84, 683.09),
12          ('87', 'Blake Lewis', 'Intern', '86', '2008-05-02', 90, 125.45, 244.37),
13          ('908', 'Gustav Waring', 'Engineer', '23', '2002-12-23', 30, NULL, 141.05),
14          ('960', 'Virge Swancott', 'Developer', '23', '1984-01-23', 30, NULL, 292.48),
15          ('969', 'Lee Prattin', 'Developer', '23', '1986-01-23', 30, NULL, 296.48),
16          ('997', 'Mag Giacomo', 'Architect', '23', '2002-12-23', 30, NULL, 427.98),
17          ('785', 'Chandal McBrier', 'Consultant', '23', '1998-02-10', 30, NULL, 697.68),
18          ('659', 'Martha Annies', 'Developer', '23', '2008-11-03', 30, NULL, 200.80),
19          ('932', 'Selestina Herries', 'Engineer', '23', '2013-05-23', 30, NULL, 239.27),
20          ('837', 'Ashil Burney', 'Engineer', '23', '1987-03-29', 30, NULL, 586.13);

```

Queries:

1. Query to display Employee Name, Job, Hire Date, Employee Number; for each employee with the Employee Number appearing first.

```

1 • SELECT  Eno, Ename,
2           Job_type, Hire_date
3   FROM EMPLOYEE;

```

Output:

	Eno	Ename	Job_type	Hire_date
	125	Gurpreet Singh	Intern	2008-05-15
	146	Donielle Tuite	Intern	2016-06-12
	153	Andy Beaford	Manager	2000-09-08
	188	Sherline Harbord	Manager	1995-08-05
	23	Chirag Wadhwa	Manager	1981-11-21
	232	Isa Jaques	Manager	1996-07-23
	243	Marie Brahms	Engineer	1983-06-22
	25	Anmol Gupta	Manager	1981-09-11
	299	Mahala Burtwhistle	Analyst	1990-07-20
	354	Bryna McKenny	Analyst	2001-10-11
	421	Ulberto Gosz	Assistant	2017-02-07
	442	Netti Dellenbrok	Designer	2014-05-14
	492	Salmon Gough	Assistant	2008-12-13
	498	Skell Woolerton	Engineer	2004-04-04
	504	Berny Bonas	Accoun...	2008-05-24
	516	Lowell Paule	System...	2008-03-31
	518	Nicholas Comelini	Accoun...	1997-03-20
	520	King Hethron	Manager	2015-10-13
	528	Laurence Grosvener	Intern	2019-09-06
	611	Brandtr Wildbore	Engineer	2000-04-14
	659	Martha Annies	Developer	2008-11-03
	697	Druci Sixsmith	Techni...	2005-07-27
	718	Oneida Hicklingb...	Intern	2006-03-25
	732	Gannie Quantrell	Architect	2019-04-29
	763	Rodrick Haighton	Analyst	2000-05-08
	778	John Smith	Managi...	1980-06-12
	783	Fran Lening	Analyst	1981-05-27
	785	Chandal McBrier	Consul...	1998-02-10
	79	Rahul Sahay	Intern	2004-08-14
	809	Cornie Munby	Consul...	1986-06-07
	811	Shay Restieaux	Lawyer	1999-04-16
	823	Marcille Occleshaw	Lawyer	2003-12-27
	832	Desiri Allott	Intern	1997-11-04
	837	Ashil Burney	Engineer	1987-03-29
	842	Rivy Buzek	Techni...	1982-05-25
	86	Tania Chauhan	Manager	1983-08-14
	87	Blake Lewis	Intern	2008-05-02
	89	Alicia Jones	Manager	1982-10-26
	908	Gustav Waring	Engineer	2002-12-23
	915	Layton Murrie	Designer	2006-06-24
	932	Selestina Herries	Engineer	2013-05-23
	960	Virge Swancott	Developer	1984-01-23
	969	Lee Prattin	Developer	1986-01-23

2. Query to display unique Jobs from the Employee Table.

```

1 • SELECT DISTINCT Job_type
2   FROM EMPLOYEE;

```

Output:

	Job_type
►	Intern
	Manager
	Engineer
	Analyst
	Assistant
	Designer
	Accountant
	Systems Administrator
	Developer
	Technician
	Architect
	Managing Director
	Consultant
	Lawyer

3. Query to display the Employee Name concatenated by a Job separated by a comma.

```
1 • SELECT CONCAT (  
2     Ename, ',',  
3     Job_type  
4 ) AS Employee_Job  
5 FROM EMPLOYEE;
```

Output:

	Employee_Job
	Gurpreet Singh, Intern
	Donielle Tuite, Intern
	Andy Beaford, Manager
	Sherline Harbord, Manager
	Chirag Wadhwa, Manager
	Isa Jaques, Manager
	Marie Brahms, Engineer
	Anmol Gupta, Manager
	Mahala Burtwhistle, Analyst
	Bryna McKenny, Analyst
	Ulberto Gosz, Assistant
	Netti Dellenbrok, Designer
	Salmon Gough, Assistant
	Skell Woolerton, Engineer
	Berny Bonas, Accountant
	Lowell Paule, Systems Adm...
	Nicholas Comelini, Accoun...
	King Hethron, Manager
	Laurence Grosvener, Intern
	Brandtr Wildbore, Engineer
	Martha Annies, Developer
	Druci Sixsmith, Technician
	Oneida Hicklingbottom, In...
	Gannie Quantrell, Architect
	Rodrick Haighton, Analyst
	John Smith, Managing Dire...
	Fran Lening, Analyst
	Chandal McBrier, Consultant
	Rahul Sahay, Intern
	Cornie Munby, Consultant
	Shay Restieaux, Lawyer
	Marcille Occleshaw, Lawyer
	Desiri Allott, Intern
	Ashil Burney, Engineer
	Rivy Buzek, Technician
	Tania Chauhan, Manager
	Blake Lewis, Intern
	Alicia Jones, Manager
	Gustav Waring, Engineer
	Layton Murrie, Designer
	Selestina Herries, Engineer
	Virge Swancott, Developer
	Lee Prattin, Developer
	Nina Fisby, Systems Admin...
	Mag Giacomo, Architect

4. Query to display all the data from the Employee Table. Separate each Column by a comma and name the said column as THE_OUTPUT.

