Part 01

Use ITI DB

- Create a trigger to prevent anyone from inserting a new record in the Department table (Display a message for user to tell him that he can't insert a new record in that table)
- Create a table named "StudentAudit". Its Columns are (Server User Name , Date, Note)

Server User Name	Date	Note

Create a trigger on student table after insert to add Row in StudentAudit table

- The Name of User Has Inserted the New Student
- Date
- Note that will be like ([username] Insert New Row with Key = [Student Id] in table [table name]

Create a trigger on student table instead of delete to add Row in StudentAudit table

- The Name of User Has Inserted the New Student
- Date
- Note that will be like "try to delete Row with id = [Student Id]"

Part 02

Use MyCompany DB:

- Create a trigger that prevents the insertion Process for Employee table in March.

Part 03

Use ITI DB :

- Create an index on column (Hiredate) that allows you to cluster the data in table Department. What will happen?

- Create an index that allows you to enter unique ages in the student table. What will happen?

- Try to Create Login Named(RouteStudent) who can access Only student and Course tables from ITI DB then allow him to select and insert data into tables and deny Delete and update

Part 04

● Create a table named 'ReturnedBooks' With the Following Structure :

User SSN	Book Id	Due Date	Return Date	fees

then create A trigger that instead of inserting the data of returned book checks if the return date is the due date or not if not so the user must pay a fee and it will be 20% of the amount that was paid before.

● Create a trigger to prevent anyone from Modifying or Delete or Insert in the Employee table (Display a

message for user to tell him that he can't take any action with this Table)

● Testing Referential Integrity , Mention What Will Happen When:
Create an index on column (Salary) that allows you to cluster the data in table Employee.

● Try to Create Login With Your Name And give yourself access Only to Employee and Floor tables then allow this login to select and insert data into tables and deny Delete and update (Don't Forget To take screenshot to every step)

Part 05

Create a database "by Wizard" named "RouteCompany"

1. Create the following tables with all the required information and load the required data as specified in each table using insert statements[at least two rows]

Table Name	Details	Comments

Department					1-Create it programmatically [By Code]

DeptNo (PK)	DeptName	Location
d1	Research	NY
d2	Accounting	DS
d3	Marketing	KW

Employee						1-Create it programmatically

2-PK constraint on EmpNo

3-FK constraint on DeptNo

4-Unique constraint on Salary

5-EmpFname, EmpLname don't accept null values

EmpNo (PK)	Emp Fname	Emp Lname	Dept No	Salary
25348	Mathew	Smith	d3	2500
10102	Ann	Jones	d3	3000
18316	John	Barrymore	d1	2400
29346	James	James	d2	2800
9031	Lisa	Bertoni	d2	4000
2581	Elisa	Hansel	d2	3600
28559	Sybl	Moser	d1	2900

Project				1-Create it by Wizard

2-ProjectName can't contain null values

3-Budget allow null

ProjectNo (PK)	ProjectName	Budget
p1	Apollo	120000
p2	Gemini	95000
p3	Mercury	185600

Works_on					1-Create it Wizard 2- EmpNo INTEGER NOT NULL 3-ProjectNo doesn't accept null values 4-Job can accept null 5-Enter_Date can't accept null and has the current system date as a default value[visually] 6-The primary key will be EmpNo,ProjectNo) 7-there is a relation between works_on and employee, Project tables
	EmpNo (PK)	ProjectNo(PK)	Job	Enter_Date	
	10102	p1	Analyst	2006.10.1	
	10102	p3	Manager	2012.1.1	
	25348	p2	Clerk	2007.2.15	
	18316	p2	NULL	2007.6.1	
	29346	p2	NULL	2006.12.15	
	2581	p3	Analyst	2007.10.15	
	9031	p1	Manager	2007.4.15	
	28559	p1	NULL	2007.8.1	
	28559	p2	Clerk	2012.2.1	
	9031	p3	Clerk	2006.11.15	
	29346	p1	Clerk	2007.1.4	
Testing Referential Integrity	1-Add new employee with EmpNo =11111 In the works_on table [what will happen] 2-Change the employee number 10102 to 11111 in the works on table [what will happen] 3-Modify the employee number 10102 in the employee table to 22222. [what will happen] 4-Delete the employee with id 10102					
Table Modification	1-Add TelephoneNumber column to the employee table[programmatically] 2-drop this column[programmatically] 3-Build A diagram to show Relations between tables					

2. Create the following schema and transfer the following tables to it
    a. Company Schema
        i. Department table
        ii. Project table

  b. Human Resource Schema
    i. Employee table

3. Increase the budget of the project where the manager number is 10102 by 10%.
4. Change the name of the department for which the employee named James works.The new department name is Sales.

5. Change the enter date for the projects for those employees who work in project p1 and belong to department 'Sales'. The new date is 12.12.2007.
6. Delete the information in the works_on table for all employees who work for the department located in KW.

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