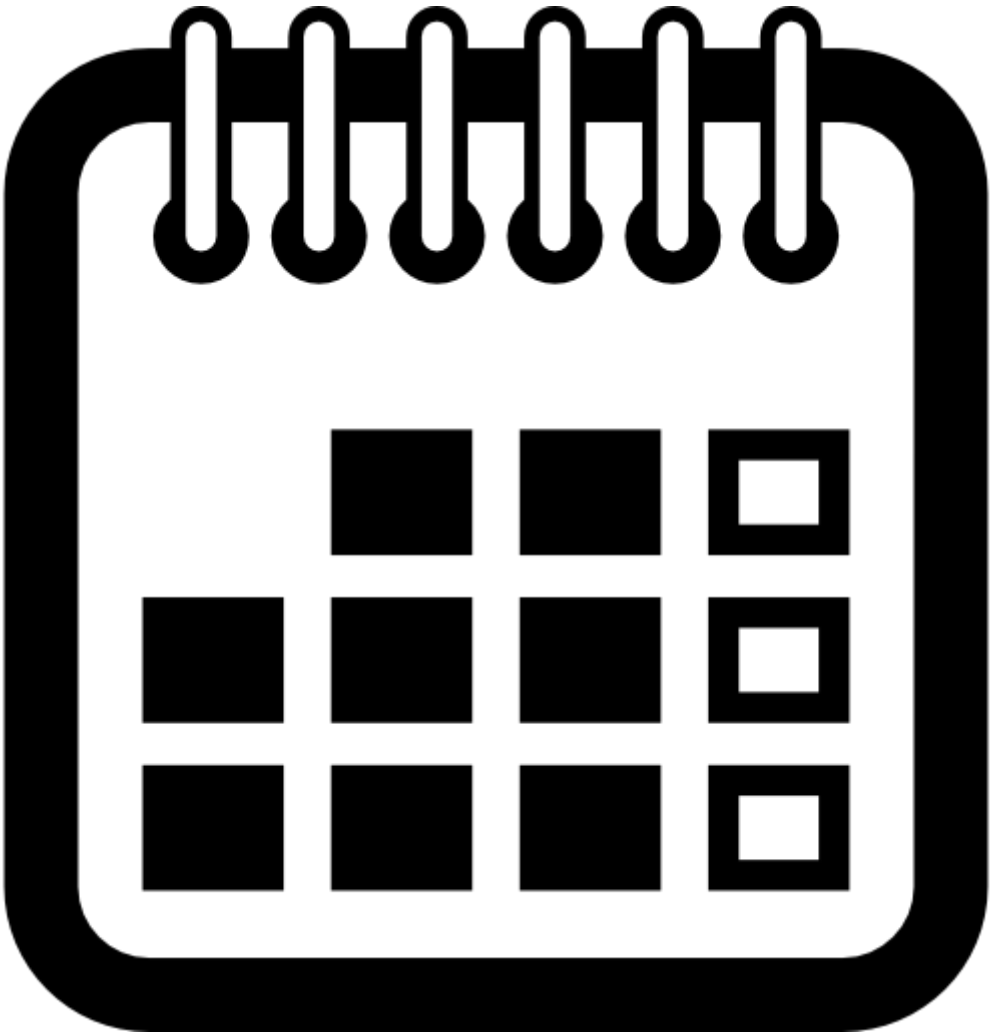
P8: DATES



1. Select the last day of the present month.

curdate provides us with the current date and **last_day** will select the last day

```
select day(last_day(curdate())) as last_day;
```

	last_day
1	31

2. Select the last day of the month three months before today.

Same as the previous exercise but we will add **interval 3 month** to provide us with the requested information

```
select day(last_day(curdate() - interval 3 month)) as last_day;
```

	last_day
1	31

3. Show the date of exercise 2 with format "Name_of_month day, year with 2 digits".

With **'% M% d,% y'** we say the format

```
select date_format(last_day(curdate() - interval 3 month),'%M
%d,%y') as last_day;
```

	last_day
1	December 31,20

4. Write a query to convert 680001 days in a date.

```
select date(680001) as date;
```

	date
1	2067-12-01

6. Use CONVERT_TZ to convert the current date/time (UTC) to Panama.

```
select convert_tz(now(),'+1:00','-5:00') as panama;
```

	panama
1	2021-03-21 12:55:05

7. Use CONVERT_TZ to convert the current date/time (UTC) to Sydney.

```
select convert_tz(now(),'+1:00','+11:00') as sydney;
```

	sydney
1	2021-03-22 04:56:13

8. Subtract 3 hours 25 minutes to the current date/time using DATE_SUB.

205 minutes is 3 hours and 25 minutes.

```
select date_sub(now(), interval 205 minute );
```