```
1 • SELECT CONCAT(  
2     Eno, ',',  
3     Ename, ',',  
4     Job_type, ',',  
5     IFNULL(SupervisorENo, ''), ',',  
6     Hire_date, ',',  
7     IFNULL(Dno, ''), ',',  
8     IFNULL(Commission, ''), ',',  
9     Salary  
10 ) AS THE_OUTPUT  
11 FROM EMPLOYEE;
```

Output:

	THE_OUTPUT
▶	125, Gurpreet Singh, Intern, , 2008-05-15, , , 521.37
	146, Donielle Tuite, Intern, 520, 2016-06-12, 90, , 171
	153, Andy Beaford, Manager, 778, 2000-09-08, 40, ,
	188, Sherline Harbord, Manager, 778, 1995-08-05, 40, ,
	23, Chirag Wadhwa, Manager, 778, 1981-11-21, 30, , 2
	232, Isa Jaques, Manager, 778, 1996-07-23, 45, , 6
	243, Marie Brahms, Engineer, 23, 1983-06-22, 40, , 8
	25, Anmol Gupta, Manager, 778, 1981-09-11, 40, , 28
	299, Mahala Burtwhistle, Analyst, 89, 1990-07-20, 9
	354, Bryna McKenny, Analyst, 153, 2001-10-11, 90, ,
	421, Ulberto Gosz, Assistant, , 2017-02-07, 10, , 381.
	442, Netti Dellenbrok, Designer, 23, 2014-05-14, 3
	492, Salmon Gough, Assistant, 86, 2008-12-13, 90, 14
	498, Skell Woolerton, Engineer, 23, 2004-04-04, 30
	504, Berny Bonas, Accountant, 778, 2008-05-24, 40,
	516, Lowell Paule, Systems Administrator, 23, 2008-03-31, 30, 324.
	518, Nicholas Comelini, Accountant, 188, 1997-03-20,
	520, King Hethron, Manager, 778, 2015-10-13, 90, ,
	528, Laurence Grosvener, Intern, 520, 2019-09-06, 90,
	611, Brandtr Wildbore, Engineer, 23, 2000-04-14, 30,
	659, Martha Annies, Developer, 23, 2008-11-03, 30, ,
	697, Druci Sixsmith, Technician, , 2005-07-27, 10,

	718, Oneida Hicklingbottom, Intern, 89, 2006-03-25
	732, Gannie Quantrell, Architect, 23, 2019-04-29, 3
	763, Rodrick Haighton, Analyst, 23, 2000-05-08, 30, ,
	778, John Smith, Managing Director, , 1980-06-12, 10, , 5800.23
	783, Fran Lening, Analyst, 23, 1981-05-27, 30, , 47
	785, Chandal McBrier, Consultant, 23, 1998-02-10, 30
	79, Rahul Sahay, Intern, 23, 2004-08-14, 30, , 2921
	809, Cornie Munby, Consultant, 23, 1986-06-07, 30, ,
	811, Shay Restieaux, Lawyer, 232, 1999-04-16, 45,
	823, Marcille Occleshaw, Lawyer, 232, 2003-12-27, 45,
	832, Desiri Allott, Intern, 89, 1997-11-04, 95, 239.
	837, Ashil Burney, Engineer, 23, 1987-03-29, 30, , 5
	842, Rivy Buzek, Technician, , 1982-05-25, 30, , 29
	86, Tania Chauhan, Manager, 778, 1983-08-14, 90, 2
	87, Blake Lewis, Intern, 86, 2008-05-02, 90, 125.4
	89, Alicia Jones, Manager, 778, 1982-10-26, 95, , 98
	908, Gustav Waring, Engineer, 23, 2002-12-23, 30, , 1
	915, Layton Murrie, Designer, 23, 2006-06-24, 30, , 6
	932, Selestina Herries, Engineer, 23, 2013-05-23, 30, ,
	960, Virge Swancott, Developer, 23, 1984-01-23, 30
	969, Lee Prattin, Developer, 23, 1986-01-23, 30,
	981, Nina Fisby, Systems Administrator, 23, 2017-07-26, 30, 324.
	997, Mag Giacomo, Architect, 23, 2002-12-23, 30,

5. Query to display the Employee Name and Salary of all the employees earning more than \$2850.

```
1 • SELECT Ename,  
2       Salary  
3 FROM EMPLOYEE  
4 WHERE Salary > 2850;
```

Output:

	Ename	Salary
▶	Anmol Gupta	2865.92
	John Smith	5800.23
	Rahul Sahay	2921.37
	Tania Chauhan	2921.37

6. Query to display Employee Name and Department Number for the Employee No= 79.

```
1 • SELECT Ename,  
2       Dno  
3 FROM EMPLOYEE  
4 WHERE Eno = '79';
```

Output:

	Ename	Dno
▶	Rahul Sahay	30

7. Query to display Employee Name and Salary for all employees whose salary is not in the range of \$1500 and \$2850.

```
1 • SELECT Ename,  
2       Salary  
3 FROM EMPLOYEE  
4 WHERE Salary NOT BETWEEN 1500 AND 2850;  
5
```

Output:

	Ename	Salary
►	Gurpreet Singh	521.37
	Donielle Tuite	171.60
	Andy Beaford	502.30
	Sherline Harbord	926.42
	Isa Jaques	651.05
	Marie Brahms	876.78
	Anmol Gupta	2865.92
	Mahala Burtwhistle	602.86
	Bryna McKenny	693.63
	Ulberto Gosz	381.64
	Netti Dellenbrok	790.82
	Salmon Gough	998.32
	Skell Woolerton	506.44
	Berny Bonas	779.34
	Lowell Paule	969.66
	Nicholas Comelini	882.53
	King Hethron	497.18
	Laurence Grosvener	244.37
	Brandtr Wildbore	704.23
	Martha Annies	200.80
	Druci Sixsmith	387.43
	Oneida Hicklingbottom	789.82
	Gannie Quantrell	174.12
	Rodrick Haighton	627.74
	John Smith	5800.23
	Fran Lening	471.17
	Chandal McBrier	697.68
	Rahul Sahay	2921.37
	Cornie Munby	688.37
	Shay Restieaux	500.22
	Marcille Occleshaw	507.10
	Desiri Allott	683.09
	Ashil Burney	586.13

	Rivy Buzek	295.31
	Tania Chauhan	2921.37
	Blake Lewis	244.37
	Alicia Jones	980.35
	Gustav Waring	141.05
	Layton Murrie	640.31
	Selestina Herries	239.27
	Virge Swancott	292.48
	Lee Prattin	296.48
	Nina Fisby	920.84
	Mag Giacomo	427.98

8. Query to display Employee Name and Department No. of all the employees in Dept 10 and Dept 30 in the alphabetical order by name.

