--write a SQL query to list the employees' name, increased their salary by 15%, and expressed as number of Dollars

```
SELECT emp_name,salary, concat('$',cast(1.15* salary as int)) AS "Salary"  FROM employees;
```

OUTPUT:

emp_name	salary	Salary
KAYLING	6000	$6900
BLAZE	2750	$3162
CLARE	2550	$2932
JONAS	2957	$3400
SCARLET	3100	$3565
FRANK	3100	$3565
SANDRINE	900	$1035
ADELYN	1700	$1955
WADE	1350	$1552
MADDEN	1350	$1552
TUCKER	1600	$1840
ADNRES	1200	$1380
JULIUS	1050	$1207
MARKER	1400	$1610

-- write a SQL query to list the employee's name and job name as a format of "Employee & Job".

```
select emp_name,job_name , concat(emp_name,'  ',job_name) as "Employee & Job" from employees;
```

OUTPUT:

KAYLING	PRESIDENT	KAYLING PRESIDENT
BLAZE	MANAGER	BLAZE MANAGER
CLARE	MANAGER	CLARE MANAGER
JONAS	MANAGER	JONAS MANAGER
SCARLET	ANALYST	SCARLET ANALYST
FRANK	ANALYST	FRANK ANALYST
SANDRINE	CLERK	SANDRINE CLERK
ADELYN	SALESMAN	ADELYN SALESMAN
WADE	SALESMAN	WADE SALESMAN
MADDEN	SALESMAN	MADDEN SALESMAN
TUCKER	SALESMAN	TUCKER SALESMAN
ADNRES	CLERK	ADNRES CLERK
JULIUS	CLERK	JULIUS CLERK
MARKER	CLERK	MARKER CLERK

--Write a query in SQL to produce the output of employees as follows: JONAS(manager).

```
select  concat(emp_name,' (',lower(job_name),')') as "Employee & Job" from employees;
```

OUTPUT:

KAYLING (president)
BLAZE (manager)
CLARE (manager)
JONAS (manager)
SCARLET (analyst)
FRANK (analyst)
SANDRINE (clerk)

ADELYN (salesman)
WADE (salesman)
MADDEN (salesman)
TUCKER (salesman)
ADNRES (clerk)
JULIUS (clerk)
MARKER (clerk)

--SQL query to find those employees with hire date in the format like February 22, 1991. Return employee ID and hire date.

```
select emp_id,format(hire_date,'MMMM dd, yyyy')as "Date" from employees;
```

OUTPUT:

68319	November 18, 1991
66928	May 01, 1991
67832	June 09, 1991
65646	April 02, 1991
67858	April 19, 1997
69062	December 03, 1991
63679	December 18, 1990
64989	February 20, 1991
65271	February 22, 1991
66564	September 28, 1991
68454	September 08, 1991
68736	May 23, 1997
69000	December 03, 1991
69324	January 23, 1992

--write a SQL query to count the number of characters except the spaces for each employee name. Return employee name length.

```
select emp_name,len(trim(emp_name)) from employees;
```

OUTPUT:

KAYLING	7
BLAZE	5
CLARE	5
JONAS	5
SCARLET	7
FRANK	5
SANDRINE	8
ADELYN	6
WADE	4
MADDEN	6
TUCKER	6
ADNRES	6
JULIUS	6
MARKER	6

--SQL query to find out which employees joined in the month of January.

```
SELECT * FROM employees WHERE format(hire_date, 'MMM')='Jun';
```

OUTPUT:

67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001

--write a SQL query to separate the names of employees and their managers by the string 'works for'.

```
select concat(e.emp_name,'works for ',m.emp_name) from employees e, employees m
WHERE e.manager_id = m.emp_id;
```

OUTPUT:

BLAZE works for KAYLING
CLARE works for KAYLING
JONAS works for KAYLING
SCARLET works for JONAS
FRANK works for JONAS
SANDRINE works for FRANK
ADELYN works for BLAZE
WADE works for BLAZE
MADDEN works for BLAZE
TUCKER works for BLAZE
ADNRES works for SCARLET
JULIUS works for BLAZE
MARKER works for CLARE

--write a SQL query to identify those employees who joined the company in 1991

```
SELECT *from Employees where format(hire_date,'yyyy')=1991;
```

