

A modern conference room with large windows and a long table. The room is empty, with several office chairs arranged around the table. The view outside the windows shows a cityscape. The image has a blue tint and a stylized, torn-paper-like border.

## Other Useful Data Types

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### DATE




used to represent a date in the format YYYY-MM-DD

1<sup>st</sup> of January 1000 - 31<sup>st</sup> of December 9999

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e.g. 25<sup>th</sup> of July 2018: '2018-07-25'

## Other Useful Data Types



A diagram illustrating the relationship between DATE and DATETIME data types. It shows a light gray rounded rectangle containing the word "DATE" in orange, followed by a plus sign, a black clock icon, an equals sign, and another light gray rounded rectangle containing the word "DATETIME" in orange.

$$\text{DATE} + \text{Clock Icon} = \text{DATETIME}$$

next to the date, we could save the time:

YYYY-MM-DD HH:MM:SS[.fraction]

0 - 23:59:59.999999

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e.g. 25<sup>th</sup> of July 2018 9:30 a.m.: '2018-07-25 9:30:00'

# Other Useful Data Types

## DATETIME

represents the date shown on the calendar and the time shown on the clock

vs.

## TIMESTAMP

used for *a well-defined, exact point in time*

# Other Useful Data Types

## TIMESTAMP

used for *a well-defined, exact point in time*

1<sup>st</sup> of January 1970 UTC – 19<sup>th</sup> of January 2038, 03:14:07 UTC

- records the moment in time as the number of seconds passed after the 1<sup>st</sup> of January 1970 00:00:00 UTC

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e.g. 25<sup>th</sup> of July 2018:

1,535,155,200

# Other Useful Data Types

## TIMESTAMP

- representing a moment in time as a number allows you to easily obtain the difference between two TIMESTAMP values

e.g. end time:

'2018-07-25 10:30:00' UTC

TIMESTAMP

-

start time:

'2018-07-25 09:00:00' UTC

TIMESTAMP

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5,400

TIMESTAMP

# Other Useful Data Types

## TIMESTAMP

is appropriate if you need to handle time zones

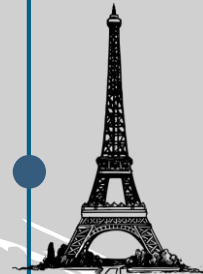
London

= 1:00 a.m



Paris

= 2:00 a.m



'1970-01-01 01:00:00' UTC

# Other Useful Data Types

*string, date, and time data types*

**CHAR**

**VARCHAR**

**DATE**

**DATETIME**

**TIMESTAMP**

data must be written  
within quotes

*numeric data types*

**INTEGER**

**DECIMAL**

**NUMERIC**

**FLOAT**

**DOUBLE**

only numeric values are  
written without quotes

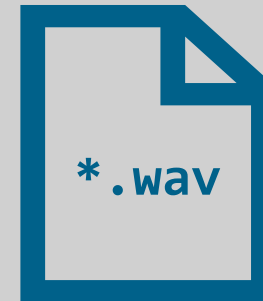


# Other Useful Data Types

## BLOB

### Binary Large Object

- refers to a file of binary data – data with 1s and 0s
- involves saving *files* in a record



## Other Useful Data Types

Customers					
customer_id	first_name	last_name	email_address	number_of_complaints	photo
1	John	McKinley	<a href="mailto:john.mackinley@365careers.com">john.mackinley@365careers.com</a>	0	 *.jpg
2	Elizabeth	McFarlane	<a href="mailto:e.mcfarlane@365careers.com">e.mcfarlane@365careers.com</a>	2	
3	Kevin	Lawrence	<a href="mailto:kevin.lawrence@365careers.com">kevin.lawrence@365careers.com</a>	1	
4	Catherine	Winnfield	<a href="mailto:c.winnfield@365careers.com">c.winnfield@365careers.com</a>	0	

# Other Useful Data Types

*string, date, and time data types*

**CHAR**

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**DATE**

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**TIMESTAMP**

*numeric data types*

**INTEGER**

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