```
1 • SELECT Ename, Dname
2   FROM (EMPLOYEE NATURAL JOIN DEPARTMENT)
3   WHERE Dno IN (10, 30)
4   ORDER BY Ename;
```

Output:

	Ename	Dname
▶	Ashil Burney	IT
	Brandtr Wildbore	IT
	Chandal McBrier	IT
	Chirag Wadhwa	IT
	Cornie Munby	IT
	Druci Sixsmith	Headquarters
	Fran Lening	IT
	Gannie Quantrell	IT
	Gustav Waring	IT
	John Smith	Headquarters
	Layton Murrie	IT
	Lee Prattin	IT
	Lowell Paule	IT
	Mag Giacomo	IT
	Martha Annies	IT
	Netti Dellenbrok	IT
	Nina Fisby	IT
	Rahul Sahay	IT
	Rivy Buzek	IT
	Rodrick Haighton	IT
	Selestina Herries	IT
	Skell Woolerton	IT
	Ulberto Gosz	Headquarters
	Virge Swancott	IT

9. Query to display Name and Hire Date of every Employee who was hired in 1981.

```
1 • SELECT Ename, Hire_date
2   FROM EMPLOYEE
3   WHERE Hire_date LIKE '1981_____';
```

Output:

	Ename	Hire_date
►	Chirag Wadhwa	1981-11-21
	Anmol Gupta	1981-09-11
	Fran Lening	1981-05-27

10. Query to display Name and Job of all employees who have not assigned a supervisor.

```
1 • SELECT Ename, Job_type
2   FROM EMPLOYEE
3  WHERE SupervisorENo IS NULL;
```

Output:

	Ename	Job_type
►	Gurpreet Singh	Intern
	Ulberto Gosz	Assistant
	Druci Sixsmith	Technician
	John Smith	Managing Director
	Rivy Buzek	Technician

11. Query to display the Name, Salary and Commission for all the employees who earn commission.

```
1 • SELECT Ename, Salary, Commission
2   FROM EMPLOYEE
3  WHERE Commission IS NOT NULL;
```

Output:

	Ename	Salary	Commission
►	Salmon Gough	998.32	148.80
	Lowell Paule	969.66	324.39
	Nicholas Comelini	882.53	546.04
	Laurence Grosvener	244.37	125.45
	Druci Sixsmith	387.43	530.53
	Shay Restieaux	500.22	574.68
	Marcille Occleshaw	507.10	453.52
	Desiri Allott	683.09	239.84
	Tania Chauhan	2921.37	235.90
	Blake Lewis	244.37	125.45
	Nina Fisby	920.84	324.39

12. Sort the data in descending order of Salary and Commission.

```
1 • SELECT *
2 FROM EMPLOYEE
3 ORDER BY Salary DESC, Commission DESC;
```

Output:

	Eno	Ename	Job_type	SupervisorEno	Hire_date	Dno	Commission	Salary
►	778	John Smith	Managing Director	NULL	1980-06-12	10	NULL	5800.23
	86	Tania Chauhan	Manager	778	1983-08-14	90	235.90	2921.37
	79	Rahul Sahay	Intern	23	2004-08-14	30	NULL	2921.37
	25	Anmol Gupta	Manager	778	1981-09-11	40	NULL	2865.92
	23	Chirag Wadhwa	Manager	778	1981-11-21	30	NULL	2465.92
	492	Salmon Gough	Assistant	86	2008-12-13	90	148.80	998.32
	89	Alicia Jones	Manager	778	1982-10-26	95	NULL	980.35
	516	Lowell Paule	Systems Administrator	23	2008-03-31	30	324.39	969.66
	188	Sherline Harbord	Manager	778	1995-08-05	40	NULL	926.42
	981	Nina Fisby	Systems Administrator	23	2017-07-26	30	324.39	920.84
	518	Nicholas Comelini	Accountant	188	1997-03-20	90	546.04	882.53
	243	Marie Brahms	Engineer	23	1983-06-22	40	NULL	876.78
	442	Netti Dellenbrok	Designer	23	2014-05-14	30	NULL	790.82
	718	Oneida Hicklingbottom	Intern	89	2006-03-25	95	NULL	789.82
	504	Berny Bonas	Accountant	778	2008-05-24	40	NULL	779.34
	611	Brandtr Wildbore	Engineer	23	2000-04-14	30	NULL	704.23
	785	Chandal McBrier	Consultant	23	1998-02-10	30	NULL	697.68
	354	Bryna McKenny	Analyst	153	2001-10-11	90	NULL	693.63
	809	Cornie Munby	Consultant	23	1986-06-07	30	NULL	688.37
	832	Desiri Allott	Intern	89	1997-11-04	95	239.84	683.09
	232	Isa Jaques	Manager	778	1996-07-23	45	NULL	651.05
	915	Layton Murrie	Designer	23	2006-06-24	30	NULL	640.31
	763	Rodrick Haighton	Analyst	23	2000-05-08	30	NULL	627.74
	299	Mahala Burtwhistle	Analyst	89	1990-07-20	95	NULL	602.86
	837	Ashil Burney	Engineer	23	1987-03-29	30	NULL	586.13
	125	Gurpreet Singh	Intern	NULL	2008-05-15	NULL	NULL	521.37
	823	Marcille Occleshaw	Lawyer	232	2003-12-27	45	453.52	507.10
	498	Skell Woolerton	Engineer	23	2004-04-04	30	NULL	506.44
	153	Andy Beaford	Manager	778	2000-09-08	40	NULL	502.30
	811	Shay Restieaux	Lawyer	232	1999-04-16	45	574.68	500.22
	520	King Hethron	Manager	778	2015-10-13	90	NULL	497.18
	783	Fran Lening	Analyst	23	1981-05-27	30	NULL	471.17

997	Mag Giacomo	Architect	23	2002-12-23	30	NULL	427.98
697	Druci Sixsmith	Technician	NULL	2005-07-27	10	530.53	387.43
421	Ulberto Gosz	Assistant	NULL	2017-02-07	10	NULL	381.64
969	Lee Prattin	Developer	23	1986-01-23	30	NULL	296.48
842	Rivy Buzek	Technician	NULL	1982-05-25	30	NULL	295.31
960	Virge Swancott	Developer	23	1984-01-23	30	NULL	292.48
528	Laurence Grosvener	Intern	520	2019-09-06	90	125.45	244.37
87	Blake Lewis	Intern	86	2008-05-02	90	125.45	244.37
932	Selestina Herries	Engineer	23	2013-05-23	30	NULL	239.27
659	Martha Annies	Developer	23	2008-11-03	30	NULL	200.80
732	Gannie Quantrell	Architect	23	2019-04-29	30	NULL	174.12
146	Donielle Tuite	Intern	520	2016-06-12	90	NULL	171.60
908	Gustav Waring	Engineer	23	2002-12-23	30	NULL	141.05

13. Query to display Name of all the employees where the third letter of their name is 'A'.