OUTPUT:

68319	KAYLING	PRESIDENT	NULL	1991-11-18	6000	NULL	1001
66928	BLAZE	MANAGER	68319	1991-05-01	2750	NULL	3001
67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001
65646	JONAS	MANAGER	68319	1991-04-02	2957	NULL	2001
69062	FRANK	ANALYST	65646	1991-12-03	3100	NULL	2001
64989	ADELYN	SALESMAN	66928	1991-02-20	1700	400	3001
65271	WADE	SALESMAN	66928	1991-02-22	1350	600	3001
66564	MADDEN	SALESMAN	66928	1991-09-28	1350	1500	3001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001

--write a SQL query to identify the experience of the employees who work under the manager whose ID number is 68319

```
select  emp_id,salary,  concat(
        DATEDIFF(year,hire_date,GETDATE()),' years ',
        DATEDIFF(month,hire_date,GETDATE())%12,' months ',
        ceiling( DATEDIFF(dd,hire_date,GETDATE())%30.4375 ),' days ') as experience
from Practice.dbo.Employees where manager_id=68319;
```

OUTPUT:

66928	2750	32 years 1 months 23 days
67832	2550	32 years 0 months 14 days
65646	2957	32 years 2 months 22 days

--SQL query to find out which employees earn more than 100 per day as a salary. Return employee ID, employee name, salary, and experience.

```
select  emp_id,salary,(salary/30) as 'Per_day_sal',
        concat(
                DATEDIFF(year,hire_date,GETDATE()),' years ',
                DATEDIFF(month,hire_date,GETDATE())%12,' months ',
```

```
        ceiling( DATEDIFF(dd,hire_date,GETDATE())%30.4375 ),' days ' ) as experience
from Employees where (salary/30)>100;
```
OUTPUT:

68319	6000	200	32 years 7 months 5 days
67858	3100	103	26 years 2 months 4 days
69062	3100	103	32 years 6 months 20 days

```
--SQL query to identify those employees who retired after 31-Dec-99, completing eight years of service. Return
employee name.
select  emp_name,hire_date from Employees where DATEADD(year,8,hire_date)>'1999-12-31';
```
OUTPUT:

SCARLET	1997-04-19
ADNRES	1997-05-23
MARKER	1992-01-23

```
--write a SQL query to identify the employees whose salaries are odd
select * from Employees where (salary %2) <> 0;
```

65646	JONAS	MANAGER	68319	1991-04-02	2957	NULL	2001

OUTPUT:

```
--find those employees who joined in the month of APRIL
select * from Employees where format(hire_date,'MMMM')='April';
```
OUTPUT:

65646	JONAS	MANAGER	68319	1991-04-02	2957	NULL	2001
67858	SCARLET	ANALYST	65646	1997-04-19	3100	NULL	2001

```
--find those employees who joined the company before 19th of the month
select * from Employees where format(hire_date,'dd')<19;
```
OUTPUT:

68319	KAYLING	PRESIDENT	NULL	1991-11-18	6000	NULL	1001
66928	BLAZE	MANAGER	68319	1991-05-01	2750	NULL	3001
67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001
65646	JONAS	MANAGER	68319	1991-04-02	2957	NULL	2001
69062	FRANK	ANALYST	65646	1991-12-03	3100	NULL	2001
63679	SANDRINE	CLERK	69062	1990-12-18	900	NULL	2001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001

```
-- SQL query to find those employees of department id 3001 or 1001 and joined in the year 1991
select * from Employees where format (hire_date,'yyyy') in ('1991')
and (dep_id = 3001 or dep_id =1001) ;
```
OUTPUT:

68319	KAYLING	PRESIDENT	NULL	1991-11-18	6000	NULL	1001
66928	BLAZE	MANAGER	68319	1991-05-01	2750	NULL	3001
67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001
64989	ADELYN	SALESMAN	66928	1991-02-20	1700	400	3001
65271	WADE	SALESMAN	66928	1991-02-22	1350	600	3001
66564	MADDEN	SALESMAN	66928	1991-09-28	1350	1500	3001

