

DBMS (ETCS – 357)

List of Practical

- 1. Create following tables and put proper constraints wherever required:**
Employee (e_no, name, addr, qualification, course_id, dept, desig, dob, doj)
Accounts (e_no, basic_sal, DA, HRA, PF, gross_sal)
Training (course_id, course_name)

Insert data in the above tables.

Solve the following queries using SQL

- a) Select name of all the employees in 'system' department.
- b) Select employee no. and qualification of all employees in marketing department and those whose name start with 'a'
- c) Select emp no. of all the employees whose basic range of 3000 to 5000.
- d) Select employee no of all those employees who do not belong to 'accounts' departments.
- e) Select employee no. of all those employee whose gross pay is greater then 5000 but basic is less then 4000.
- f) Select that employee whose designation is either 'manager', 'executive' or 'sr. executive' and belongs to 'system' dept.
- g) Find out the names of the existing departments in this office.
- h) Extract the names of those employees who got appointed after completion of 25 years of age.
- i) Extract the names, date of birth, date of joining of all the employees with column as employees: name, date of birth, date of joining.
- j) Extract the names, departments, designation of all employees sorted according the names in descending order within departments in ascending orders.
- k) All the employees have been given a phone. So to keep the records of phone no. a new field needs to get added modify structure of table.
- l) Annual increments of all employees were 10% of their basic. Update appropriate table.
- m) Employee relation needs to be renamed as 'personal' alter the name of the table.
- n) Employee no. are unique create index as such not to include any duplicate number.
- o) Count the total number of employees, max salary received by an employee, total amount paid by the management for the employees' salary and avg salary of employee.

2. Create following tables and put proper constraints wherever required:

Course (course_no, course_name)

Course_fee (course_no, full_part, fees)

Student (prospectus_no, name, address, phone, D_O_B, D_O_A, strong_pts, weak_pts, total_amt, amount_paid, inst_full, comments)

Installment (prospectus_no, installment_amt, due_dt, paid)

Course Taken (prospectus_no, course_no, start_date, full_part, time_slot, performance, certificate)

Insert data in the above tables.

Solve the following queries using SQL

- a) Insert 10 records in STUDENT, COURSE and INSTALLMENT table.
- b) Insertion into COURSE table
- c) Insertion into INSTALLMENT table.
- d) Find out the names of all students
- e) Print the entire COURSE table
- f) Retrieve name and course_no. of all students.
- g) List the various course available from COURSE table.
- h) Find the name of students who have paid all amount at the time of admission
- i) Find the name of student starting with 'A'.
- j) Print the name of students whose total amount is not equal to amount due.
- k) Count the number of students who have joined in the current year, current month.
- l) Print the details of course fee where course name="ORACLE".
- m) Print the details of the course whose fees is more than 5000 but less than 10000
- n) Rename the table COURSE_FEE as COU_FEE
- o) Select the students who have not yet paid the full amount.
- p) Determine the maximum and minimum course prices. Rename the title as max_price and min_price respectively.
- q) Count the no. of student taken admission in 'ORACLE'
- r) Get the sum of amount to be collected from student this month.
- s) Insert two columns in STUDENT table (no_of_installments and no_of_instpaid).
- t) List out the name of students and name of course taken by them (sorted according to course names)
- u) List out the prospectus no. , course taken (names) and fees paid till today.
- v) Display the admission date as 'DD-MONTH-YY' format
- w) Change the course name 'UNIX as 'UNIX OPERATING SYSTEM'.
- x) Delete all the records from Installment table of those students who have paid all the installments
- y) Increase the price of "ORACLE' with FEE+1000
- z) Display the names of all student who have to pay installments within next 3 months
- aa) Find out in which course the maximum no. of student have taken admission.

3. Create following tables and put proper constraints wherever required:

Emp(e_no, ename, sal, d_no, man_no, job_no, doj, dob, commission)

Dept(d_no, dname)

Job(Job_type, j_no, j_performed)

Manager(m_name, m_no)

Insert data in the above tables.

Solve the following queries using SQL :-

- a) Describe the tables EMP and DEPT.
- b) Select all information from EMP table.
- c) List the details of employee having salary between 1000 and 2000.
- d) List deptno. And dept name in dept order.
- e) Display different job types.
- f) List the employees in dept 10 & 20 in alphabetical order,
- g) List the names and jobs of all clerks in dept 20
- h) Display all employees with TH or LL in their name
- i) List name, job and salary of all employees who have manager
- j) List name and total sal of employees.
- k) Display all the employee hired during 1983.
- l) Display name , annual salary and commission of all employee whose monthly salary is greater then their commission.
- m) Select data as SMITH HAS WORKED IN THE POSITION OF CLERK IN DEPT 20.
- n) Generate a statement, which prompts the user at runtime. The intention is to display employees hired between 2 given. Run the query twice.
- o) Develop a query to accept a given job title.
- p) Define a variable representing a expression used to calculate total annual remuneration. Use the variable in a statement, which finds all employees who earn \$30000 a year more.
- q) List employees name and salaries increased by 15% and expressed as whole number of dollars.
- r) Produce the following output.
EMPLOYEE_AND_JOB

SMITH	CLERK
ALLEN	SALESMAN

- s) Produce the following output
EMPLOYEE

SMITH(CLERK)

ALLEN(SALESMAN)

- t) Do a case sensitive for a list of employees with a job that the user enters.
- u) Do a case insensitive search for a list of employees with a job that the user enters.
- v) It has been discovered that the sales people in the dept 30 are not all male. Please produce the following output.

ENAME	DEPTNO.	JOB
ALLEN	30	Salesperson

- w) Display each employee name and hire date of dept 20
- x) Display each employees name, hiredate and salary review date. Assume salary review date is 1 year from hire date. Output should be in ascending review date.
- y) Print list of employees displaying just salary if fore than 1500 if exactly 1500 display 'On Target', if less than 1500 display Below 1500.
- z) Write query which returns the DAY OF THE WEEK (i.e. MONDAY) for any date entered in the format DD.MM.YY.
- aa) Write a query to calculate length of service of each employee.
- bb) Find the minimum salary all employees.
- cc) Find the Maximum, minimum and average salaries of all employees.
- dd) List the maximum and minimum salary of each job type.
- ee) Find out how many manager are there without listing them.
- ff) Find the average salary and average total remuneration of each job type .
Remember salesman earn commission.
- gg) Find out the difference between highest and lowest salaries.
- hh) Find all department which have more than three employee

4. PL/SQL ASSIGNMENT

Solve following Questions:-

- a) Explain PL/SQL with examples.
- b) Write a database trigger to check that date_of_joining is not empty and also that the date_of_joining should be greater then date_of_birth field in the employees table.
- c) Write a database trigger on course table to check that first letter of the course_name is 'c'
- d) Write a PL/SQL program to reverse a given number, for example display 7954 for 4597.