Practical 02 – Example 02

Data Manipulation (12 marks)

Informatika • Department
Informatics
Universiteit van Pretoria
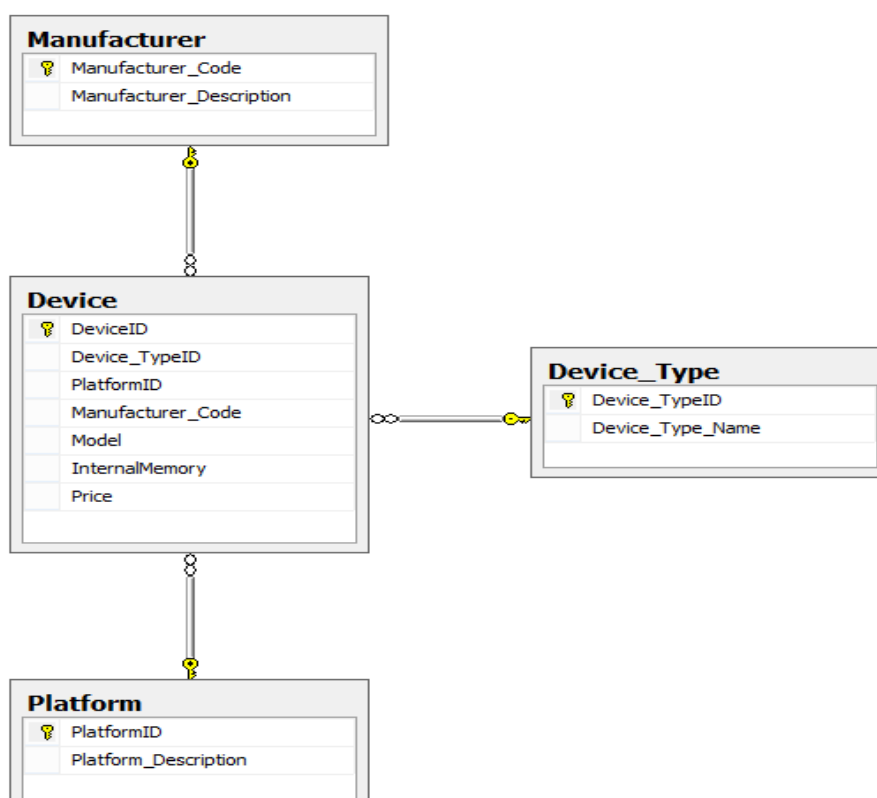University of Pretoria

Important Notes:
1. Bring the following to the practical session:
   a. The Practical Textbook and/or the lecture notes for the exercise class in which the exercise was explained

2. SQL scripts are what is marked
   a. Scripts which run and perform what they are supposed to do get full marks
   b. Scripts which do not run will be marked on their own merit

3. Please refer to Lecture Week 02 (L2) for examples of relational algebra. Also refer to Hotek Chapter 10, as well as the class notes (03SQLCh10.pdf) on ClickUP for examples on generic structures as well as specific code.

DATABASE CONTEXT:

In this example, you will create four of the tables for a store that sells tablets and smartphones called Elite Shop.

Name the database *EliteShop*.

The tables to be created are DEVICE_TYPE, MANUFACTURER, PLATFORM and DEVICE. Shown below, is part of the Elite Shop ERD that shows the four entities.

Questions:

1.	**Create the Database** CREATE THE DATABASE *EliteShop*	**(2 marks)**

2.	**Create the Tables** CREATE the accompanying TABLES as shown in the ERD taking special note of the datatypes as specified below:	**(4 marks)**

DEVICE_TYPE

FIELD NAME	DATA TYPE
Device_TypeID (PK)	int
Device_TypeID _Name	Varchar(50)

MANUFACTURER

FIELD NAME	DATA TYPE
Manufacturer_Code (PK)	Varchar(50)
Manufacturer_Description	Varchar(100)

PLATFORM

FIELD NAME	DATA TYPE
PlatformID (PK)	int
Platform_Description	Varchar(100)

DEVICE

FIELD NAME	DATA TYPE
DeviceID (PK)	int
Device_TypeID (FK)	int
PlatformID (FK)	int
Manufacturer_Code (FK)	Varchar(10)
Model	Varchar(50)
InternalMemory	Varchar(10)
Price	Money

3.	Insert data into the Tables (4 marks) Using **INSERT INTO** statements, enter the following test data:	(4 marks)

3.1.	For the **DEVICE_TYPE** table save the query as follows: INSERT_DEVICE_TYPE.sql	(1 marks)

	Device_TypeID	Device_Type_Name
1	1	Cellphone
2	2	Tablet

3.2.	For the **MANUFACTURER** save the query as follows: INSERT_MANUFACTURER.sql	(1 marks)

	Manufacturer_Code	Manufacturer_Description
1	a	Samsung
2	b	Nokia
3	c	Blackberry
4	d	Apple
5	e	Sony

3.3.	For the **PLATFORM** save the query as below: INSERT_PLATFORM.sql	(1 marks)

	PlatformID	Platform_Description
1	1	Android
2	2	Apple OS
3	3	Windows
4	4	Blackberry OS

3.4.	For the **DEVICE** save the query as follows: INSERT_DEVICE.sql	(1 marks)

You may insert other data and not necessarily the data as it appears below for **Device table

	DeviceID	Device_TypeID	PlatformID	Manufacturer_Code	Model	InternalMemory	Price
1	1	1	3	b	Lumia 8	7 GB	7500,00
2	2	1	1	a	Galaxy A3 LTE	5 GB	6499,99
3	3	2	1	e	Sony Tab	16 GB	9500,00
4	4	1	2	d	iPhone 6	7 GB	15000,00
5	5	2	4	c	Playbook	6 GB	1500,00

4.	**Delete data from the table (1 mark)** Write a DELETE query to delete one of the records you inserted into the **Device** table. Save the query as: DELETE_DEVICE.sql	**(1 marks)**

5.	**Update data in the table (1 mark)** Write an UPDATE query to update one of the records you inserted into the **Device** table. Save the query as UPDATE_DEVICE.sql	**(1 marks)**

TOTAL : 12 MARKS