	`date_sub(now(), interval 205 minute )`
1	2021-03-21 15:34:21

9. Which day of the year (1, 2, 3, etc., 365) is today

```
select dayofyear(now()) as TodayNumber;
```

	TodayNumber
1	80

10. Can you convert a String to a Date and/or Time?

we use **str_to_date** to transform a string into a date

```
select str_to_date('Sunday, March 21, 2021', '%W, %M %e, %Y') as
Date;
```

12. Difference in days between the employee who started in the first place and the employee who started in the last place.

datediff returns the result of value1 and value2

```
select datediff(max(start_date),min(start_date)) as MyDay from
EMPLOYEES;
```

	MyDay
1	5379

13. Select the dates inside the field EMPLOYEES.start_date that are Tuesday.

```
select surname, name, start_date from EMPLOYEES
where 'Tuesday'=date_format(start_date,'%W');
```

	surname	name	start_date
1	GONZÁLEZ	RAUL	2011-02-22
2	GIL	JAVIER	2010-11-09

14. Select the data of the older employee in the enterprise.

```
select * from EMPLOYEES
where start_date in (select min(start_date) from EMPLOYEES);
```

	num	surname	name	manager	start_date	salary	commission	dept_num	occu_code
1	1000	PITT	BRAD	<null>	2004-01-01	1040	<null>	20	<null>

15. Select the employees' name, surname and years working in our enterprise (order by those years descendent).

#1

```
select name,surname, datediff(curdate(), start_date)/365 as Years
from EMPLOYEES
order by Years desc;
```

#2

```
select name,surname, date_format(from_days(datediff(curdate(),
start_date)), '%y years  %m months %d days') as Years from EMPLOYEES
order by Years desc ;
```

Option 1:

	name	surname	Years
1	BRAD	PITT	17.2301
2	MARTA	ARROYO	11.0877
3	JOSÉ	CEREZO	10.7890
4	JAVIER	GIL	10.3699
5	SERGIO	SÁNCHEZ	10.2658
6	RAUL	GONZÁLEZ	10.0822
7	ANTONIA	MUÑOZ	5.1616
8	ANA	FERNÁNDEZ	4.2986
9	ANTONIO	BANDERAS	4.1973
10	JUAN JOSÉ	JIMÉNEZ	3.9699
11	BARTOLOME	GUASP	3.8904
12	MONICA	MARTÍN	3.4767
13	XAVIER	JIMENO	3.2986
14	FERNANDA	RUIZ	2.7808
15	LUIS	TOVAR	2.5342
16	FERNANDO	ALONSO	2.4932

Option 2:

	name	surname	Years
1	BRAD	PITT	17 years 03 months 21 days
2	MARTA	ARROYO	11 years 01 months 30 days
3	JOSÉ	CEREZO	10 years 10 months 13 days
4	JAVIER	GIL	10 years 05 months 13 days
5	SERGIO	SÁNCHEZ	10 years 04 months 05 days
6	RAUL	GONZÁLEZ	10 years 01 months 28 days
7	ANTONIA	MUÑOZ	05 years 02 months 27 days
8	ANA	FERNÁNDEZ	04 years 04 months 18 days
9	ANTONIO	BANDERAS	04 years 03 months 12 days
10	JUAN JOSÉ	JIMÉNEZ	03 years 12 months 20 days
11	BARTOLOME	GUASP	03 years 11 months 21 days
12	MONICA	MARTÍN	03 years 06 months 23 days
13	XAVIER	JIMENO	03 years 04 months 19 days
14	FERNANDA	RUIZ	02 years 10 months 12 days
15	LUIS	TOVAR	02 years 07 months 14 days
16	FERNANDO	ALONSO	02 years 06 months 29 days

