CDGI'S
Chameli Devi School Of Engineering Indore(MP
Department of CSE and IT
Lab Manual

Subject: Data Base Management System **Subject Code:**IT-403
Branch: Information Technology **Year**:IT IVth Sem

Exp-No. 1

[A] **Create the following tables**

Table name: EMP

Column Name	Data type	Remarks
EMPNO	NUMBER(4)	PRIMARY KEY
ENAME	VARCHAR2(10)	
JOB	VARCHAR2(9)	
MGR	NUMBER(4)	
HIREDATE	DATE	
SAL	NUMBER(7 2)	
COMM	NUMBER(7 2)	
DEPTNO	NUMBER(2)	

[B] **Insert the following records in EMP table**

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-1980	800	NULL	20
7499	ALLEN	SALESMAN	7698	20-FEB-1981	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-1981	1250	500	30
7566	JONES	MANAGER	7839	02-APR-1981	2975	NULL	20
7654	MARTIN	SALESMAN	7698	28-SEP-1981	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-1981	2850	NULL	30
7782	CLARK	MANAGER	7839	09-JUN-1981	2450	NULL	10
7788	SCOTT	ANALYST	7566	09-DEC-1982	3000	NULL	20
7839	KING	PRESIDENT	NULL	17-NOV-1981	5000	NULL	10
7844	TURNER	SALESMAN	7698	08-SEP-1981	1500	0	30
7876	ADAMS	CLERK	7788	12-JAN-1983	1100	NULL	20
7900	JAMES	CLERK	7698	03-DEC-1981	950	NULL	30
7902	FORD	ANALYST	7566	03-DEC-1981	3000	NULL	20
7934	MILLER	CLERK	7782	23-JAN-1982	1300	NULL	10

[C] **Create the following tables**

Table name: **DEPT**

Column Name	Data type	Remarks
DEPTNO	NUMERIC(2	
DNAME	VARCHAR(14	
LOC	VARCHAR(13	

[D]**Insert the following records in DEPT table**

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

[E]**Create the following tables**

Table name: **BONUS**

Column Name	Data type	Remarks
ENAME	VARCHAR(10	
JOB	VARCHAR(9	
SAL	NUMERIC	
COMM	NUMERIC	

[F]**Insert the following records in BONUS table**

ENAME	JOB	SAL	COMM
SMITH	CLERK	800	NULL
ALLEN	SALESMAN	1600	300
WARD	SALESMAN	1250	500
JONES	MANAGER	2975	NULL
MARTIN	SALESMAN	1250	1400
BLAKE	MANAGER	2850	NULL
CLARK	MANAGER	2450	NULL
SCOTT	ANALYST	3000	NULL
KING	PRESIDENT	5000	NULL
TURNER	SALESMAN	1500	0
ADAMS	CLERK	1100	NULL
JAMES	CLERK	950	NULL
FORD	ANALYST	3000	NULL
MILLER	CLERK	1300	NULL

[G]**Create the following tables**

Table name: **SALEGRADE**

Column Name	Data type	Remarks
GRADE	NUMERIC	
LOSAL	NUMERIC	
HISAL	NUMERIC	

[D]**Insert the following records in SALEGRADE table**

GRADE	LOSAL	HISAL
1	700	1200
2	1201	1400
3	1401	2000
4	2001	3000
5	3001	9999

EXP-NO.-2

1. List all the information about the employees in the EMP table.
2. List all information about the departments in the DEPT table.
3. List the employees number, name, job title and hiredate of employees.
4. Display name, job, salary, and annual salary of all employees.
5. List contents of salgrade table.
6. Display all the different job types
7. Select the name and salary of all employees who are CLERK.
8. List the employees number, name, job title, salary and hiredate of employees of department number 20.
9. List the name, job title and salary of everyone hired on December 17, 1980
10. List the department name and department number for departments with numbers greater than or equal to 20
11. Select the name, salary and commission of employees whose commission is greater than their salary
12. List the names of employees where salaries are less than 2500
13. List the names and employee numbers of managers who earn more than 2600. Display in alphabetical order by name
14. Select the information about managers and the president from the column job in the EMP table. Order the resume by department number.
15. List all the employee name that do not end in 'S'
16. List the employee names that start with 'C'
17. List the name, job and department of everyone whose name falls in the alphabetical range 'C' to 'L'.
18. List employee details working in department 20, 30 or 40
19. List of employees while names start with 'T' and ends with 'R'
20. Display all employee names which have 'TH' or 'LL' in them

EXP-No.3

21. Display all employees who are hired during 1983
22. Display the data as shown below for all employees.

    SMITH HAS HELD THE POSITION OF CLERK IN DEPT 20 SINCE 13-JUN-83
    ALLEN HAS HELD THE POSITION OF SALESMAN IN DEPT 30 SINCE 13-JUN-83
    WARD HAS HELD THE POSITION OF CLERK IN DEPT 20 SINCE 13-JUN-83
23. List the details of the employees in department 10 and 20 in alphabetical order of names.
24. List all row from EMP table, by converting the NULL value in COMM column to 0(use NVL command).
25. List all manager and salesman with salaries over 1500/-
26. Write a query that will accept a given job title and display all records according to that title.
26. List of employees who do not get any commission
27. List the names and hiredates of the employees in department
28. Display the hiredate formatted as '12/03/84'.
29. How many months has the president worked for the company? Round to the nearest whole number of months.
30. List the names of all employees whose hiredate is in the month of December (Use SubStr () Function).