68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001

--Find those employees where -1. the employees receive some commission which should not be more than the salary and annual salary including commission is below 34000.2. Designation is 'SALESMAN' and working in the department '3001'

```
SELECT *FROM employees WHERE job_name='SALESMAN' and dep_id=3001
and commission<salary and 12*(salary+commission)<34000 AND commission IS NOT null;
```

OUTPUT:

64989	ADELYN	SALESMAN	66928	1991-02-20	1700	400	3001
65271	WADE	SALESMAN	66928	1991-02-22	1350	600	3001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001

--SQL query to identify those employees who joined in any month other than February

```
select * from Employees where FORMAT(hire_date ,'MMMM')<> 'February';
--or
select * from Employees where FORMAT(hire_date ,'MMM')not in ('Feb');
```

OUTPUT:

68319	KAYLING	PRESIDENT	NULL	1991-11-18	6000	NULL	1001
66928	BLAZE	MANAGER	68319	1991-05-01	2750	NULL	3001
67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001
65646	JONAS	MANAGER	68319	1991-04-02	2957	NULL	2001
67858	SCARLET	ANALYST	65646	1997-04-19	3100	NULL	2001
69062	FRANK	ANALYST	65646	1991-12-03	3100	NULL	2001
63679	SANDRINE	CLERK	69062	1990-12-18	900	NULL	2001
66564	MADDEN	SALESMAN	66928	1991-09-28	1350	1500	3001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001
68736	ADNRES	CLERK	67858	1997-05-23	1200	NULL	2001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001
69324	MARKER	CLERK	67832	1992-01-23	1400	NULL	1001

--SQL query to identify the employees who joined the company in June 1991.

```
select * from Practice.dbo.Employees where FORMAT(hire_date,'MMMM yyyy')='June 1991';
```

OUTPUT:

67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001

--write a SQL query to identify all employees who joined the company on 1st May 1991, 20th February 1991, and 3rd December 1991.

```
select * from Practice.dbo.Employees where FORMAT(hire_date,'dd MMMM yyyy') in ('01 MAy 1991','20
February 1991','03 December 1991');
```

OUTPUT:

66928	BLAZE	MANAGER	68319	1991-05-01	2750	NULL	3001
69062	FRANK	ANALYST	65646	1991-12-03	3100	NULL	2001
64989	ADELYN	SALESMAN	66928	1991-02-20	1700	400	3001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001

--SQL query to find those employees who joined in 90's

```
SELECT *FROM Practice.dbo.Employees WHERE format(hire_date,'yy') BETWEEN '90' AND '99';
```

OUTPUT:

68319	KAYLING	PRESIDENT	NULL	1991-11-18	6000	NULL	1001
66928	BLAZE	MANAGER	68319	1991-05-01	2750	NULL	3001
67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001
65646	JONAS	MANAGER	68319	1991-04-02	2957	NULL	2001
67858	SCARLET	ANALYST	65646	1997-04-19	3100	NULL	2001
69062	FRANK	ANALYST	65646	1991-12-03	3100	NULL	2001
63679	SANDRINE	CLERK	69062	1990-12-18	900	NULL	2001
64989	ADELYN	SALESMAN	66928	1991-02-20	1700	400	3001
65271	WADE	SALESMAN	66928	1991-02-22	1350	600	3001
66564	MADDEN	SALESMAN	66928	1991-09-28	1350	1500	3001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001
68736	ADNRES	CLERK	67858	1997-05-23	1200	NULL	2001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001
69324	MARKER	CLERK	67832	1992-01-23	1400	NULL	1001

--SQL query to list the employees in ascending order of designations of those joined after the second half of 1991

```
SELECT * FROM employees WHERE hire_date>('1991-6-30') AND datepart(year,hire_date)=1991
ORDER BY job_name ASC;
```

OUTPUT:

69062	FRANK	ANALYST	65646	1991-12-03	3100	NULL	2001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001
68319	KAYLING	PRESIDENT	NULL	1991-11-18	6000	NULL	1001
66564	MADDEN	SALESMAN	66928	1991-09-28	1350	1500	3001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001

--SQL query to find top 3 highest salary.

```
select top 3 emp_id,emp_name,job_name,salary from Employees order by salary desc;
-- or
select * from(select emp_id,emp_name,job_name,salary,DENSE_RANK() over(order by salary desc)rnk
from Employees)as emp where rnk<3;
```