16. Write a query to show EMPLOYEES.start_date in three columns: year, month and day.

```
select year(start_date) as Year, month(start_date) as Month,
day(start_date) as Day from EMPLOYEES;
```

	Year	Month	Day
1	2004	1	1
2	2010	12	17
3	2010	2	20
4	2011	2	22
5	2017	4	2
6	2017	9	29
7	2017	5	1
8	2010	6	9
9	2010	11	9
10	2018	9	8
11	2018	9	23
12	2017	12	3
13	2016	12	3
14	2016	1	23
15	2017	1	9
16	2018	6	10

17. Write a query to show the employees that joined the enterprise in June.

```
select surname, name, start_date from EMPLOYEES
where 'June'=date_format(start_date,'%M');
```

	surname	name	start_date
1	CEREZO	JOSÉ	2010-06-09
2	RUIZ	FERNANDA	2018-06-10

18. Write the date of exercise 17 in the next format:

We give the format with **'% W% D% M% Y% H:% i:% S'**

```
select surname, name, date_format(start_date, '%W %D %M %Y
%H:%i:%S') as start_date from EMPLOYEES
where 'June'=date_format(start_date,'%M');
```

	surname	name	start_date
1	CEREZO	JOSÉ	Wednesday 9th June 2010 00:00:00
2	RUIZ	FERNANDA	Sunday 10th June 2018 00:00:00

19. Write a query to get the year and number of employees who began working that year.

```
select year(start_date) as Year, count(year(start_date)) as Num
from EMPLOYEES
group by Year;
```

	Year	Num
1	2004	1
2	2010	4
3	2011	1
4	2016	2
5	2017	5
6	2018	3

20. Write a query to get the maximum number of employees who started working in our enterprise in a year.

```
select max(a.Num) as max_num
from (
select year(start_date) as Year, count(year(start_date)) as Num
from EMPLOYEES
group by Year) as a;
```

	max_num
1	5

21. Write a query to get the year in which more employees joined our enterprise.

```
select a.Year from (
select year(start_date) as Year, count(year(start_date)) as Num
from EMPLOYEES
group by Year order by Num desc limit 1) as a;
```

	Year
1	2017

22. Show employees who are manager of other employees and the time in years that they are working in the enterprise.

```
select num, name, surname, datediff(curdate(), start_date)/365 as
Years
from EMPLOYEES where num in (select manager from EMPLOYEES);
```

	num	name	surname	Years
1	1000	BRAD	PITT	17.2301
2	7698	BARTOLOME	GUASP	3.8904
3	7782	JOSÉ	CEREZO	10.7890
4	7788	JAVIER	GIL	10.3699
5	8000	ANTONIO	BANDERAS	4.1973
6	8001	FERNANDA	RUIZ	2.7808

23. Show employees who are manager of other employees working in the enterprise for more than 5 years.

```
select num, name, surname from (
select num, name, surname, datediff(curdate(), start_date)/365 as
Years
from EMPLOYEES where num in (select manager from EMPLOYEES)) as W
where W.Years>5;
```

	num	name	surname
1	1000	BRAD	PITT
2	7782	JOSÉ	CEREZO
3	7788	JAVIER	GIL

24. Can you use BETWEEN keyword with dates.

```
select *
from EMPLOYEES
where start_date between '1999-01-01' and '2013-01-01' ;
```

	num	surname	name	manager	start_date	salary	commission	dept_num	occu_code
1	1000	PITT	BRAD	<null>	2004-01-01	1040	<null>	20	<null>
2	7369	SÁNCHEZ	SERGIO	8001	2010-12-17	1040	<null>	20	EMP
3	7499	ARROYO	MARTA	7698	2010-02-20	1500	390	30	SAL
4	7521	GONZÁLEZ	RAUL	7782	2011-02-22	1625	650	30	SAL
5	7782	CEREZO	JOSÉ	1000	2010-06-09	2885	<null>	10	MAN
6	7788	GIL	JAVIER	8000	2010-11-09	3000	<null>	20	<null>