

MODUL TIK UNTUK SMA

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Mari Berbagi Ilmu Dengan Yang Lain

Pesan soal-soal matematika untuk SD, SMP dan SMA ?
Soal ulangan harian, ulangan mid, ulangan semester,

soal-soal UAN dll.

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DATABASE ORACLE

KELAS XI-IPA Pertemuan-3

BASIC MAPPING: THE TRANSFORMATION PROCESS

Proses mapping yang dimaksud adalah proses penterjemahan dari bentuk ERD menjadi bentuk table.

A table is a simple structure in which data is organized and stored. In the example, the EMPLOYEES table is used to store employees' information.

| Table: EMPLOYEES | | | | | |
|------------------|--------|----------|----------|---------|------------|
| | | | columns | | |
| rows | EMP_NO | LNAME | FNAME | DEPT_NO | PAYROLL_ID |
| → | 100 | SMITH | DANA | 10 | 21215 |
| → | 310 | ADAMS | TYLER | 15 | 59877 |
| → | 210 | CHEN | LAWRENCE | 10 | 1101 |
| → | 405 | GOMEZ | CARLOS | 10 | 52 |
| → | 378 | LOUNGANI | NEIL | 22 | 90386 |
| | | | | | NICK NAME |
| | | | | | Dana |
| | | | | | Ty |
| | | | | | Larry |
| | | | | | Chaz |
| | | | | | Neil |

Primary Key Column (PK) Foreign Key Column (FK) Unique Key Column (UK)

Tables have columns and rows. Each row, in this example, describes an occurrence of an employee. Each column is used to store a specific type of value, such as employee number, last name, and first name.

The emp_no column is a primary key -- that is, every employee has a unique identification number in this table. The value in this column distinguishes each individual row.

The payroll_id is a unique key. This means that the system does not allow two rows with the same payroll_id.

The foreign key column refers to a row in another table. In this example, the dept_no refers to a row in the DEPARTMENTS table.

The conceptual model is transformed into a physical model. In the example on the right, the physical implementation will be a relational database.

Contoh:

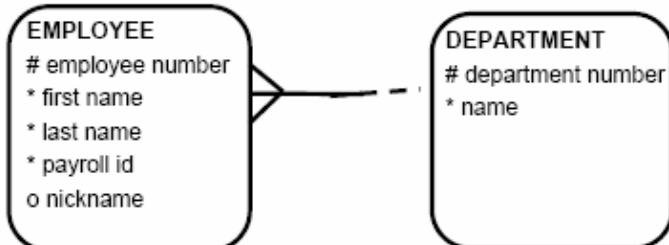


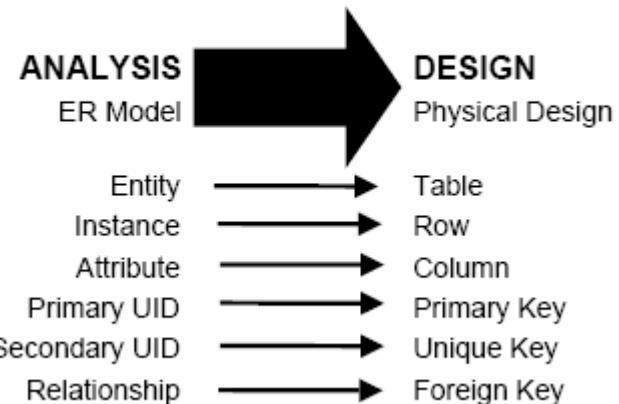
Table Diagram: EMPLOYEES

| EMPLOYEES (EPE) | | |
|-----------------|-------------|-------------|
| Key type | Optionality | Column name |
| pk | * | emp_no |
| uk | * | payroll_id |
| | * | lname |
| | * | fname |
| | * | nickname |
| fk | * | dpt_nbr |

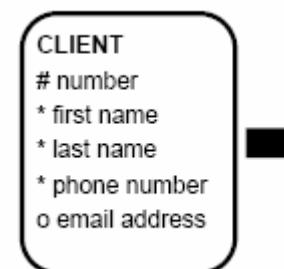
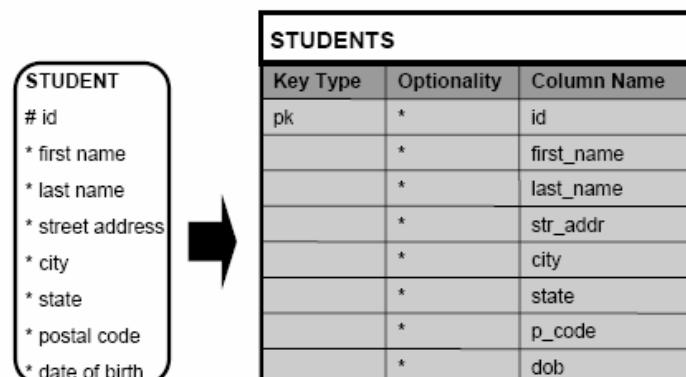
Table Diagram: DEPARTMENTS

| DEPARTMENTS (DPT) | | |
|-------------------|-------------|-------------|
| Key type | Optionality | Column name |
| pk | * | nbr |
| | * | name |

TERMINOLOGY MAPPING



Contoh mapping dari entity STUDENT menjadi table STUDENTS



Naming Restrictions with Oracle

Table and column names:

- Must start with a letter
- Can contain up to 30 alphanumeric characters
- Cannot contain spaces or special characters such as "!", but "\$," "#," and "_" are permitted.

Table names must be unique.

Column names must be unique within a table.

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LATIHAN:

1. Transform the following entities into table definitions, using suitable naming conventions.

STUDENT
id
* first name
* last name
* home address
o phone number

TEACHER
id
* first name
* last name
* social security number
* phone number
o e-mail address

BANK ACCOUNT
bank id
account id
* customer name
* customer balance
o customer home address

2. Identify what is wrong with each of the table names below.

- 1997classes
- Schedule_of_classes_spring_2003
- Financial Aid deadlines!

SQL Introduction: Querying the Database

The DESCRIBE command displays the structure of the table. The syntax is:

DESCRIBE <table name>;

The SELECT * command returns all the rows in a table. The syntax is:

SELECT * FROM <table name>;

To return a subset of the data, modify the SELECT statement. The syntax is:

SELECT <column name 1, column name 2, etc.>;

FROM <table name>
WHERE <condition>

Using the INSERT command, you can add a row of data to the table. The syntax is:

INSERT INTO <table name>
VALUES (value 1, value 2, value 3, etc);

Basic Table Modifications

To add a new column to a table, use the ALTER TABLE command. The syntax is:

ALTER TABLE <table name>
ADD (<new_column_name> <data type>)

To drop a column from a table, use the ALTER TABLE command. The syntax is:

ALTER TABLE <table name>
DROP COLUMN <column_name>;

To delete a row from a table, use the DELETE command. The syntax is:

DELETE from <table name>
WHERE <column_name> = 'some value' ;

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