DATABASES FOR REAL

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THE E-R MODEL WAS A GRAPHICAL REPRESENTATION OF IMAGINING DATA, IT'S LOGICAL UNITS AND THE RELATIONSHIPS BETWEEN THEM

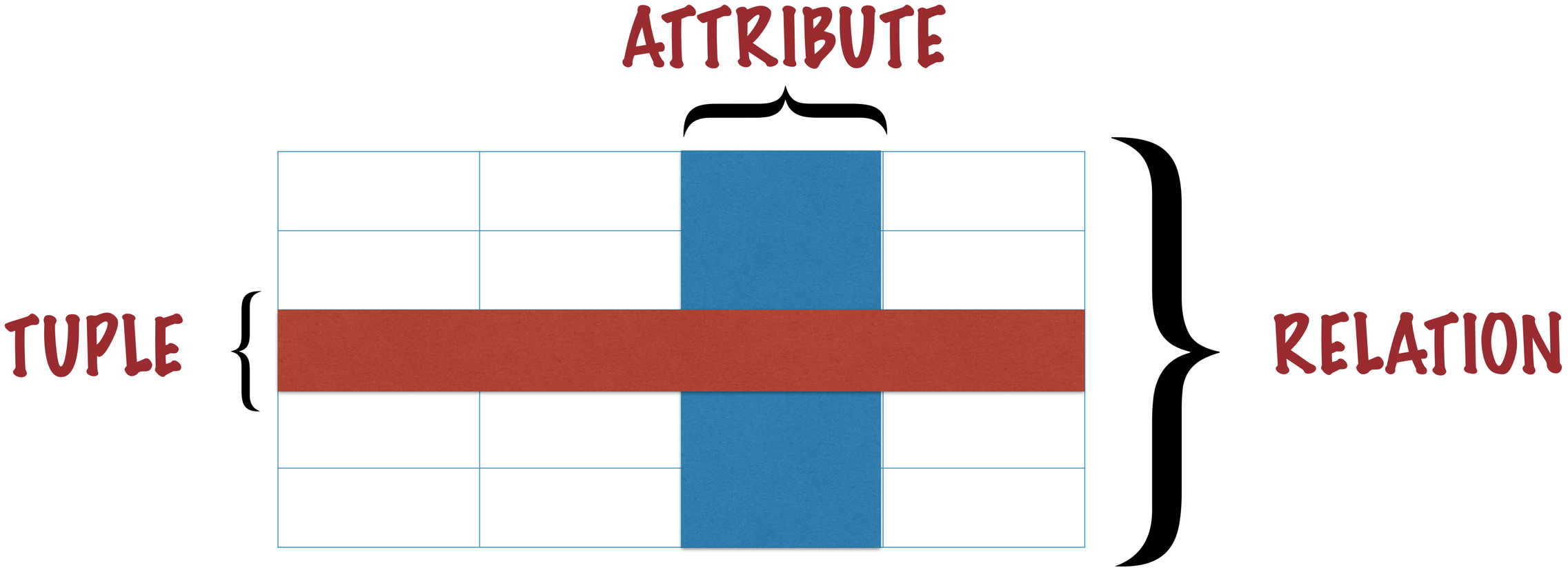
ULTIMATELY THE INFORMATION REPRESENTED IN AN ABSTRACT FORM USING THE E-R MODEL HAS TO LIVE SOMEWHERE IN A REAL DATABASE

THE MOST COMMON TYPE OF DATABASE USED IS THE RELATIONAL DATABASE

WHAT IS A RELATIONAL DATABASE?

