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SOUTH EASTERN UNIVERSITY OF SRI LANKA

FIRST EXAMINATION IN BACHELOR OF INFORMATION AND COMMUNICATION TECHNOLOGY - 2016/2017

SEMESTER – I, SEPTEMBER/ OCTOBER 2018

CIS11051 – Practical for Database Design

Answer all Questions. **Time: 03 Hours**

- **Create a folder with your Index Number in the Desktop**
- **Save the database that you create for Question 01 in the above folder**
- **Answers for Question no. 02 should be a document consisting of screenshots of the SQL statements and their outputs. Save the document with your registration number in the same folder (Eg: CIS11051_ICTxxx.docx)**
- **Save your work in progress frequently (every 10 min) to avoid inconveniences with any possible power interruption.**

Question 01:

You are requested to create a database for a hospital that maintains records of its patients, doctors and the consultation and appointment details.

a. Create a database named "Hospital_ICTxxx" in the above folder.

(5 Marks)

b. Create following tables with the given table structure.

Table: Patients

Field	Data Type	Other Information
Patient_ID	Text	Primary Key
P_Name	Text	
Gender	Text	Gender can be "M" or "F"
Paid	Yes/No	

(10 Marks)

Table: Consultation_Room

Field	Data Type	Other Information
Room_No	Number	Primary Key
Room_Name	Text	
Attendant	Text	
App_Number	Text	
Scanning Available	Yes/No	

(10 Marks)

Table: Doctors

Field	Data Type	Other Information
Doctor_ID	Text	Primary Key
D_Name	Text	
Specialization	Text	Specialization can be General, Psychology, Neurology, Cardiology or Radiology

(10 Marks)

Table: Appointments

Field	Data Type	Other Information
Appoint_No	Auto Number	Primary Key
Patient_ID	Text	
Doctor_ID	Text	
App_Date	Date/Time	
Room_No	Text	
Scanning	Text	
Bill Amount	Currency	

(10 Marks)

c. Insert the following records to their respective tables

Patients

Patient_ID	P_Name	Gender	Paid
P001	Daniel	M	Yes
P002	Amisha	F	No
P003	Kate	F	Yes
P004	Shivani	F	Yes
P005	Marian	M	Yes
P006	Fredrick	M	No
P007	Lara	F	No
P008	Umar	M	Yes

(10 Marks)

Consultation_Room

Room_No	Room_Name	Attendant	App_Number	Scanning Available
01	R_01	Shuan	2	Yes
02	R_02	Saamina	3	No
03	R_03	Johan	5	Yes
04	R_04	Kelly	1	No

(10 Marks)

Appointments						
Appoint_No	**Patient_ID**	**Doctor_ID**	**App_Date**	**Room_No**	**Scanning**	**Bill Amount**
1	P002	D004	9/7/2018	03	Required	$1,500.00
2	P004	D001	8/14/2018	02	Not Required	$650.00
3	P003	D003	9/14/2018	01	Not Required	$520.00
4	P008	D001	8/15/2018	02	Required	$1,700.00
5	P006	D006	9/12/2018	02	Not Required	$650.00
6	P002	D004	9/14/2018	03	Not Required	$500.00
7	P007	D002	9/6/2018	04	Required	$1,200.00

(10 Marks)

d. Create a form for the table Doctors named as "Doctors". Using this form, insert the following records to the table Doctors.

Doctors		
Doctor_ID	**D_Name**	**Specialization**
D001	Martin Henry	Neurology
D002	Lewis Carol	Psychology
D003	Amaya Gibson	Cardiology
D004	Kiara Williams	Cardiology
D005	Jennifer Hills	General
D006	Steven Jobbs	Neurology

(15 Marks)

e. Create a form for the table "Appointments" as shown in Figure 01. [Font Face: Rockwell] and save as "Receipt". Include two buttons to save and to print a record.

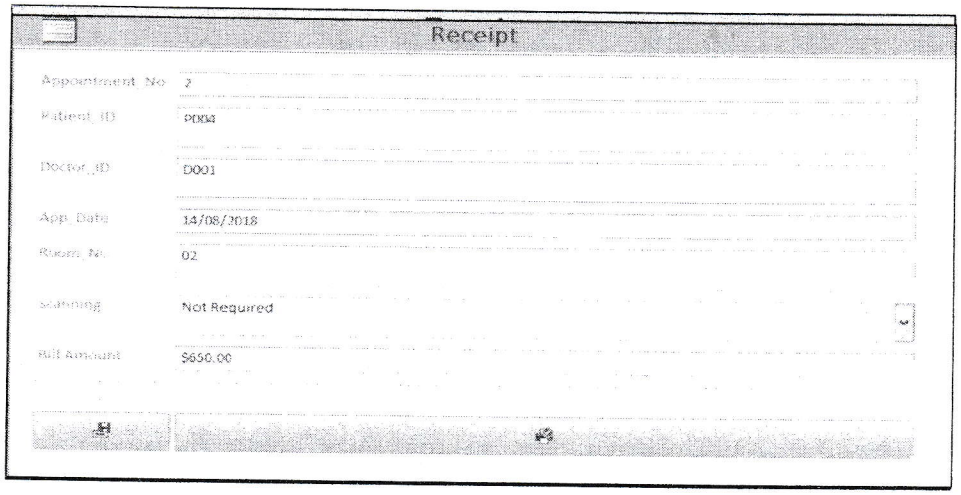

Figure 01: Form Receipt

(10 Marks)

f. Insert the following record using the form created for part e.

