Module 2: Relational Model Constraints & Data Objects

Lesson 2: Relational Model relational Constraints Advanced

➢ Different types of Relational model constraints

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Constraints

- Helps to implements business Rules

- Types of Constraints:

    - Entity Integrity Constraint

    - Referential Integrity Constraint

    - Semantic Integrity Constraint

    - Domain Constraint

    - Null Constraint

    - Check Constraint
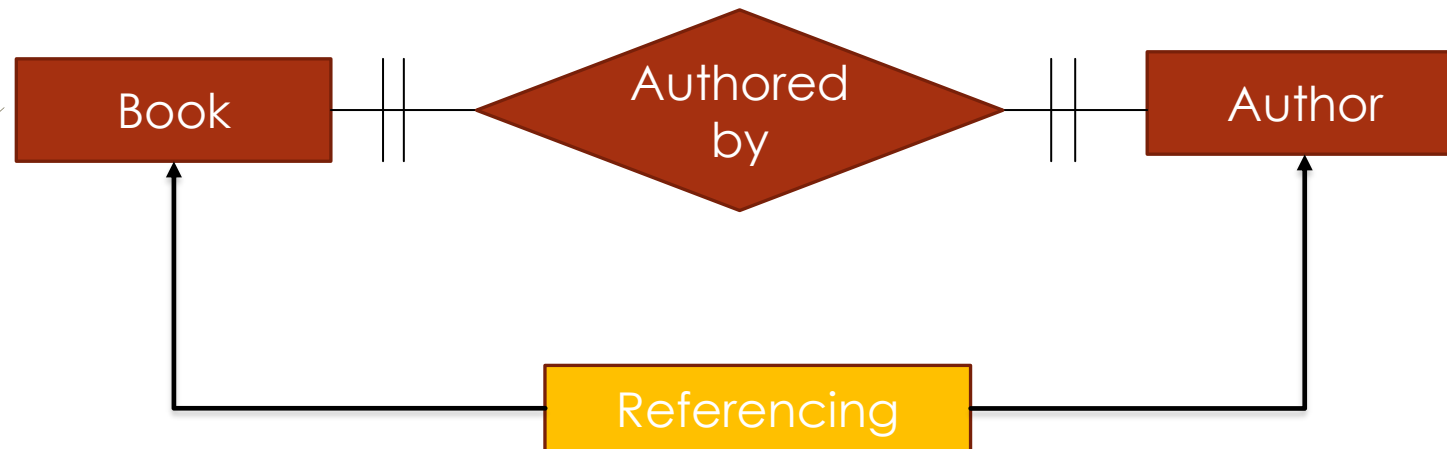
Entity Integrity Constraints

AUTHOR

AUTHOR_ID (PK)	Last_name	First_name	Email	City	Country
NULL	Ajay	Sharma	as@gmal.com	Pune	India
A2	Karan	Pal	kp@yahoo.com	Mumbai	India
A3	Vinay	Shah	vsh@gmail.com	Kolkata	India
NULL	Ram	Kale	ramk@hotmail.com	Delhi	India

Entity integrity constraints ensures that primary key can not be a null

Referential Integrity Constraints

Referential integrity constraints defines relationships between tables and ensures that they remain valid

Semantic Integrity Constraints

AUTHOR

AUTHOR_ID (PK)	Last_name	First_name	Email	City	Country
A1	Ajay	Sharma	as@gmal.com	Pune	India
A2	Karan	Pal	kp@yahoo.com	**E#*ai**	India
A3	Vinay	Shah	vsh@gmail.com	Kolkata	India
A4	Ram	Kale	ramk@hotmail.com	Delhi	India

Semantic integrity constraints refers to correctness or accuracy of data

Domain Constraints

AUTHOR

AUTHOR_ID (PK)	Last_name	First_name	Email	City	Country
A1	Ajay	Sharma	as@gmal.com	Pune	**43**
A2	Karan	Pal	kp@yahoo.com	Mumbai	**43**
A3	Vinay	Shah	vsh@gmail.com	Kolkata	**43**
A4	Ram	Kale	ramk@hotmail.com	Delhi	India

Domain constraints allows only permissible values

NULL Constraints

AUTHOR

AUTHOR_ID (PK)	Last_name	First_name	Email	City	Country
A1	Ajay	**NULL**	as@gmal.com	Pune	43
A2	Karan	Pal	kp@yahoo.com	Mumbai	43
A3	**NULL**	Shah	vsh@gmail.com	Kolkata	43
A4	Ram	Kale	ramk@hotmail.com	Delhi	India

NULL constraints ensures that no values have null values

Check Constraints

BOOK

Title	Description	ISBN	pages	Price	Edition	Year
Getting started with Database	Teaches you how to get started with database	875-4832-1-1	200	19.99	1	2022
Java fundamentals	Learn about Java	543-8943-2-4	150	11.99	2	2022

CHECK constraints enforces the domain integrity by limiting the values accepted by attribute year

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Summary

- Different Types of Integrity Constraints