



Relations

Relational Databases Basics

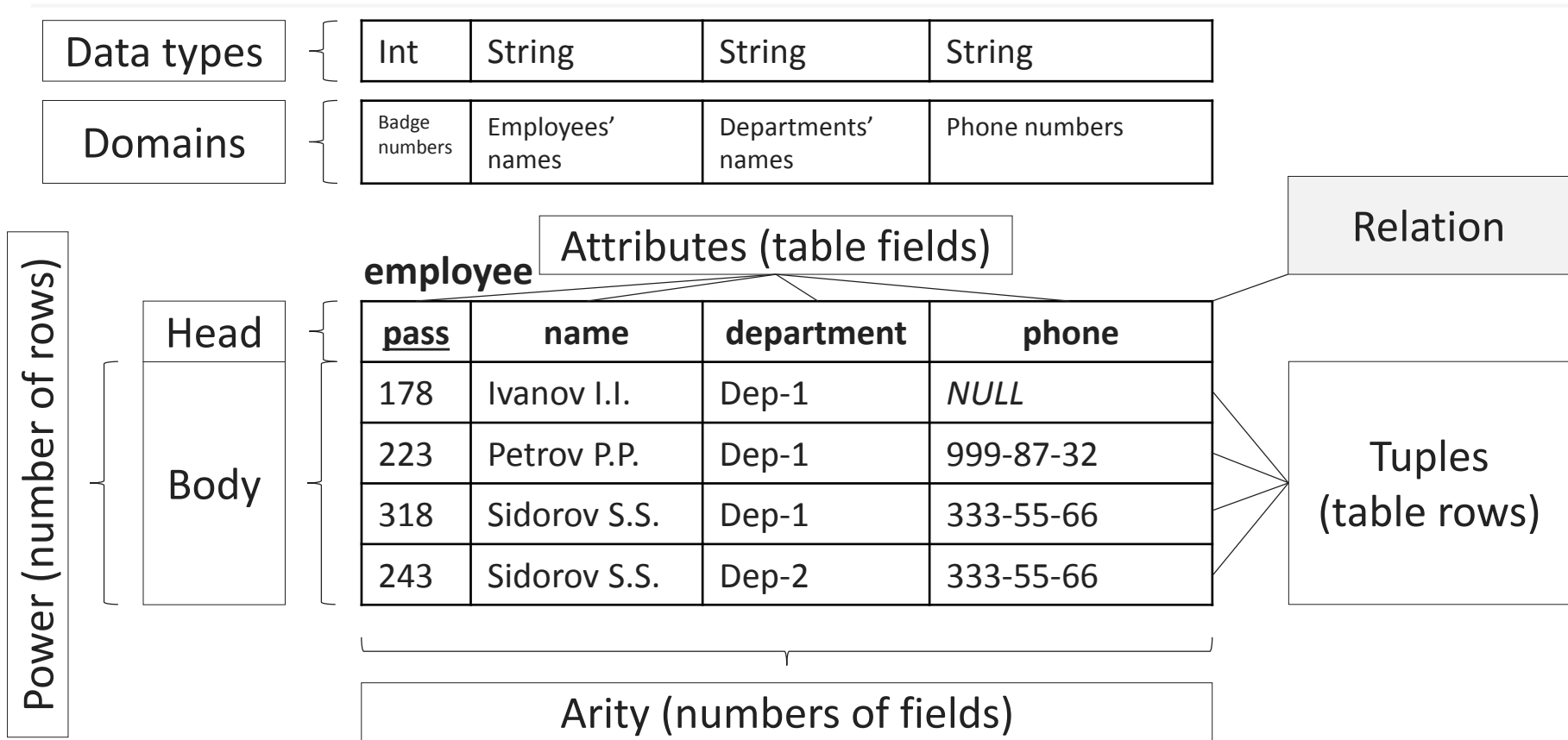


TRAINING
CENTER



Relation – set of entity occurrences that have the same attributes, together with these attributes.

Relation



Data Type – defined set of data objects of a specified data structure and a set of permissible operations, such that these data objects act as operands in the execution of any one of these operations.

Attribute Domain – set of all possible attribute values.

Attribute – named property of an entity.

Tuple – part of a relation that uniquely describes an entity occurrence and its attributes.

Demystifying the terminology

Relation schema	A description of relation attributes (names, data types, and other properties).
Relation variable (relvar)	A real database table (that was created using DBMS capabilities).
Relation (relvar value)	A data that is stored inside a table (which was created using DBMS capabilities).
Derived relvar (view)	Literally “a named SQL-query”, i.e. another way of accessing a data stored in a relation.

Demystifying the terminology

Point of view	Matching terms		
	Group 1	Group 2	Group 3
Subject matter	Entity	Instance	Property
Relational theory	Relation	Tuple	Attribute
Database	Table	Row	Column
Physical storage	File	Record	Field

How to create a relation?

With an SQL query

```
CREATE TABLE `employee`  
(  
  `e_pass` INT NOT NULL,  
  `e_name` VARCHAR(100) NOT NULL,  
  `e_department` VARCHAR(10) NOT NULL,  
  `e_phone` VARCHAR(50) NULL,  
  CONSTRAINT `PK_employee`  
  PRIMARY KEY (`e_pass`)  
)
```

Using some special tool

```
-- Here goes live demo :)
```

Live demo in Sparx Enterprise Architect



Relations

Relational Databases Basics



TRAINING
CENTER

