

WHAT INFORMATION DOES A
DATABASE STORE?

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ANYTHING...

OUR LIFE IS AUTOMATED AND INFORMATION ABOUT PRACTICALLY EVERYTHING WE SEE OR USE IN LIFE LIVES IN SOME DATABASE

CONSIDER A SCHOOL

STUDENTS

TESTS

TEACHERS

SPORTS

CLASSES

STAFF



WHAT INFORMATION DOES A DATABASE STORE?

STUDENTS TESTS
TEACHERS SPORTS
CLASSES STAFF

CONSIDER A SCHOOL



CUSTOMERS
BANK ACCOUNTS BRANCHES
TRANSACTIONS

CONSIDER A BANK



WHAT INFORMATION DOES A DATABASE STORE?

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CONSIDER A BANK

CUSTOMERS
BANK ACCOUNTS BRANCHES
TRANSACTIONS



CONSIDER UBER

DRIVERS CUSTOMERS RIDES



ENTITIES

EACH OF THESE ARE OBJECTS WITH SPECIFIC CHARACTERISTICS WHICH DEFINE THEM



STUDENTS

TESTS

TEACHERS

SPORTS

STAFF

CLASSES

CUSTOMERS

BRANCHES

BANK ACCOUNTS

TRANSACTIONS

DRIVERS

CUSTOMERS

RIDES

ENTITIES

CUSTOMERS BANK ACCOUNTS
CLASSES BRANCHES DRIVERS
STAFF RIDES
TEACHERS
STUDENTS
SPORTS TRANSACTIONS
TESTS CUSTOMERS

EACH OF THESE ARE OBJECTS WITH SPECIFIC CHARACTERISTICS WHICH DEFINE THEM

An entity is a real-world object or a “thing”, either animate or inanimate, that can be easily identifiable and is distinguishable

An entity set is a collection of similar types of entities. An entity set contains entities with the same properties

SET OF CUSTOMERS AND DRIVERS IS NOT AN ENTITY SET

SET OF TEACHERS

SET OF BANK ACCOUNTS

ENTITIES

EACH OF THESE ARE OBJECTS WITH SPECIFIC CHARACTERISTICS WHICH DEFINE THEM

CUSTOMERS



NAME

PHONE NUMBER

ADDRESS

FAVORITE COLOR

FULL HEAD OF HAIR

ATTRIBUTES



CUSTOMERS ATTRIBUTES

NAME

ADDRESS

FAVORITE COLOR

PHONE NUMBER

EACH OF THESE ARE OBJECTS WITH SPECIFIC CHARACTERISTICS WHICH DEFINE THEM

Attributes are properties of entities which hold specific values

Every attribute has a range of values or "domain" which can be assigned to it

SINGLE VALUED

COMPOSITE

SIMPLE

MULTI VALUED

DERIVED

SIMPLE

These attributes are atomic values which cannot be divided further

PERSON'S PHONE NUMBER

PERSON'S EMAIL ADDRESS

BANK BRANCH CODE

SCHOOL CLASS CODE

SINGLE VALUED

These attributes can contain just one value

PERSON'S SOCIAL SECURITY NUMBER

BANK BRANCH CODE

SCHOOL CLASS CODE

MULTI VALUED

These attributes can contain more than one value for the same attribute

PERSON'S PHONE NUMBER

PERSON'S EMAIL ADDRESS

COMPOSITE

These attributes are made up of more
than one simple attribute

PERSON'S NAME

FIRST NAME

MIDDLE NAME

LAST NAME

PERSON'S ADDRESS

BLOCK NUMBER

STREET NAME

CITY

PIN CODE

DERIVED

These attributes do not explicitly exist as a part of the data but can be derived from other related data available

PERSON'S AGE

CAN BE DERIVED FROM HIS DATE OF BIRTH