Appoint_No	Patient_ID	Doctor_ID	App_Date	Room_No	Scanning	Bill Amount
8	P009	D003	9/19/2018	01	Not Required	$ 750.00

(5 Marks)

g. The appointment having the "Appoint_No 4" has been cancelled for an emergency reason. Delete the particular record from the database.

(5 Marks)

h. Design the following queries and save them as separate query with the specified name.

i. Query_Cardiology:

Display only the names and IDs of the doctor who are specialized in "Cardiology"

(5 Marks)

i.Query_Room:

Display the names of patients who are being consulted either in room number **2 OR 3**

(5 Marks)

ii.Query_Scan:

Display Patient_ID and Appoint_No of the patients who require scanning in **descending** order of their Patient_ID

(10 Marks)

iii. Query_Patient:

Display the list of patients with their name and ID who are being consulted by doctor having the Doctor_ID = "D001"

(10 Marks)

i. Create a report named "Report 2018" from the table "Appointments"

The maximum bill amount should be displayed at the bottom of report with the label: **Maximum Bill**

Use Modern No.20 font face for the header. Header and titles should be in bold

(5 Marks)

j. Export the report you created in part i as "FinalReport_ICTxx.pdf" to your folder

(5 Marks)

[150 Marks]

Question 02

Mr. Carry owns a vehicle showroom. He uses a database management system named "Carry's Vehicle Management System (CVMS)" that keeps track of automobile sales in his dealership.

The following relations are available in the CVMS.

SalesPerson (SalesPerson_ID, S_Name, St_Address, City, Commission)
Sales (SalesPerson_ID, Serial_No, Date, Sale_price)
Accessories (Serial_no, Access_Name, Price)
Cars (Serial_no, Model, Manufacturer, Price)

The actual price of the car (without additional accessories) is listed in Cars table. If the car includes any additional accessories, such details are available in accessories table with the note of the price of accessories separately. The Sale_price in Sales table lists prices of sold cars.

Write SQL statements and execute them to display the output for each of the question [2 a. to 2 p.] given below.

a. Create a database named 'CVMS'

(5 Marks)

b. Create the four (04) tables namely SalesPerson, Sales, Accessories and Cars, given in the above schema, in the database CVMS

(20 Marks)

c. Insert the following records into the respective tables

Table: SalesPerson

Salesperson_ID	S_Name	St_Address	City	Commission
S001	David	25 New Jersey	Washington	0.12
S002	Henry	Keskatu 45	Helsinki	0.12
S003	Martin	Filtrowa 68	London	0.35
S004	Carrol	Skagen 21	Berlin	0.18
S005	Siam	4th Ave Suite	Seattle	0.12
S006	Woods	Obere Str. 57	Berlin	0.25
S007	Kate	120 Hanover Sq	London	0.11

Table: Sales

Salesperson_ID	Serial_No	Date	Sale_price
S001	PH1042	2018.02.12	4600000
S004	FA1354	2018.03.05	2750000
S001	HG5674	2018.05.28	4020000
S007	ER3125	2018.06.25	3750000
S004	PH0901	2018.07.26	4000000

Table: Accessories

Serial_no	Access_Name	Price
PH0901	AC	87500
WU1987	Bluetooth	23500
FA1354	Parking sensors	35000
ER3125	Cruise control	76000
PH1042	Leather	32000

Table: Cars

Serial_no	Model	Manufacturer	Price
PH1042	Ciaz	Maruti	4500000
PH0901	Kwid	Renault	3750000
FA1354	Swift	Maruti	2500000
HG5674	Baleno	Maruti	3500000
WU1987	Tiago	Tata	2563000
ER3125	Eon	Hyundai	4550000

(20 Marks)

d. Display all details of the available cars in the show room

(5 Marks)

e. Retrieve different type of manufacturers available in the database.

(5 Marks)

f. Update the city of the sales person with Salesperson_ID = S002 as "Seattle"

(5 Marks)

g. List names and commission of sales person whose name contains an 'e'

(5 Marks)

h. Display the list of accessories whose price is **not** between 30000 and 75000

(5 Marks)

i. Display models of cars with their serial number and price that are produced by the manufacturer "Maruti" in the **descending** order of their price.

(10 Marks)

j. Find the total amount of sales made by each of the sales person as "Total Sales" with their Salesperson_ID

(10 Marks)

k. Display the car having the maximum price among all the available cars with its model and manufacturer.

(10 Marks)

l. Display addresses of the sales persons as "Address" with St_Address and city separated by commas who are either from **London or Seattle or Washington**

(10 Marks)

m. Each sales person receive a commission amount for every sales made by them (Sale_price × Commision). Calculate the commission received from the sales of each car.

(10 Marks)

n. List out the names and IDs of salespersons who have **not** made any sales so far.

(10 Marks)

o. List the names of accessories that are fixed to cars that has a Sale_Price over 4000000.

(10 Marks)

p. Considering the actual prices of cars and the prices of accessories, find the profit or loss as "**Profit or Loss**" received from the selling of each car.

(10 Marks)

[150 Marks]