Spring-2024 DataBase Systems (CS-103)

Lab Task # 04

Data Definition Language (DDL) and Constraints

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Important Instruction

1. No plagiarism allowed.
2. You will required to submit only soft copy via google classroom
3. Late submission not accepted
4. Rename submission file DB24-Name-RegNo. **like: DB24-hamza-1234**
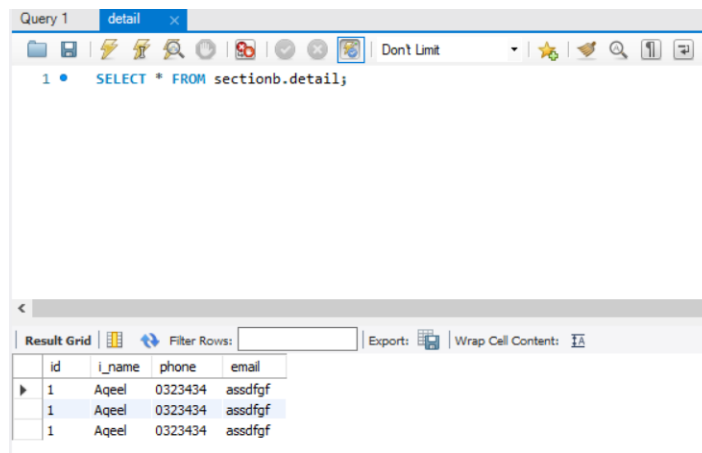5. You will required to submit single **pdf**

Submission Example

Question .

Write query to select all data from table:

Solution

SELECT * FROM db.detail;

Question 1

Tasks:1

1. Create Department table based on the following design:

Column Name	Data Type	Allow Nulls
🔑 deptno	Int	☐
dname	varchar(14)	☑
loc	varchar(13)	☑
		☐

2. Create Employee table based on the following design:

	Column Name	Data Type	Allow Nulls
🔑	empno	Int	☐
	ename	varchar(10)	☐
	job	varchar(9)	☑
	mgr	Int	☑
	hiredate	date	☑

3. Modify Employee table and add three more columns:

	Column Name	Data Type	Allow Nulls
🔑	empno	Int	☐
	ename	varchar(10)	☐
	job	varchar(9)	☑
	mgr	Int	☑
	hiredate	date	☑
	sal	Int	☑
	comm	Int	☑
	deptno	Int	☑
			☐

4. Insert at least five Record into Employee table
5. Drop Column **loc** from Department table
6. Delete all record from Employee table
7. Delete Department Table.
8. Create database Authorization
9. Add a column 'Address' in Starsin table in database Authorization. CREATE TABLE StarsIn (movieTitle char(30), movieYear int,starName char(30));

Solution
Question 2

Tasks:2

Solve the Queries given below according to the following tables given below:

Table_Orders

🔑	Order_ID
	Cusromer_ID
	Order_Details
	Order_Date
	Required_Date

Table_Customers *

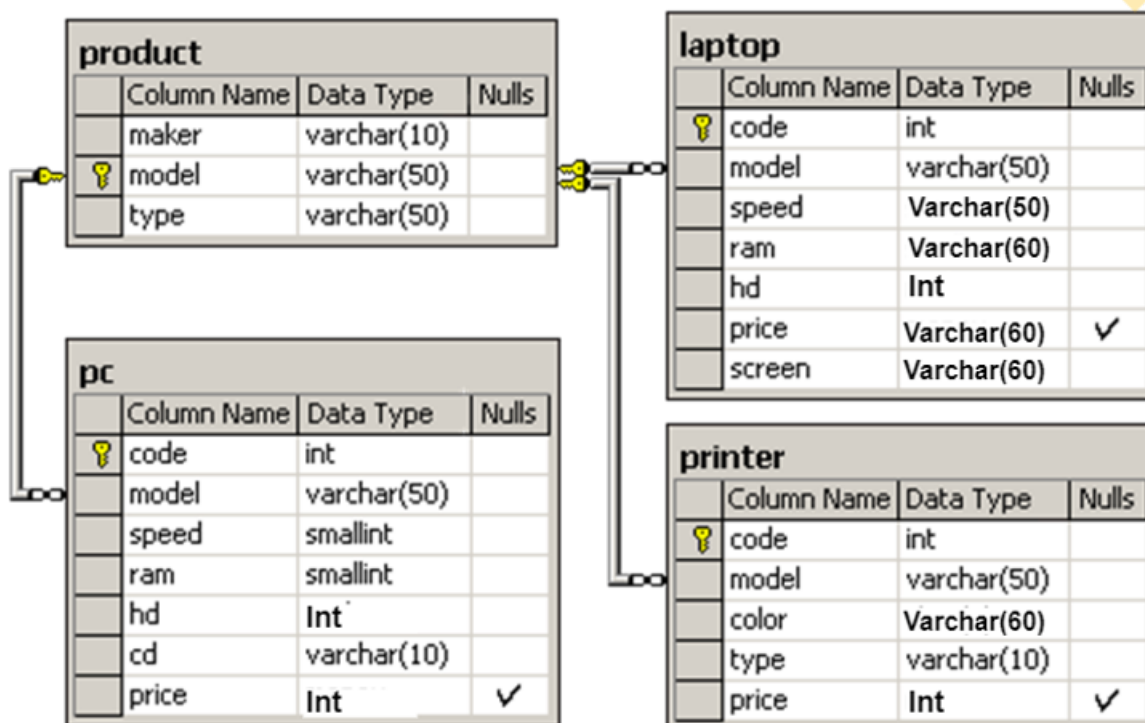|	
🔑	CustomerID
	FirstName
	LastName
	City
	Address

1. Apply Not Null Constraint on all columns.
2. Apply primary key constraint in OrderID and customer ID
3. Apply foreign key constraint on Customer ID in Order table.
4. Apply check constraint on city (allow Karachi, Islamabad, Lahore only).
5. Set the default value of City as 'Karachi'.
6. Add CNIC column in Customer table with unique constraint.

Solution

Question 3

Task:3

Create the following tables given in diagram with constraints (PK-FK relationship).

product

	Column Name	Data Type	Nulls
	maker	varchar(10)	
🔑	model	varchar(50)	
	type	varchar(50)	

laptop

	Column Name	Data Type	Nulls
🔑	code	int	
	model	varchar(50)	
	speed	Varchar(50)	
	ram	Varchar(60)	
	hd	Int	
	price	Varchar(60)	✓
	screen	Varchar(60)	

pc

	Column Name	Data Type	Nulls
🔑	code	int	
	model	varchar(50)	
	speed	smallint	
	ram	smallint	
	hd	Int	
	cd	varchar(10)	
	price	Int	✓

printer

	Column Name	Data Type	Nulls
🔑	code	int	
	model	varchar(50)	
	color	Varchar(60)	
	type	varchar(10)	
	price	Int	✓

Solution