Assignment-1

Course Name: Database

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Weightage : 4

Deadline: 3/14/2019

Note :

. Zero tolerance for plagiarism.

. You will be awarded straight zero If your assignment found to be copied or someone copied your assignment

. As this assignment is lengthy and carry high weightage, so please start working on assignment as soon as possible.

. No submission on email.

Instruction:

a. check "Database_Table_Description.doc" file.This file contain general information of databse and their model used in this assignment. Try to identify the foreign key and primary key in ERD diagram.
b. First you need to create all 7 table with constraint.
c. after creating table run the insert query given in "insert.txt" table.
d. **How to submit:**
    1. You should submit your assignment in the form of two file one is "query.txt" and another is "screen_shot.pdf".
    2. "query.txt" file contain the create,select,update and Data modification query which you run on the database.
    3. "screen_shot.pdf" file contain screen shot of all the outputs. e.g after creating the table run "describe table" query on each table and take screen shot of it.for select query you should take the output of each select query and same goes for data modification.

Part A: Table Creation **Weightage:1.5**

Customer

custno	custname	address	Internal	contact	phone	city	state	zip
C100	Football	Box 352200	Y	Mary Manager	6857100	Boulder	CO	80309
C101	Men's Basketball	Box 352400	Y	Sally Supervisor	5431700	Boulder	CO	80309
C103	Baseball	Box 352020	Y	Bill Baseball	5431234	Boulder	CO	80309
C104	Women's Softball	Box 351200	Y	Sue Softball	5434321	Boulder	CO	80309
C105	High School Football	123 AnyStreet	N	Coach Bob	4441234	Louisville	CO	80027

Employee

empno	empname	department	email	phone
E100	Chuck Coordinator	Administration	chuck@colorado.edu	3-1111
E101	Mary Manager	Football	mary@colorado.edu	5-1111
E102	Sally Supervisor	Planning	sally@colorado.edu	3-2222
E103	Alan Administrator	Administration	alan@colorado.edu	3-3333

Facility

facno	facname
F100	Football stadium
F101	Basketball arena
F102	Baseball field
F103	Recreation room

Location

locno	facno	locname
L100	F100	Locker room
L101	F100	Plaza
L102	F100	Vehicle gate
L103	F101	Locker room
L104	F100	Ticket Booth
L105	F101	Gate
L106	F100	Pedestrian gate

ResourceTbl

resno	resname	rate
R100	attendant	$10.00
R101	police	$15.00
R102	usher	$10.00
R103	nurse	$20.00
R104	janitor	$15.00
R105	food service	$10.00

EventRequest

eventno	dateheld	datereq	facno	custno	dateauth	status	estcost	estaudience	budno
E100	25-Oct-2013	06-Jun-2013	F100	C100	08-Jun-2013	Approved	$5,000.00	80000	B1000
E101	26-Oct-2013	28-Jul-2013	F100	C100		Pending	$5,000.00	80000	B1000
E102	14-Sep-2013	28-Jul-2013	F100	C100	31-Jul-2013	Approved	$5,000.00	80000	B1000
E103	21-Sep-2013	28-Jul-2013	F100	C100	01-Aug-2013	Approved	$5,000.00	80000	B1000
E104	03-Dec-2013	28-Jul-2013	F101	C101	31-Jul-2013	Approved	$2,000.00	12000	B1000
E105	05-Dec-2013	28-Jul-2013	F101	C101	01-Aug-2013	Approved	$2,000.00	10000	B1000
E106	12-Dec-2013	28-Jul-2013	F101	C101	31-Jul-2013	Approved	$2,000.00	10000	B1000
E107	23-Nov-2013	28-Jul-2013	F100	C105	31-Jul-2013	Denied	$10,000.00	5000	

