Term work on

**Data Base Management System Lab (PCS 503)**

Submitted in partial fulfillment of the requirement for the V semester

**Bachelor of Technology by**

**Yash Tiwari**

**University Roll No:**

**2161348**

Under the Guidance of

**Ms. Senam Pandey**

**Assistant Professor**

**Department of CSE**



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING GRAPHIC ERA HILL UNIVERSITY**

**BHIMTAL CAMPUS**

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**EXPERIMENT - 1**

**AIM:** Implement the following commands:

* Create
* Alter
* Truncate
* Drop

**Q1. Create the above schema with the help of create command.**

**Queries:**

* create database lab1;
* show databases;

**Output:**

* create table student (Name varchar(255), Student Number int, Class char(255), Major char(255));
* create table course (CourseName varchar(255), CourseNumber int, CreditHours int, Department char(255));
* create table prerequisite (CourseNumber int, Prerequisite Number int);
* create table section (Section Identifier char(5), CourseNumber int, Semester int, Year int, Instructor char(255));
* create table grade\_report (Student Number int, Section Identifier char(5), Grade char(2));
* show tables;
* **Output:**

**Q2. Use Insert Command for record at least 10 records in each table.**

**Queries:**

* insert into student (Name, Student Number, Class, Major) values

('John', 123, '12', 'Bio'), ('Smith', 234, '11', 'Hist roty'),

('Davis', 345, '10', 'Science'), ('Jessica', 456, '9', 'Maths'),

('Lee', 567, '8', 'Chemistry'), ('David', 678, '7', 'Economics'),

('Taylor', 789, '6', 'Maths'), ('Mart', 890, '5', 'Psychology'),

('Kevin', 901, '8', 'Politics'), ('Robert', 0 12, '12', 'Physics') ;

* select \* from student;

**Output:**

* insert into course values

('Quantum Mechanics', 101, 3, 'Physics'),

('Digital Marketing', 102, 4, 'Marketing'),

('Wor ld History', 103, 4, 'History'),

('DSA', 104, 5, 'CSE'),

('Writing', 105, 3, 'English'),

('EVS', 106, 2, 'EVSs'),

('Intro to Psychology, 107, 3, 'Psychology'),

('Business Ethics', 108, 3, 'Business'),

('Into to Sociology', 109, 4, 'Sociology'),

(' French', 110, 3, 'Arts');

* select \* from course;

**Output:**

* insert into prerequisite values (101,1), (102,2), (103,3), (104,4), (105,5), (106,6), (107,7), (108,8), (109,9), (110 ,10);
* select \* from prerequisite;

**Output:**

* insert into section values

('A', 101, 1, 2021, 'Sarah'), ('B', 102, 2, 2021, 'Michael'),

('A', 103, 2, 2022,'Jennifer'), ('C', 104, 1, 2023, 'Smith'),

('D', 105, 3, 2021,'Emily'), ('B', 106, 4, 2020, 'Brown'),

('A', 107, 2, 2021, 'Wilson'), ('C', 108, 3, 2022, 'Christopher'),

('D', 109, 3, 2020, 'Laura'), ('B', 110, 1, 2023, 'Daniel');

* select \* from section;

**Output:**

* insert into grade\_report values

(123, 'A', 'O'), (234, 'B', 'A'),

(345, 'C', 'A'), (456, 'A', 'O'),

(567, 'B', 'A'), (678, 'A', 'B'),

(789, 'D', 'A'), (890, 'C', 'B'),

(901, 'C', 'B'), (12, 'B', 'O');

* select \* from grade\_report;

**Output:**

**Q3. Modify schema with use of drop and add command.**

**Queries:**

* alter table grade\_report add status char(10);
* select \* from grade\_report;

**Output:**

* alter table grade\_report drop status;
* select \* from grade\_report;

**Output:**

**Q4. At last, delete prerequisite data record and delete grade table from database.**

**Queries:**

* truncate table prerequisite;
* select \* from prerequisite;

**Output:**

* drop table grade\_report;
* show tables;

**Output:**

**EXPERIMENT – 2**

**AIM:** Create Table to store details as shown below and write statements for following queries based on table.

**Q1. Create above table.**

**Queries:**

* create table emp (

EMPLOYEE\_ID INT(3),

FIRST\_NAME CHAR(30),

LAST\_NAME CHAR(30),

JOINING\_DATE INT(5),

JOB\_ID CHAR(30),

SALARY INT(7),

DEPARTMENT\_ID INT(2)

);