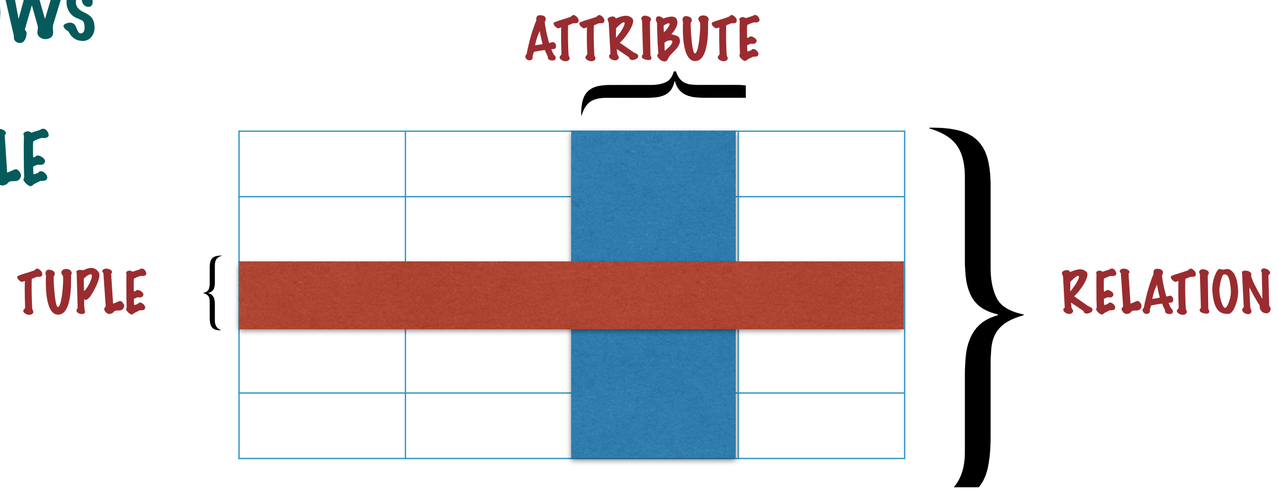
RELATIONAL DATABASES USE TABLES TO STORE INFORMATION

THE TERM RELATION COMES FROM MATHEMATICAL RELATIONS



WHY TABLES?

FIELDS ARE COLUMNS OF A TABLE AND ROWS ARE INDIVIDUAL RECORDS IN A TABLE



TABLES ALLOW MODULARIZATION OF INFORMATION WHERE LOGICAL COMPONENTS ARE KEPT IN ONE TABLE

THE UNIFORMITY OF STORAGE ALLOWS COMPARING INFORMATION VERY EASILY

TABLES ARE CONNECTED TO OTHER TABLES IN THE DATABASE

CREATING NEW TABLES FROM EXISTING TABLES IS ALSO STRAIGHTFORWARD

SO HOW DOES REAL WORLD INFORMATION MAP TO TABLES

ENTITIES

CUSTOMERS

NAME

PHONE

ADDRESS

ENTITIES

CUSTOMERS

NAME	ADDRESS	PHONE
JOHN	PALO ALTO	650 804 2134
ELLEN	SAN JOSE	408 456 1231

TYPICALLY YOU WOULD HAVE A CUSTOMER ID TO UNIQUELY IDENTIFY THE CUSTOMER

ENTITIES

CUSTOMERS

ID	NAME	ADDRESS	PHONE
1265	JOHN	PALO ALTO	650 804 2134
7682	ELLEN	SAN JOSE	408 456 1231

RELATIONSHIPS

STUDENT

ID

NAME

EMAIL

ENROLLS IN

SCHOOL

NAME

ADDRESS

RELATIONSHIPS

STUDENT

ID	NAME	EMAIL

SCHOOL

NAME	ADDRESS

ENROLLS IN

ID	NAME

HOW DO WE CREATE TABLES?

HOW DO WE PUT INFORMATION INTO TABLES?

HOW DO WE GET INFORMATION FROM TABLES?

SQL

STRUCTURED QUERY LANGUAGE

STRUCTURED QUERY LANGUAGE

SQL

THIS IS THE COMPUTER LANGUAGE TO WORK WITH RELATIONAL DATABASES

IT'S INCREDIBLY POWERFUL!

ALLOWS YOU TO CREATE, UPDATE AND DELETE TABLES

ALLOWS YOU TO INSERT DATA INTO TABLES AND DELETE DATA FROM TABLES

HAS RICH CONSTRUCTS FOR QUERYING INFORMATION TO UNDERSTAND THE DATA

STRUCTURED QUERY LANGUAGE

SQL

IT'S INCREDIBLY POWERFUL!

LEARNING SQL GIVES YOU THE POWER TO MAKE SENSE OF THE DATA STORED

QUERY DATA, AGGREGATE IT, GROUP IT, FILTER IT, TRIM IT

ADD CONSTRAINTS AND VALIDITY CHECKS TO YOUR DATA SO IT ALWAYS MAKES SENSE

COMBINE TABLES IN A VARIETY OF WAYS TO SLICE AND DICE INFORMATION