EventPlan

planno	eventno	workdate	notes	activity	empno
P100	E100	25-Oct-2013	Standard operation	Operation	E102
P101	E104	03-Dec-2013	Watch for gate crashers	Operation	E100
P102	E105	05-Dec-2013	Standard operation	Operation	E102
P103	E106	12-Dec-2013	Watch for seat switching	Operation	
P104	E101	26-Oct-2013	Standard cleanup	Cleanup	E101
P105	E100	25-Oct-2013	Light cleanup	Cleanup	E101
P199	E102	10-Dec-2013	Standard operation	Operation	E101
P299	E101	26-Oct-2013		Operation	E101
P349	E106	12-Dec-2013		Cleanup	E101
P85	E100	25-Oct-2013	Standard operation	Setup	E102
P95	E101	26-Oct-2013	Extra security	Setup	E102

EventPlanLine

PlanNo	LineNo	TimeStart	TimeEnd	NumberFld	LocNo	ResNo
P100	1	25-Oct-2013 8:00	25-Oct-2013 17:00	2	L100	R100
P100	2	25-Oct-2013 12:00	25-Oct-2013 17:00	2	L101	R101
P100	3	25-Oct-2013 7:00	25-Oct-2013 16:30	1	L102	R102
P100	4	25-Oct-2013 18:00	12-Dec-2013 22:00	2	L100	R102
P101	1	3-Dec-2013 18:00	3-Dec-2013 20:00	2	L103	R100
P101	2	3-Dec-2013 18:30	3-Dec-2013 19:00	4	L105	R100
P101	3	3-Dec-2013 19:00	3-Dec-2013 20:00	2	L103	R103
P102	1	5-Dec-2013 18:00	5-Dec-2013 19:00	2	L103	R100
P102	2	5-Dec-2013 18:00	5-Dec-2013 21:00	4	L105	R100
P102	3	5-Dec-2013 19:00	5-Dec-2013 22:00	2	L103	R103
P103	1	12-Dec-2013 18:00	12-Dec-2013 21:00	2	L103	R100
P103	2	12-Dec-2013 18:00	12-Dec-2013 21:00	4	L105	R100
P103	3	12-Dec-2013 19:00	12-Dec-2013 22:00	2	L103	R103
P104	1	26-Oct-2013 18:00	26-Oct-2013 22:00	4	L101	R104
P104	2	26-Oct-2013 18:00	26-Oct-2013 22:00	4	L100	R104
P105	1	25-Oct-2013 18:00	25-Oct-2013 22:00	4	L101	R104
P105	2	25-Oct-2013 18:00	25-Oct-2013 22:00	4	L100	R104
P199	1	10-Dec-2013 8:00	10-Dec-2013 12:00	1	L100	R100
P349	1	12-Dec-2013 12:00	12-Dec-2013 15:30	1	L103	R100
P85	1	25-Oct-2013 9:00	25-Oct-2013 17:00	5	L100	R100
P85	2	25-Oct-2013 8:00	25-Oct-2013 17:00	2	L102	R101
P85	3	25-Oct-2013 10:00	25-Oct-2013 15:00	3	L104	R100
P95	1	26-Oct-2013 8:00	26-Oct-2013 17:00	4	L100	R100
P95	2	26-Oct-2013 9:00	26-Oct-2013 17:00	4	L102	R101
P95	3	26-Oct-2013 10:00	26-Oct-2013 15:00	4	L106	R100
P95	4	26-Oct-2013 13:00	26-Oct-2013 17:00	2	L100	R103
P95	5	26-Oct-2013 13:00	26-Oct-2013 17:00	2	L101	R104

Primary keys:

Primary key fields are (*CustNo*, *LocNo*, *EventNo*, *PlanNo*, *EmpNo*, *ResNo*, and *FacNo*).

Data types:

Identify the Data types from data given in the table.

Constraints:

First go watch this vide. Link is given below.

https://www.youtube.com/watch?v=S6Ptz63B5Rk

- For each primary key, you should specify a PRIMARY KEY constraint clause. For single column primary keys (*CustNo*, *LocNo*, *EventNo*, *PlanNo*, *EmpNo*, *ResNo*, and *FacNo*), the constraint clause can be inline or external. For multiple column primary keys (combination of *PlanNo* and *LineNo*), the CONSTRAINT clause must be external.
- For each foreign key, you should specify a FOREIGN KEY constraint clause. The constraint clauses can be inline or separate.