* insert into emp values

(100,'Gerald','Cambrault',34675,'AD\_PRES',5500,10),

(101,'Renske','Ladwig',34837,'AD\_VP',15000,20),

(102,'Janette','King',35230,'AD\_VP',7000,20),

(103,'Sarath','Sewall',35477,'IT\_PROG',12000,30),

(104,'William','Gietz',35627,'IT\_PROG',5100,30),

(105,'Jennifer','Whalen',35662,'IT\_PROG',4900,30),

(106,'Britney','Everett',35733,'IT\_PROG',5800,30),

(107,'Anthony','Cabrio',35788,'IT\_PROG',5600,30),

(108, 'Alexis', 'Bull', 35861, 'FI\_MGR', 7500, 40),

(109, 'Adam', 'Fripp', 36033, 'FI\_ACCOUNT',8000,40),

(110, 'James', 'Marlow',36066,'FI\_ACCOUNT',9000,50), (111,'James','Landry',36174,'FI\_ACCOUNT',8500,50),

(112,'Payam','Kaufling',36260, 'FI\_ACCOUNT', 9500,50),

(113,'Shelly','Higgins',36480,'FI\_ACCOUNT',8500,50),

(114,'Shanta', 'Vollman', 36501, 'PU\_MAN', 10500, 50),

(115,'Irene', 'Mikkilineni',36506,'PU\_CLERK',10000,50),

(116, 'Mozhe', 'Arkinson', 36593, 'PU\_CLERK', 9500,50);

* Select \* from emp;

**Output:**

**Q2. Update PU\_CLERK to MANAGER.**

**Queries:**

* update emp set job\_id="Manager" where job\_id="pu\_clerk";
* show \* from emp;

**Output:**

**Q3. Change JOINING\_DATE of employee to 5678 where DEPARTMENT\_ID =30**

**Queries:**

* update emp set joining\_date=5678 where department\_id=30;
* select \* from emp;

**Q4. Delete Employee where salary is less than 8000.**

**Queries:**

* delete from emp where salary<8000;
* select \* from emp;

**Output:**

**EXPERIMENT – 3**

**AIM:** Create a Table Empl to store details as shown below and write statements for following queries based on table.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **emno** | **ename** | **job** | **mgr** | **hiredate** | **sal** | **comm** | **deptno** |
| 8369 | SMITH | CLERK | 8902 | 1990-12-18 | 800.00 | NULL | 20 |
| 8499 | ANYA | SALESMAN | 8698 | 1991-02-20 | 1600.00 | 300.00 | 30 |
| 8521 | SETH | SALESMAN | 8698 | 1991-02-22 | 1250.00 | 500.00 | 30 |
| 8566 | MAHADEVAN | MANAGER | 8839 | 1991-04-02 | 2985.00 | NULL | 20 |
| 8654 | MOMIN | SALESMAN | 8898 | 1991-09-28 | 1250.00 | 1400.00 | 30 |
| 8698 | BINA | MANAGER | 8839 | 1991-05-01 | 2850.00 | NULL | 30 |
| 8882 | SHIVANSH | MANAGER | 8839 | 1991-06-09 | 2450.00 | NULL | 10 |
| 8888 | SCOTT | ANALYST | 8566 | 1991-12-09 | 3000.00 | NULL | 20 |
| 8839 | AMIR | PRESIDENT | NULL | 1991-11-18 | 5000.00 | NULL | 10 |
| 8844 | KULDEEP | SALSEMAN | 8698 | 1991-09-08 | 1500.00 | 0.00 | 30 |

Consider the Empl table and write SQL command to get the following.

**Output:**

1. **Write a query to display ename and sal of employees whose sal are greater than or equal to 2200?**

**Query:**

* Select ename, sal from empl where sal>=2200;

1. **Write a query to display details of employs who are not getting commission?**

**Query:**

* select \* from empl where comm is null;

**Output:**

1. **Write a query to display employee name and salary of those employees who don’t have their salary in range of 2500 to 4000?**

**Query:**

* Select ename, sal from empl where sal<2500 or sal>4000;

**Output:**

1. **Write a query to display name, job and salary of employees who don’t have manager?**

**Query:**

* Select ename, job, sal from empl where mgr is null;

**Output:**

**e . Write a query to display the name of employee whose name contains ‘A’ as third aplhabet?**

**Query:**

* Select ename from empl where ename like ‘\_ \_ A %’;

**Output:**

**f . Write a quey to display the name of the employee whose name contains ‘T’ as last aplhabet?**

**Query:**

* Select ename from empl where ename like ‘% T’;

**Output:**

**g. Write a query to display the name of employee whose name contains ‘M’ as First and ‘L’ as third alphabet?**

**Query:**

* Select ename from empl where like ‘M \_ L %’;

**Output:**

**h. Write a query to display details of employs with the text ‘Not given’, if commission is null?**

**Query:**

* select \*, if(comm is null,'Not Given',comm) as commission from empl;

**Output:**