RDBMS FUNDAMENTALS

ASSIGNMENT 2

Design a database schema for a library system, including tables, fields, and constraints like NOT NULL, UNIQUE, and CHECK. Include primary and foreign keys to establish relationships between tables.

CREATE TABLE Member (

   MemberID NUMBER PRIMARY KEY,

   Name VARCHAR(20) NOT NULL,

   Address VARCHAR(50),

   PhoneNumber VARCHAR(10) UNIQUE,

   Email VARCHAR(20) UNIQUE NOT NULL

);

CREATE TABLE Category (

   CategoryID NUMBER PRIMARY KEY,

   CategoryName VARCHAR(50) NOT NULL UNIQUE

);

CREATE TABLE Book (

   BookID INT PRIMARY KEY,

   Title VARCHAR(20) NOT NULL,

   Author VARCHAR(20) NOT NULL,

   Publisher VARCHAR(20),

   YearOfPublication INT CHECK (YearOfPublication > 0),

   CategoryID REFERENCES Category(CategoryId)

);

CREATE TABLE Employee (

EmployeeID INT PRIMARY KEY,

Name VARCHAR(20) NOT NULL,

Position VARCHAR(50),

Email VARCHAR(20) UNIQUE NOT NULL

);

Explanation of Constraint :

- **NOT NULL :** Ensures that a field must have a value.
- **UNIQUE :** Ensures that all values in a column are different.
- **CHECK :** Ensures that all values in a column satisfy a specific condition.
- **PRIMARY KEY :** Uniquely identifies each record in a table.
- **FOREIGN KEY :** Establishes a link between records in two tables.

ORACLE Database Express Edition

User: SYSTEM

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```
select * from category1;

create table book( bookid number primary key, title varchar(50) not null, author varchar(20) not null, publisher varchar(20) not null,YearofPublication number CHECK
(YearofPublication>0), categoryId references category1(categoryId));

insert into book values(1, 'Educated', 'Tara Westover', 'Random House', 2018, 1);

insert into book values(2, 'Beloved', 'Toni morrison', 'vintage', 1987, 2);

insert into book values(3, 'The Road', 'Cormac McCarthy', ' vintage', 2006, 1);

select * from book;

create table employee(empid number primary key, name varchar(20) not null, position varchar(20), email varchar(20) unique not null);

insert into employee values(1,'Kiran', 'Librarian', 'kiran@abc.com');

insert into employee values(2,'Rahul', 'Librarian', 'rahul@abc.com');

select * from employee;
```

Results Explain Describe Saved SQL History

EMPID	NAME	POSITION	EMAIL
1	Kiran	Librarian	kiran@abc.com
2	Rahul	Librarian	rahul@abc.com

2 rows returned in 0.00 seconds   CSV Export

Language: en-us