```
1 • SELECT Ename
2 FROM EMPLOYEE
3 WHERE Ename LIKE '__A%';
```

Output:

	Ename
►	Isa Jaques
	Brandtr Wildbore
	Fran Lening
	Chandal McBrier
	Shay Restieaux
	Blake Lewis

14. Query to display Name of all employees either have two 'R's or have two 'A's in their name and are either in Dept No = 30 or their Manager's Employee No = 7788.

```
2 FROM EMPLOYEE
3 WHERE Ename LIKE '%R%R%'
4 OR Ename LIKE '%A%A%'
5 OR Dno = 30
6 OR SupervisorENo = '778';
```

Output:

	Ename
►	Gurpreet Singh
	Andy Beaford
	Sherline Harbord
	Chirag Wadhwa
	Isa Jaques
	Marie Brahms
	Anmol Gupta
	Mahala Burtwhistle
	Netti Dellenbrok
	Skell Woolerton
	Berny Bonas
	Lowell Paule
	King Hethron
	Laurence Grosvener
	Brandtr Wildbore
	Martha Annies
	Gannie Quantrell
	Rodrick Haighton
	Fran Lening
	Chandal McBrier
	Rahul Sahay
	Cornie Munby
	Shay Restieaux
	Marcille Occleshaw
	Ashil Burney
	Rivy Buzek
	Tania Chauhan
	Alicia Jones
	Gustav Waring
	Layton Murrie
	Selestina Herries
	Virge Swancott
	Lee Prattin
	Nina Fisby
	Mag Giacomo

15. Query to display Name, Salary and Commission for all employees whose Commission amount is greater than their Salary increased by 5%.

```
1 • SELECT Ename,  
2         Salary,  
3         Commission  
4 FROM EMPLOYEE  
5 WHERE Commission > 1.05 * Salary;
```


Output:

	Ename	Salary	Commission
►	Druci Sixsmith	387.43	530.53
	Shay Restieaux	500.22	574.68

16. Query to display the Current Date along with the day name.

```
1 • SELECT DATE(NOW()),  
2       DAYNAME(NOW());
```

Output:

	DATE(NOW())	DAYNAME(NOW())
►	2023-04-13	Thursday

17. Query to display Name, Hire Date and Salary Review Date which is the 1st Monday after six months of employment.

```
1 • WITH RECORDS(Ename, Hire_date, Six_after) AS (  
2     SELECT Ename,  
3            Hire_date,  
4            DATE_ADD(Hire_date, INTERVAL 6 MONTH)  
5            AS Six_after  
6     FROM EMPLOYEE  
7 )  
8 SELECT RECORDS.Ename,  
9        RECORDS.Hire_date,  
10       DATE_ADD(  
11          RECORDS.Six_after,  
12          INTERVAL  
13          IF(  
14             0 = WEEKDAY(RECORDS.Six_after),  
15             0 - WEEKDAY(RECORDS.Six_after),  
16             7 - WEEKDAY(RECORDS.Six_after) + 0  
17          )  
18          DAY  
19       ) AS Salary_review_date  
20 FROM RECORDS;  
21
```

Output:

	Ename	Hire_date	Salary_review_date
►	Gurpreet Singh	2008-05-15	2008-11-17
	Donielle Tuite	2016-06-12	2016-12-12
	Andy Beaford	2000-09-08	2001-03-12
	Sherline Harbord	1995-08-05	1996-02-05
	Chirag Wadhwa	1981-11-21	1982-05-24
	Isa Jaques	1996-07-23	1997-01-27
	Marie Brahms	1983-06-22	1983-12-26
	Anmol Gupta	1981-09-11	1982-03-15
	Mahala Burtwhistle	1990-07-20	1991-01-21
	Bryna McKenny	2001-10-11	2002-04-15
	Ulberto Gosz	2017-02-07	2017-08-07
	Netti Dellenbrok	2014-05-14	2014-11-17
	Salmon Gough	2008-12-13	2009-06-15
	Skell Woolerton	2004-04-04	2004-10-04
	Berny Bonas	2008-05-24	2008-11-24
	Lowell Paule	2008-03-31	2008-10-06
	Nicholas Comelini	1997-03-20	1997-09-22
	King Hethron	2015-10-13	2016-04-18
	Laurence Grosvener	2019-09-06	2020-03-09
	Brandtr Wildbore	2000-04-14	2000-10-16
	Martha Annies	2008-11-03	2009-05-04
	Druci Sixsmith	2005-07-27	2006-01-30
	Oneida Hicklingbottom	2006-03-25	2006-09-25
	Gannie Quantrell	2019-04-29	2019-11-04
	Rodrick Haighton	2000-05-08	2000-11-13
	John Smith	1980-06-12	1980-12-15
	Fran Lening	1981-05-27	1981-11-30
	Chandal McBrier	1998-02-10	1998-08-10
	Rahul Sahay	2004-08-14	2005-02-14
	Cornie Munby	1986-06-07	1986-12-08
	Shay Restieaux	1999-04-16	1999-10-18
	Marcille Occleshaw	2003-12-27	2004-06-28
	Desiri Allott	1997-11-04	1998-05-04
	Ashil Burney	1987-03-29	1987-10-05

Rivy Buzek	1982-05-25	1982-11-29
Tania Chauhan	1983-08-14	1984-02-20
Blake Lewis	2008-05-02	2008-11-03
Alicia Jones	1982-10-26	1983-05-02
Gustav Waring	2002-12-23	2003-06-23
Layton Murrie	2006-06-24	2006-12-25
Selestina Herries	2013-05-23	2013-11-25
Virge Swancott	1984-01-23	1984-07-23
Lee Prattin	1986-01-23	1986-07-28
Nina Fisby	2017-07-26	2018-01-29
Mag Giacomo	2002-12-23	2003-06-23

18. Query to display Name and calculate the number of months between today and the date on which the employee was hired by the department 'Purchase'.

```
1 • SELECT Ename, TIMESTAMPDIFF(MONTH, Hire_date, NOW())
2   FROM (EMPLOYEE NATURAL JOIN DEPARTMENT)
3   WHERE Dname = 'Purchase';
```

Output:

	Ename	TIMESTAMPDIFF(MONTH, Hire_date, NOW())
►	Mahala Burtwhistle	392
	Oneida Hicklingbottom	204
	Desiri Allott	305
	Alicia Jones	485

19. Query to display the following for each employee <E-Name> earns < Salary> monthly but wants < 3 * Current Salary >. Label the Column as Dream Salary.