- Define NOT NULL constraints for all columns except *eventplan.empno*, *EventRequest.DateAuth*, *EventRequest.BudNo*, and *EventPlan.Notes*. Make sure that you define NOT NULL constraints for the PK of each table. Because of MySQL syntax limitations for NOT NULL constraints (inline with no constraint name and no CONSTRAINT keyword), you should define inline NOT NULL constraints.
- Define a named CHECK constraint to restrict the *eventrequest.status* column to have a value of "Pending", "Denied", or "Approved". You can use the IN operator in this constraint. In MySQL, the syntax does not allow the CONSTRAINT keyword and a constraint name for CHECK constraints. You should use the CHECK keyword followed the condition enclosed in parentheses.
- Define named CHECK constraints to ensure that the *resource.rate* and *eventrequest.estaudience* are greater than 0. In MySQL, you cannot use a constraint name and the CONSTRAINT keyword for CHECK constraints. In MySQL, the syntax does not allow the CONSTRAINT keyword and a constraint name for CHECK constraints. You should use the CHECK keyword followed the condition enclosed in parentheses.
- Define a named CHECK constraint involving *EventPlanLine.TimeStart* and *EventPlanLineTimeEnd*. The start time should be smaller (chronologically before) than the end time. This CHECK constraint must be external because it involves two columns. In MySQL, the syntax does not allow the CONSTRAINT keyword and a constraint name for CHECK constraints. You should use the CHECK keyword followed the condition enclosed in parentheses.

Part B: Query Processing **Weightage:2.5**

Query:

Part A

1. List the city, state, and zip codes in the customer table. Your result should not have duplicates. (Hint: The DISTINCT keyword eliminates duplicates.)
2. List the name, department, phone number, and email address of employees with a phone number beginning with "3-".
3. List all columns of the resource table with a rate between $10 and $20. Sort the result by rate.
4. List the event requests with a status of "Approved" or "Denied" and an authorized date in July 2013. Include the event number, authorization date, and status in the output. (Hint: see the examples in Module 4 for date constants in Oracle and MySQL.)
5. List the location number and name of locations that are part of the "Basketball arena". Your WHERE clause should not have a condition involving the facility number compared to a constant ("F101"). Instead, you should use a condition on the FacName column for the value of "Basketball arena".
6. For each event plan, list the plan number, count of the event plan lines, and sum of the number of resources assigned. For example, plan number "P100" has 4 lines and 7 resources assigned. You only need to consider event plans that have at least one line.

Part B:

1. For event requests, list the event number, event date (*eventrequest.dateheld*), and count of the event plans. Only include event requests in the result if the event request has more than one related event plan with a work date in December 2013.
2. List the plan number, event number, work date, and activity of event plans meeting the following two conditions: (1) the work date is in December 2013 and (2) the event is held in the "Basketball arena". Your query must not use the facility number ("F101") of the basketball arena in the WHERE clause. Instead, you should use a condition on the *FacName* column for the value of "Basketball arena".

3. List the event number, event date, status, and estimated cost of events where there is an event plan managed by Mary Manager and the event is held in the basketball arena in the period October 1 to December 31, 2013. Your query must not use the facility number ("F101") of the basketball arena or the employee number ("E101") of "Mary Manager" in the WHERE clause. Thus, the WHERE clause should not have conditions involving the facility number or employee number compared to constant values.

4. List the plan number, line number, resource name, number of resources (*eventplanline.number*), location name, time start, and time end where the event is held at the basketball arena, the event plan has activity of activity of "Operation", and the event plan has a work date in the period October 1 to December 31, 2013. Your query must not use the facility number ("F101") of the basketball arena in the WHERE clause. Instead, you should use a condition on the *FacName* column for the value of "Basketball arena".

Part C:

Database Modification Problems

1. Insert a new row into the *Facility* table with facility name "Swimming Pool".
2. Insert a new row in the *Location* table related to the *Facility* row in modification problem 1. The new row should have "Door" for the location name.
3. Insert a new row in the *Location* table related to the *Facility* row in modification problem 1. The new row should have "Locker Room" for the location name.
4. Change the location name of "Door" to "Gate" for the row inserted in modification problem 2.
5. Delete the row inserted in modification problem 3.

Enjoy!