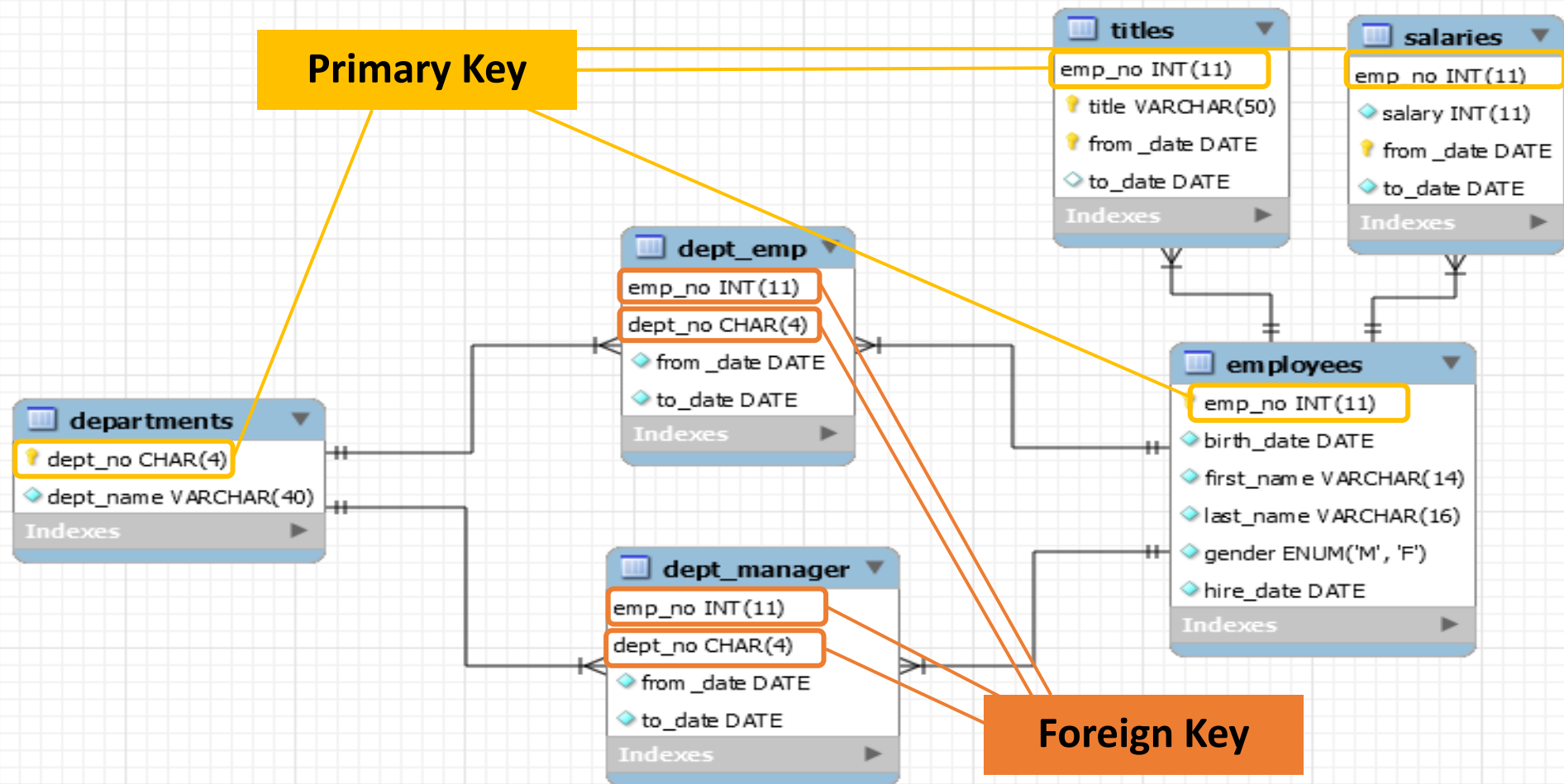# Referencing

- In any business, data must adhere to certain restrictions or rules.