```
1 • SELECT CONCAT(
2     Ename, ' earns $',
3     Salary, ' monthly ',
4     'but wants $', 3 * Salary
5 ) AS "Dream Salary"
6 FROM EMPLOYEE;
```

Output:

Dream Salary	
►	Gurpreet Singh earns \$521.37 monthly but wants \$1564.11
	Donielle Tuite earns \$171.60 monthly but wants \$514.80
	Andy Beaford earns \$502.30 monthly but wants \$1506.90
	Sherline Harbord earns \$926.42 monthly but wants \$2779.26
	Chirag Wadhwa earns \$2465.92 monthly but wants \$7397.76
	Isa Jaques earns \$651.05 monthly but wants \$1953.15
	Marie Brahms earns \$876.78 monthly but wants \$2630.34
	Anmol Gupta earns \$2865.92 monthly but wants \$8597.76
	Mahala Burtwhistle earns \$602.86 monthly but wants \$1808.58
	Bryna McKenny earns \$693.63 monthly but wants \$2080.89
	Ulberto Gosz earns \$381.64 monthly but wants \$1144.92
	Netti Dellenbrok earns \$790.82 monthly but wants \$2372.46
	Salmon Gough earns \$998.32 monthly but wants \$2994.96
	Skell Woolerton earns \$506.44 monthly but wants \$1519.32
	Berny Bonas earns \$779.34 monthly but wants \$2338.02
	Lowell Paule earns \$969.66 monthly but wants \$2908.98
	Nicholas Comelini earns \$882.53 monthly but wants \$2647.59
	King Hethron earns \$497.18 monthly but wants \$1491.54
	Laurence Grosvener earns \$244.37 monthly but wants \$733.11
	Brandtr Wildbore earns \$704.23 monthly but wants \$2112.69
	Martha Annies earns \$200.80 monthly but wants \$602.40
	Druci Sixsmith earns \$387.43 monthly but wants \$1162.29
	Oneida Hicklingbottom earns \$789.82 monthly but wants \$2369.46
	Gannie Quantrell earns \$174.12 monthly but wants \$522.36
	Rodrick Haighton earns \$627.74 monthly but wants \$1883.22
	John Smith earns \$5800.23 monthly but wants \$17400.69
	Fran Lening earns \$471.17 monthly but wants \$1413.51
	Chandal McBrier earns \$697.68 monthly but wants \$2093.04
	Rahul Sahay earns \$2921.37 monthly but wants \$8764.11
	Cornie Munby earns \$688.37 monthly but wants \$2065.11
	Shay Restieaux earns \$500.22 monthly but wants \$1500.66
	Marcille Occleshaw earns \$507.10 monthly but wants \$1521.30
	Desiri Allott earns \$683.09 monthly but wants \$2049.27
	Ashil Burney earns \$586.13 monthly but wants \$1758.39
	Rivy Buzek earns \$295.31 monthly but wants \$885.93
	Tania Chauhan earns \$2921.37 monthly but wants \$8764.11
	Blake Lewis earns \$244.37 monthly but wants \$733.11
	Alicia Jones earns \$980.35 monthly but wants \$2941.05
	Gustav Waring earns \$141.05 monthly but wants \$423.15
	Layton Murrie earns \$640.31 monthly but wants \$1920.93
	Selestina Herries earns \$239.27 monthly but wants \$717.81
	Virge Swancott earns \$292.48 monthly but wants \$877.44
	Lee Prattin earns \$296.48 monthly but wants \$889.44
	Nina Fisby earns \$920.84 monthly but wants \$2762.52
	Mag Giacomo earns \$427.98 monthly but wants \$1283.94

20. Query to display Name with the 1st letter capitalized and all other letters lowercase and length of their name of all the employees whose name starts with 'J', 'A' and 'M'.

```
1 • SELECT CONCAT(  
2     UPPER(SUBSTR(Ename, 1, 1)),  
3     LOWER(SUBSTR(Ename, 2))  
4 ) AS "Name", LENGTH(Ename)  
5 FROM EMPLOYEE  
6 WHERE Ename LIKE 'J%'  
7     OR Ename LIKE 'A%'  
8     OR Ename LIKE 'M%';
```

Output:

	Name	LENGTH(Ename)
►	Andy beaford	12
	Marie brahms	12
	Anmol gupta	11
	Mahala burtwhistle	18
	Martha annies	13
	John smith	10
	Marcille occleshaw	18
	Ashil burney	12
	Alicia jones	12
	Mag giacomio	11

21. Query to display Name, Hire Date and Day of the week on which the employee started.

```
1 • SELECT Ename, Hire_date, DAYNAME(Hire_date)  
2 FROM EMPLOYEE;
```

Output:

	Ename	Hire_date	DAYNAME(Hire_date)
▶	Gurpreet Singh	2008-05-15	Thursday
	Donielle Tuite	2016-06-12	Sunday
	Andy Beaford	2000-09-08	Friday
	Sherline Harbord	1995-08-05	Saturday
	Chirag Wadhwa	1981-11-21	Saturday
	Isa Jaques	1996-07-23	Tuesday
	Marie Brahms	1983-06-22	Wednesday
	Anmol Gupta	1981-09-11	Friday
	Mahala Burtwhistle	1990-07-20	Friday
	Bryna McKenny	2001-10-11	Thursday
	Ulberto Gosz	2017-02-07	Tuesday
	Netti Dellenbrok	2014-05-14	Wednesday
	Salmon Gough	2008-12-13	Saturday
	Skell Woolerton	2004-04-04	Sunday
	Berny Bonas	2008-05-24	Saturday
	Lowell Paule	2008-03-31	Monday
	Nicholas Comelini	1997-03-20	Thursday
	King Hethron	2015-10-13	Tuesday
	Laurence Grosvener	2019-09-06	Friday
	Brandtr Wildbore	2000-04-14	Friday
	Martha Annies	2008-11-03	Monday
	Druci Sixsmith	2005-07-27	Wednesday
	Oneida Hicklingb...	2006-03-25	Saturday
	Gannie Quantrell	2019-04-29	Monday
	Rodrick Haighton	2000-05-08	Monday
	John Smith	1980-06-12	Thursday
	Fran Lening	1981-05-27	Wednesday
	Chandal McBrier	1998-02-10	Tuesday
	Rahul Sahay	2004-08-14	Saturday
	Cornie Munby	1986-06-07	Saturday
	Shay Restieaux	1999-04-16	Friday
	Marcille Occleshaw	2003-12-27	Saturday
	Desiri Allott	1997-11-04	Tuesday
	Ashil Burney	1987-03-29	Sunday
	Rivy Buzek	1982-05-25	Tuesday
	Tania Chauhan	1983-08-14	Sunday
	Blake Lewis	2008-05-02	Friday
	Alicia Jones	1982-10-26	Tuesday
	Gustav Waring	2002-12-23	Monday
	Layton Murrie	2006-06-24	Saturday
	Selestina Herries	2013-05-23	Thursday
	Virge Swancott	1984-01-23	Monday
	Lee Prattin	1986-01-23	Thursday
	Nina Fisby	2017-07-26	Wednesday
	Mag Giacomo	2002-12-23	Monday

22. Query to display Name, Department Name and Department No for all the employees.

