# **Homework 5** Adhiraj Budukh

## **Problem 1**

CREATE TABLE Product

(

manufacturer CHAR(10),

model CHAR(10) PRIMARY KEY,

type CHAR(10) CHECK (TYPE = 'LAPTOP' OR TYPE ='PC'));

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Only 2 rows inserted

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Violation occurred for the next row hence Constraint satisfied.

A close-up of a computer code

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CREATE TABLE Laptop (

model CHAR(10) PRIMARY KEY,

speed INT,

ram INT,

hd INT,

rd INT,

price INT,

FOREIGN KEY (model) REFERENCES Product(model),

CHECK (price >= 500)

);

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Only one row was inserted and second was rejected because of price less than 500; Hence constraint satisfied.

A close-up of a computer code

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1. To add the constraint that a laptop with a larger model number must also have a higher price than one with a lower model number, It is not possible to implement this constraint using a DDL statement, we must use triggers.

Without triggers, we can't enforce **this** specific constraint in SQL DDL.



CREATE TABLE PC(

model CHAR(10) PRIMARY KEY,

speed INT,

ram INT,

hd INT,

screen Number(4,2),

price INT,

CONSTRAINT model\_no FOREIGN KEY (model) REFERENCES Product(model)

);

PC table created.

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Constrain violated when tried inserting values again.

For PC:-

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For Laptop:-

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1. To limit the number of manufacturers to at most 5, we can create a CHECK constraint on the Product table, But for the exact number of distinct manufacturers can't be enforced using a simple CHECK constraint alone i.e. without using Trigger.

## **Problem 3:**

1. SELECT \* FROM PCPriceList WHERE price = (SELECT MIN(price) FROM PCPriceList);

We can see minimum price 800 was selected from the data.

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To delete - DELETE FROM PCPriceList WHERE model = 'Model1'; this can delete the row with model name as Model1

1. The INSERT INTO PCPriceList(model) VALUES (2005)

statement provided is trying to insert a single value into the model column of the PCPriceList view. This operation is valid if the following conditions are met:

When NO? – If Foreign Key Constraints are declared.

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When YES- when Foreign Key are not defined/removed. And it will insert model 2005 as its primary key and set price to Null.

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1. INSERT INTO PCPriceList (price) VALUES (1700)

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As a result, the insert would show an error since it would enter a null value in the

model field and 1700 in the price field. However, model is the primary key of PC,

and it cannot contain a null value.

1. CREATE VIEW extendedPC AS Select manufacturer, Product.model, speed,

ram, hd, price, type FROM Product, PC WHERE Product.model = PC.model;

select \* from extendedpc;

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We can delete values from this Views.

For ex. By this query  
DELETE FROM extendedPC WHERE MODEL ='2009' we deleted the 6th row.