- For example, relationship between actress and movie.

- At least, **one actress** to be actor in **one movie.** This is a one to **one relationship**.

- To look up the actress information, the movie entity refers to the actress entity. To look up the movie information, the actress entity refers to the movie entity. In a relational data model this is called **referencing.**

Movie		Actress

Referencing

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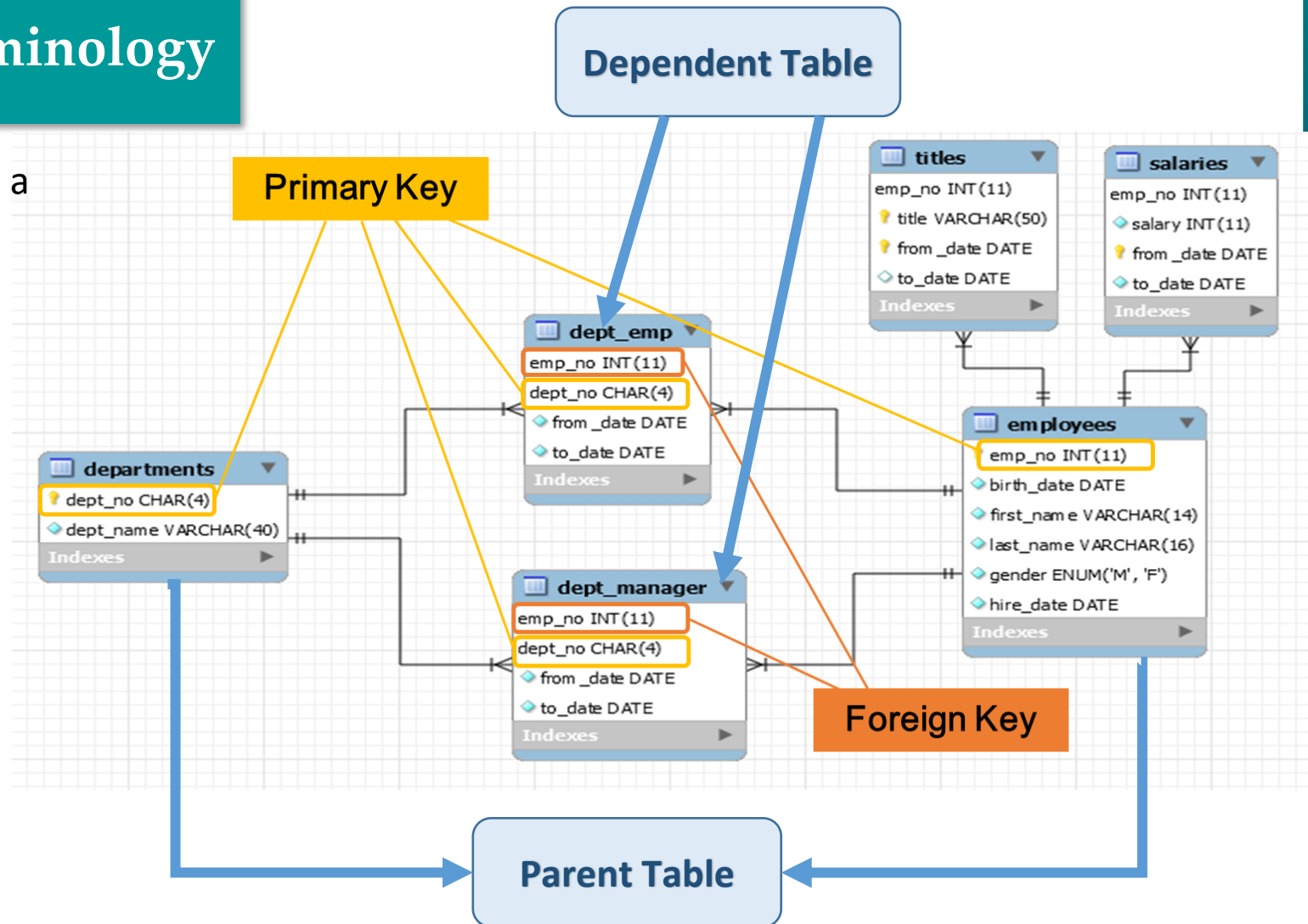Startup and Coding School
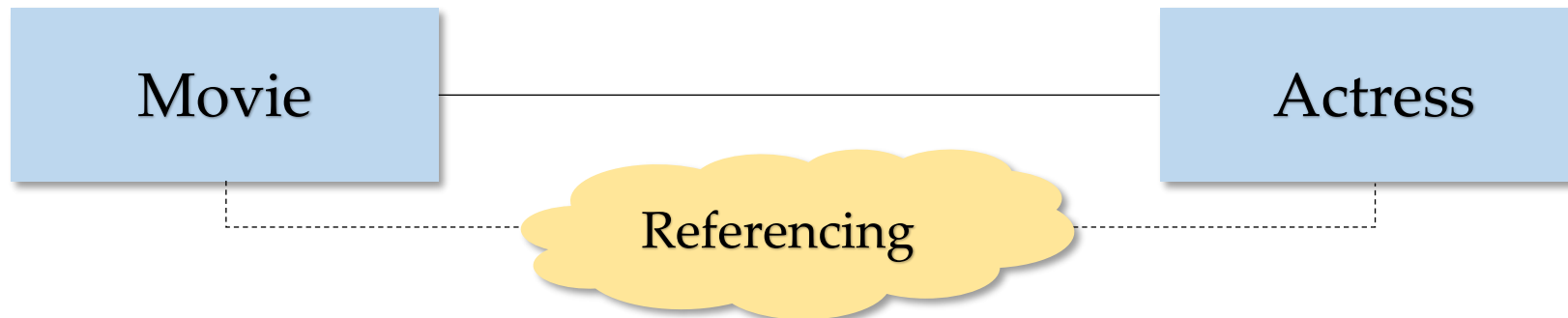
Primary Key & Foreign Key