```
1 • SELECT Ename, Dno, Dname
2 FROM (EMPLOYEE NATURAL JOIN DEPARTMENT);
```

Output:

	Ename	Dno	Dname
►	Ulberto Gosz	10	Headquarters
	Druci Sixsmith	10	Headquarters
	John Smith	10	Headquarters
	Chirag Wadhwa	30	IT
	Netti Dellenbrok	30	IT
	Skell Woolerton	30	IT
	Lowell Paule	30	IT
	Brandtr Wildbore	30	IT
	Martha Annies	30	IT
	Gannie Quantrell	30	IT
	Rodrick Haighton	30	IT
	Fran Lening	30	IT
	Chandal McBrier	30	IT
	Rahul Sahay	30	IT
	Cornie Munby	30	IT
	Ashil Burney	30	IT
	Rivy Buzek	30	IT
	Gustav Waring	30	IT
	Layton Murrie	30	IT
	Selestina Herries	30	IT
	Virge Swancott	30	IT
	Lee Prattin	30	IT
	Nina Fisby	30	IT
	Mag Giacomo	30	IT
	Andy Beaford	40	Administration
	Sherline Harbord	40	Administration
	Marie Brahms	40	Administration
	Anmol Gupta	40	Administration
	Berny Bonas	40	Administration
	Isa Jaques	45	Legal
	Shay Restieaux	45	Legal
	Marcille Occleshaw	45	Legal
	Donielle Tuite	90	Sales
	Bryna McKenny	90	Sales

	Salmon Gough	90	Sales
	Nicholas Comelini	90	Sales
	King Hethron	90	Sales
	Laurence Grosvener	90	Sales
	Tania Chauhan	90	Sales
	Blake Lewis	90	Sales
	Mahala Burtwhistle	95	Purchase
	Oneida Hicklingbottom	95	Purchase
	Desiri Allott	95	Purchase
	Alicia Jones	95	Purchase

23. Query to display Unique Listing of all Jobs that are in Department number 30.

```
1 • SELECT DISTINCT Job_type
2   FROM EMPLOYEE
3   WHERE Dno = 30;
```

Output:

	Job_type
►	Manager
	Designer
	Engineer
	Systems Administrator
	Developer
	Architect
	Analyst
	Consultant
	Intern
	Technician

24. Query to display Name, Dept Name of all employees who have an 'A' in their name.

```
1 • SELECT Ename, Dname
2   FROM (EMPLOYEE NATURAL JOIN DEPARTMENT)
3   WHERE Ename LIKE '%A%';
```

Output:

	Ename	Dname
►	Andy Beaford	Administration
	Sherline Harbord	Administration
	Chirag Wadhwa	IT
	Isa Jaques	Legal
	Marie Brahms	Administration
	Anmol Gupta	Administration
	Mahala Burtwhistle	Purchase
	Bryna McKenny	Sales
	Salmon Gough	Sales
	Berny Bonas	Administration
	Lowell Paule	IT
	Nicholas Comelini	Sales
	Laurence Grosvener	Sales
	Brandtr Wildbore	IT
	Martha Annies	IT
	Oneida Hicklingb...	Purchase
	Gannie Quantrell	IT
	Rodrick Haighton	IT
	Fran Lening	IT
	Chandal McBrier	IT
	Rahul Sahay	IT
	Shay Restieaux	Legal
	Marcille Occleshaw	Legal
	Desiri Allott	Purchase
	Ashil Burney	IT
	Tania Chauhan	Sales
	Blake Lewis	Sales
	Alicia Jones	Purchase
	Gustav Waring	IT
	Layton Murrie	IT
	Selestina Herries	IT
	Virge Swancott	IT
	Lee Prattin	IT
	Nina Fisby	IT
	Mag Giacomo	IT

25. Query to display Name, Job, Department No. And Department Name for all the employees working at the Dallas location.

```

1 • SELECT Ename, Job_type, Dno, Dname
2   FROM (EMPLOYEE NATURAL JOIN DEPARTMENT)
3   WHERE Location = 'Dallas';

```

Output:

	Ename	Job_type	Dno	Dname
►	Mahala Burtwhistle	Analyst	95	Purchase
	Oneida Hicklingbottom	Intern	95	Purchase
	Desiri Allott	Intern	95	Purchase
	Alicia Jones	Manager	95	Purchase

26. Query to display Name and Employee no. Along with their supervisor's Name and the supervisor's employee no; along with the Employees' Name who do not have a supervisor.

```

1 • SELECT E.Ename, E.Eno, S.Ename AS SupervisorName,
2         S.Eno AS SupervisorEno
3 FROM EMPLOYEE AS E LEFT OUTER JOIN EMPLOYEE AS S
4 ON E.SupervisorEno = S.Eno;

```

Output:

	Ename	Eno	SupervisorName	SupervisorEno
►	Gurpreet Singh	125	NULL	NULL
	Donielle Tuite	146	King Hethron	520
	Andy Beaford	153	John Smith	778
	Sherline Harbord	188	John Smith	778
	Chirag Wadhwa	23	John Smith	778
	Isa Jaques	232	John Smith	778
	Marie Brahms	243	Chirag Wadhwa	23
	Anmol Gupta	25	John Smith	778
	Mahala Burtwhistle	299	Alicia Jones	89
	Bryna McKenny	354	Andy Beaford	153
	Ulberto Gosz	421	NULL	NULL
	Netti Dellenbrok	442	Chirag Wadhwa	23
	Salmon Gough	492	Tania Chauhan	86
	Skell Woolerton	498	Chirag Wadhwa	23
	Berny Bonas	504	John Smith	778
	Lowell Paule	516	Chirag Wadhwa	23
	Nicholas Comelini	518	Sherline Har...	188
	King Hethron	520	John Smith	778
	Laurence Grosvener	528	King Hethron	520
	Brandtr Wildbore	611	Chirag Wadhwa	23
	Martha Annies	659	Chirag Wadhwa	23
	Druci Sixsmith	697	NULL	NULL
	Oneida Hicklingb...	718	Alicia Jones	89
	Gannie Quantrell	732	Chirag Wadhwa	23
	Rodrick Haighton	763	Chirag Wadhwa	23
	John Smith	778	NULL	NULL
	Fran Lening	783	Chirag Wadhwa	23
	Chandal McBrier	785	Chirag Wadhwa	23
	Rahul Sahay	79	Chirag Wadhwa	23
	Cornie Munby	809	Chirag Wadhwa	23
	Shay Restieaux	811	Isa Jaques	232
	Marcille Occleshaw	823	Isa Jaques	232
	Desiri Allott	832	Alicia Jones	89
	Ashil Burney	837	Chirag Wadhwa	23
	Rivy Buzek	842	NULL	NULL
	Tania Chauhan	86	John Smith	778
	Blake Lewis	87	Tania Chauhan	86

Alicia Jones	89	John Smith	778
Gustav Waring	908	Chirag Wadhwa	23
Layton Murrie	915	Chirag Wadhwa	23
Selestina Herries	932	Chirag Wadhwa	23
Virge Swancott	960	Chirag Wadhwa	23
Lee Prattin	969	Chirag Wadhwa	23
Nina Fisby	981	Chirag Wadhwa	23
Mag Giacomo	997	Chirag Wadhwa	23

27. Query to display Name, Dept No. And Salary of any employee whose department No.and salary matches both the department no. And the salary of any employee who earns a commission.