OUTPUT:

68319	KAYLING	PRESIDENT	6000
67858	SCARLET	ANALYST	3100
69062	FRANK	ANALYST	3100

68319	KAYLING	PRESIDENT	6000	1
67858	SCARLET	ANALYST	3100	2
69062	FRANK	ANALYST	3100	2

--SQL query to find 5th highest salary.

```
select * from(select emp_id, emp_name, salary, DENSE_RANK() over(order by salary desc)rnk from
Employees)as emp where rnk=5;
```

OUTPUT:

67832	CLARE	2550	5

--SQL query to find the average salary and average total remuneration (salary and commission) for each type of job.

```
select job_name, avg(salary) as avg_sal, avg(salary+commission) remuneration from employees
 group by job_name;
```

OUTPUT:

ANALYST	3100	NULL
CLERK	1137	NULL
MANAGER	2752	NULL
PRESIDENT	6000	NULL
SALESMAN	1500	2125

--SQL query to identify departments with fewer than four employees. Return department ID, number of employees.

```
select dep_id, count(*) as emp_count from Employees group by dep_id having count(*)<4;
```

OUTPUT:

1001	3

--find which departments have at least two employees. Return department name, number of employees

```
select dep_name, count(*) as emp_count from Employees e,department d
where e.dep_id=d.dep_id  group by dep_name having count(*)>= 2;
```

OUTPUT:

Audit	5
Finance	3
Marketing	6

--SQL query to check whether the employees ID are unique or not.

```
select emp_id, count(*) as count from Practice.dbo.Employees group by emp_id;
```

OUTPUT:

63679	1
64989	1
65271	1
65646	1
66564	1
66928	1
67832	1
67858	1
68319	1
68454	1
68736	1
69000	1
69062	1
69324	1

--write a SQL query to find number of employees and average salary. Group the result set on department id and job name.

```
select count(*) as count,AVG(salary) as 'avg' ,job_name , dep_id  FROM Employees
group by dep_id , job_name;
```

OUTPUT:

2	3100	ANALYST	2001
1	1400	CLERK	1001
2	1050	CLERK	2001
1	1050	CLERK	3001
1	2550	MANAGER	1001

1	2957	MANAGER	2001
1	2750	MANAGER	3001
1	6000	PRESIDENT	1001
4	1500	SALESMAN	3001

--write a SQL query to identify those employees whose names begin with 'A' and are six characters long. Return employee name

```
select emp_name FROM Employees where emp_name like 'A%' and LEN(emp_name)=6;
```

OUTPUT:

ADELYN
ADNRES

--SQL query to find those employees who joined in the month of where the second letter is 'a'.

```
select emp_name , FORMAT(hire_date,'MMMM') 'month' FROM Employees
where FORMAT(hire_date,'MMMM') like '_A%';
```

OUTPUT:

BLAZE	May
ADNRES	May
MARKER	January

--query to find those employees who joined in 90's.

```
SELECT  * FROM Practice.dbo.Employees where FORMAT(hire_date,'yy') like'9%';
```

OUTPUT:

68319	KAYLING	PRESIDENT	NULL	1991-11-18	6000	NULL	1001
66928	BLAZE	MANAGER	68319	1991-05-01	2750	NULL	3001
67832	CLARE	MANAGER	68319	1991-06-09	2550	NULL	1001
65646	JONAS	MANAGER	68319	1991-04-02	2957	NULL	2001
67858	SCARLET	ANALYST	65646	1997-04-19	3100	NULL	2001
69062	FRANK	ANALYST	65646	1991-12-03	3100	NULL	2001
63679	SANDRINE	CLERK	69062	1990-12-18	900	NULL	2001
64989	ADELYN	SALESMAN	66928	1991-02-20	1700	400	3001
65271	WADE	SALESMAN	66928	1991-02-22	1350	600	3001
66564	MADDEN	SALESMAN	66928	1991-09-28	1350	1500	3001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600	0	3001
68736	ADNRES	CLERK	67858	1997-05-23	1200	NULL	2001
69000	JULIUS	CLERK	66928	1991-12-03	1050	NULL	3001
69324	MARKER	CLERK	67832	1992-01-23	1400	NULL	1001