- Every table have **unique identity**, such as salary_id, employee_id, department_id, etc.This identifies the primary key

- The primary key constraint uniquely identifies each record in a table.

- Primary keys must contain UNIQUE values, and cannot contain NULL values.

- But, sometimes **"A" table primary key** is placed in **"B" table**. This 'primary key' is called **foreign key** in "B" table.

- A foreign key is a set of columns referring to a primary key of another table. A foreign key is a key **used to link two tables together**.

- A foreign key is a field (or collection of fields) in one table that refers to the primary key in another table.

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ERD Representation of a Relational Data Model

Relational Model Terminology

- **Parent table:** a table containing a Primary Key that is related to at least one Foreign Key.

- **Dependent table:** a table containing one or more Foreign Keys

Dependent Table

Primary Key

titles
- emp_no INT(11)
- 🔑 title VARCHAR(50)
- 🔑 from _date DATE
- ◇ to_date DATE
- Indexes ▶

salaries
- emp_no INT(11)
- ◇ salary INT(11)
- 🔑 from _date DATE
- ◇ to_date DATE
- Indexes ▶

dept_emp
- emp_no INT(11)
- dept_no CHAR(4)
- ◇ from _date DATE
- ◇ to_date DATE
- Indexes ▶

departments
- 🔑 dept_no CHAR(4)
- ◇ dept_name VARCHAR(40)
- Indexes ▶

employees
- emp_no INT(11)
- ◇ birth_date DATE
- ◇ first_name VARCHAR(14)
- ◇ last_name VARCHAR(16)
- ◇ gender ENUM('M', 'F')
- ◇ hire_date DATE
- Indexes ▶

dept_manager
- emp_no INT(11)
- dept_no CHAR(4)
- ◇ from _date DATE
- ◇ to_date DATE
- Indexes ▶

Foreign Key

Parent Table

Reference

- https://www.w3schools.com/sql/sql_primarykey.ASP
- https://www.w3schools.com/sql/sql_foreignkey.asp

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