```
1 • SELECT L.Ename, L.Dno, L.Salary
2   FROM EMPLOYEE AS L, EMPLOYEE AS R
3  WHERE L.Dno = R.Dno
4        AND L.Salary = R.Salary
5        AND L.Eno <> R.Eno
6        AND R.Commission IS NOT NULL;
```

Output:

	Ename	Dno	Salary
►	Blake Lewis	90	244.37
	Laurence Grosvener	90	244.37

28. Query to display Name and Salaries represented by asterisks, where each asterisk (*) signifies \$100.

```
1 • SELECT Ename, RPAD('*', Salary / 100, '*') AS Salary_Star
2   FROM EMPLOYEE;
```

	Ename	Salary_Star
►	Gurpreet Singh	*****
	Donielle Tuite	**
	Andy Beaford	*****
	Sherline Harbord	*****
	Chirag Wadhwa	*****
	Isa Jaques	*****
	Marie Brahms	*****
	Anmol Gupta	*****
	Mahala Burtwhistle	*****
	Bryna McKenny	*****
	Ulberto Gosz	***
	Netti Dellenbrok	*****
	Salmon Gough	*****
	Skell Woolerton	*****
	Berny Bonas	*****
	Lowell Paule	*****
	Nicholas Comelini	*****
	King Hethron	*****
	Laurence Grosvener	**
	Brandtr Wildbore	*****
	Martha Annies	**
	Druci Sixsmith	***
	Oneida Hicklingbottom	*****
	Gannie Quantrell	**
	Rodrick Haighton	*****
	John Smith	*****
	Fran Lening	*****
	Chandal McBrier	*****
	Rahul Sahay	*****
	Cornie Munby	*****
	Shay Restieaux	*****
	Marcille Occleshaw	*****
	Desiri Allott	*****
	Ashil Burney	*****

	Rivy Buzek	***
	Tania Chauhan	*****
	Blake Lewis	**
	Alicia Jones	*****
	Gustav Waring	*
	Layton Murrie	*****
	Selestina Herries	**
	Virge Swancott	***
	Lee Prattin	***
	Nina Fisby	*****
	Mag Giacomo	****

29. Query to display the Highest, Lowest, Sum and Average Salaries of all the employees.

```
1 • SELECT MAX(Salary),  
2       MIN(Salary),  
3       SUM(Salary),  
4       AVG(Salary)  
5 FROM EMPLOYEE;
```

Output:

	MAX(Salary)	MIN(Salary)	SUM(Salary)	AVG(Salary)
►	5800.23	141.05	39467.46	877.054667

30. Query to display the number of employees performing the same Job type functions.

```
1 • SELECT Job_type, COUNT(DISTINCT Eno)  
2 FROM EMPLOYEE  
3 GROUP BY Job_type;
```

Output:

	Job_type	COUNT(DISTINCT Eno)
►	Accountant	2
	Analyst	4
	Architect	2
	Assistant	2
	Consultant	2
	Designer	2
	Developer	3
	Engineer	6
	Intern	7
	Lawyer	2
	Manager	8
	Managing...	1
	Systems ...	2
	Technician	2

31. Query to display the total number of supervisors without listing their names.

```
1 • SELECT COUNT(DISTINCT SupervisorENo)
2 FROM EMPLOYEE;
```

Output:

	COUNT(DISTINCT SupervisorENo)
►	8

32. Query to display the Department Name, Location Name, No. of Employees and the average salary for all employees in that department.

```
1 • SELECT Dname,
2         Location,
3         COUNT(*) AS NumberOfEmployees,
4         ROUND(AVG(Salary), 2) AS AvgSalary
5 FROM EMPLOYEE NATURAL JOIN DEPARTMENT
6 GROUP BY EMPLOYEE.Dno;
```

Output:

	Dname	Location	NumberOfEmployees	AvgSalary
►	Headquarters	Mumbai	3	2189.77
	IT	Bengaluru	21	717.06
	Administration	New Delhi	5	1190.15
	Legal	Mumbai	3	552.79
	Sales	New Delhi	8	831.67
	Purchase	Dallas	4	764.03

33. Query to display Name and Hire Date for all employees in the same dept. as Blake.

```
1 • SELECT Ename, Hire_date
2 FROM EMPLOYEE
3 WHERE Dno IN (
4     SELECT Dno
5     FROM EMPLOYEE
6     WHERE Ename LIKE 'Blake%'
7 );
```

Output:

	Ename	Hire_date
►	Donielle Tuite	2016-06-12
	Bryna McKenny	2001-10-11
	Salmon Gough	2008-12-13
	Nicholas Comelini	1997-03-20
	King Hethron	2015-10-13
	Laurence Grosvener	2019-09-06
	Tania Chauhan	1983-08-14
	Blake Lewis	2008-05-02

34. Query to display the Employee No. And Name for all employees who earn more than the average salary.

```
1 • SELECT Ename, Salary
2   FROM EMPLOYEE
3  WHERE Salary > (
4      SELECT AVG(Salary)
5      FROM EMPLOYEE
6  );
```

Output:

	Ename	Salary
►	Sherline Harbord	926.42
	Chirag Wadhwa	2465.92
	Anmol Gupta	2865.92
	Salmon Gough	998.32
	Lowell Paule	969.66
	Nicholas Comelini	882.53
	John Smith	5800.23
	Rahul Sahay	2921.37
	Tania Chauhan	2921.37
	Alicia Jones	980.35
	Nina Fisby	920.84

35. Query to display Employee Number and Name for all employees who work in a department with any employee whose name contains a 'T'.

```
1 • SELECT Eno, Ename
2   FROM EMPLOYEE
3  WHERE Dno IN (
4      SELECT Dno
5      FROM EMPLOYEE
6      WHERE Ename LIKE '%T%'
7  );
```

Output:

	Eno	Ename
►	146	Donielle Tuite
	354	Bryna McKenny
	492	Salmon Gough
	518	Nicholas Comelini
	520	King Hethron
	528	Laurence Grosvener
	86	Tania Chauhan
	87	Blake Lewis
	153	Andy Beaford
	188	Sherline Harbord
	243	Marie Brahms
	25	Anmol Gupta
	504	Berny Bonas
	299	Mahala Burtwhistle
	718	Oneida Hicklingb...
	832	Desiri Allott
	89	Alicia Jones
	421	Ulberto Gosz
	697	Druci Sixsmith
	778	John Smith
	23	Chirag Wadhwa
	442	Netti Dellenbrok
	498	Skell Woolerton
	516	Lowell Paule
	611	Brandtr Wildbore
	659	Martha Annies
	732	Gannie Quantrell
	763	Rodrick Haighton
	783	Fran Lening
	785	Chandal McBrier
	79	Rahul Sahay
	809	Cornie Munby
	837	Ashil Burney
	842	Rivy Buzek
	908	Gustav Waring
	915	Layton Murrie
	932	Selestina Herries
	960	Virge Swancott
	969	Lee Prattin
	981	Nina Fisby
	997	Mag Giacomo
	232	Isa Jaques
	811	Shay Restieaux
	823	Marcille Occleshaw

36. Query to display the names and salaries of all employees who report to a supervisor named 'King'.

```
1 • SELECT Ename, Salary
2 FROM EMPLOYEE
3 WHERE SupervisorENo IN (
4     SELECT Eno
5     FROM EMPLOYEE
6     WHERE Ename LIKE 'King%'
7 );
```

Output:

	Ename	Salary
►	Donielle Tuite	171.60
	Laurence Grosvener	244.37

37. Query to display the department no, name and job for all employees in the Sales department.

```
1 • SELECT Dno, Ename, Job_type
2 FROM (EMPLOYEE NATURAL JOIN DEPARTMENT)
3 WHERE Dname = 'Sales';
4
```

Output:

	Dno	Ename	Job_type
►	90	Donielle Tuite	Intern
	90	Bryna McKenny	Analyst
	90	Salmon Gough	Assistant
	90	Nicholas Comelini	Accountant
	90	King Hethron	Manager
	90	Laurence Grosvener	Intern
	90	Tania Chauhan	Manager
	90	Blake Lewis	Intern

38. Display names of employees along with their department name who have more than 20 years experience.

```
1 • SELECT Ename, Dname
2 FROM (EMPLOYEE NATURAL JOIN DEPARTMENT)
3 WHERE TIMESTAMPDIFF (
4     YEAR,
5     Hire_date,
6     NOW()) > 20;
7
```

Output:

	Ename	Dname
►	John Smith	Headquarters
	Chirag Wadhwa	IT
	Brandtr Wildbore	IT
	Rodrick Haighton	IT
	Fran Lening	IT
	Chandal McBrier	IT
	Cornie Munby	IT
	Ashil Burney	IT
	Rivy Buzek	IT
	Virge Swancott	IT
	Lee Prattin	IT
	Andy Beaford	Administration
	Sherline Harbord	Administration
	Marie Brahms	Administration
	Anmol Gupta	Administration
	Isa Jaques	Legal
	Shay Restieaux	Legal
	Bryna McKenny	Sales
	Nicholas Comelini	Sales
	Tania Chauhan	Sales
	Mahala Burtwhistle	Purchase
	Desiri Allott	Purchase
	Alicia Jones	Purchase

39. Display total number of departments at each location.

```
1 • SELECT Location,  
2       COUNT(*)  
3   FROM DEPARTMENT  
4   GROUP BY Location;
```

Output:

	Location	COUNT(*)
►	Mumbai	2
	Dallas	2
	Bengaluru	1
	New Delhi	3

40. Find the department name in which at least 20 employees work.

```
1 • SELECT Dname
2   FROM (EMPLOYEE NATURAL JOIN DEPARTMENT)
3   GROUP BY Dno
4   HAVING COUNT(*) > 20;
```

Output:

	Dname
▶	IT

41. Query to find the employee' name who is not supervisor and name of supervisor supervising more than 5 employees.

```
1 • (
2   SELECT Ename
3   FROM EMPLOYEE
4   WHERE Eno NOT IN (
5       SELECT DISTINCT SupervisorENo
6       FROM EMPLOYEE
7       WHERE SupervisorENo IS NOT NULL
8   )
9 )
10 UNION
11 (
12   SELECT Ename
13   FROM EMPLOYEE
14   WHERE Eno IN (
15       SELECT SupervisorENo
16       FROM EMPLOYEE
17       WHERE SupervisorENo IS NOT NULL
18       GROUP BY SupervisorENo
19       HAVING COUNT(*) > 5
20   )
21 );
```

Output:

	Ename
▶	Gurpreet Singh
	Donielle Tuite
	Marie Brahms
	Anmol Gupta
	Mahala Burtwhistle
	Bryna McKenny
	Ulberto Gosz
	Netti Dellenbrok
	Salmon Gough
	Skell Woolerton
	Berny Bonas
	Lowell Paule
	Nicholas Comelini
	Laurence Grosvener
	Brandtr Wildbore
	Martha Annies
	Druci Sixsmith
	Oneida
	Hicklingbottom
	Gannie Quantrell
	Rodrick Haighton
	Fran Lening
	Chandal McBrier
	Rahul Sahay
	Cornie Munby
	Shay Restieaux
	Marcille Occleshaw
	Desiri Allott
	Ashil Burney
	Rivy Buzek
	Blake Lewis
	Gustav Waring
	Layton Murrie
	Selestina Herries
	Virge Swancott
	Lee Prattin
	Nina Fisby
	Mag Giacomo
	Chirag Wadhwa
	John Smith

42. Query to display the job type with maximum and minimum employees.

```
1 • WITH JOBCOUNT AS (  
2     SELECT COUNT(*) AS ECount  
3     FROM EMPLOYEE  
4     GROUP BY Job_type  
5 )  
6 SELECT Job_type, COUNT(*)  
7 FROM EMPLOYEE  
8 GROUP BY Job_type  
9 HAVING COUNT(*) IN (  
10    (  
11        SELECT MAX(ECount)  
12        FROM JOBCOUNT  
13    )  
14    UNION  
15    (  
16        SELECT MIN(ECount)  
17        FROM JOBCOUNT  
18    )  
19 );
```

Output:

	Job_type	COUNT(*)
►	Manager	8
	Managing Director	1