EXP-N0-4

31. Give SQL command to find the average annual salary per job in each
32. Count the number of people in department 30
33. Compute the average, minimum and maximum salaries of employee for each department.
34. Display the deptno's where more than two clerks are working
35. Produce the following output :

ALLEN (CLERK)
WARD (clerk)
JONES (CLERK)
BLAKE (clerk)
CLARK (manager)
SCOTT (manager)
KING (president)
TURNER (salesman)
ADAMS (clerk)
FORD (analyst)
MILLER (clerk)

36. Who was the first employee hired in each department
37. Create a view consisting of employees and their total sum of salary deptwise
38. How many employee work in New York?
39. Print a list of employees display just salary if more than 1500 if exactly 1500
40. Display on target if less than 1500 display below 1500

ENAME	SALARY
ADAMS	Below 1500
ALLEN	1600
BLAKE	2850
CLARK	2450
FORD	3000
JAMES	Below 1500
JONES	2975
KING	**5000**
MARTIN	Below 1500
MILLER	Below 1500
SCOTT	3000
SMITH	**Below 1500**
TURNER	ON TARGET
WARD	Below 1500

41. Determine the average salary of employees
42. List department number, department name, location, local commission paid and total salary of each department.
43. Display the average monthly salary bill for each job type within a department
44. To display only those jobs where the minimum salary is greater than or equal to 3000.

Exp-NO.5

45.Find the average salary and average total remuneration for each job type
remember salesman earn commission.
46.Find out the difference between highest and lowest salaries
47.Find all departments which have more than 3 employees
48.To display only those jobs where the maximum salary is greater than or equal to
3000.
49.Which of the two dates is smaller:
23/04/1999 or 20/07/1999
50. Find the employees who earn more than the lowest salary in each department.
51. Display employee who earn more than the lowest salary in department 30.
52. Find employees who earn more than every employee in department 30.
53. Find the job with highest average salary
54. To display all employee who earn less than their managers
55. Display the name of job, hiredate for employees whose salary is greater than the
highest salary.
56. Find out the names of the employees salary 2000 and working under FORD, BLAKE,
KING.
57. Find out all the jobs either in department 20 or where salary is greater than 3000.
58. Find out the employees who earn the highest salary in each department.
59. Display the employees who are doing the same job as 'FORD'.
60. List the employee name and minimum salary earned by employee in each
department.

EXP-No-6

61.List the top three earners in the company. Display their names and salary.
62.Display the employee working in TURNER'S department.
62. Find the employees who earn the highest salary in each job type.
Sort in the descending salary order.

64. Find the employees who earn the minimum salary for their job.
Sort in ascending order of salary
65. Find the most recently hired employees in each department.
66. List all the departments where there are no employees. (Use a subquery).
67. Display the department number and highest annual remuneration bill.
68. In which year did most people join the company ? Display the year and
number of employees.
69. List lowest paid employee working for each manager, exclude any group
where the minimum salary is less than 1000 sort the output by salary
70. List the employees who have at least one person reporting to them.
71. List the employee details if and only if more than 3 employees are presents in
department no 10.
72. List the name of the employees with their immediate higher authority.
73. List all the employees who do not manage any one .
74. List the employee details whose salary is greater than the lowest salary of an
employee belonging to deptno 20.
75. List the details of the employee earning more than the highest paid manager.

EXP-No- 7

76. List the highest salary paid for each job.
77. Find the most recently hired employee in each department.
78. In which year did most people join the company? Display the year and the number of employees.
79. Which department has the highest annual remuneration bill?
80. Write a query to display a '*' against the row of the most recently hired employee.
81. Write a correlated sub-query to list out the employees who earn more than the average salary of their department.
82. Find the 5th maximum salary.
83. Write a query to list the length of service of the employees (of the form n years and m
84. Create the following tables:

Table name: Vendor_table

Column Name	Format	Remarks
Vendor_no	number (4)	not null, primary key
Address	varchar2 (30)	
City	varchar2 (10)	
State	varchar2 (10)	
Contact_person	varchar2 (10)	

Table name: Price_info

Column Name	Format	Remarks
Part_number	number (4)	not null, primary key
Vendor_no	number (4)	not null, references Vendor_no of verdor_table
Category	varchar2 (6)	not null
Price	number (8,2)	default null

85 Create **the following tables using the specified constraints:**

Table name: itemmaster

Column Name	Format	Remarks
Itemid	char (4)	not null
Intemdesc	char (20)	
Rate	number (8,2)	

Table name: itemtran

Column Name	Format	Remarks
Ordid	char (4)	not null
Itemid	char (4)	not null
Quantity	number (2)	

1. Itemid must be the primary key in table itemmaster.

2. Itemid and ordid must be the primary key in table itemtran.

3. Itemid must be the foreign key in table itemtran.

86 Perform the following tasks on the above created tables :
a. Add the following records to the table itemmaster:

I001	Pens	12.4
I002	Pencils	2.5
I003	Rubbers	2.3

b. Add the following records to the table itemtran:

A001	i001	40
A001	i002	70
A002	i001	90
A003	i003	56

87. Add the following record to itemtran table and check if the record gets added or not:

A004	01	67

88. Drops table itemmaster and note the error message.
89. Drop table itemtran and then drop table item master. What conclusions can you draw, after performing the above tasks?
90. Insert 5 records each of above created tables.

EXP-NO.8

91. Create the Customer,salesperson and Oredrs table and insert following record into table

Customer

ID	Name	City	Industry Type
4	Samsonic	pleasant	J
6	Panasung	oaktown	J
7	Samony	jackson	B
9	Orange	Jackson	B

Saleperson

ID	Name	Age	Salary
1	Abe	61	
2	Bob	34	44000
5	Chris	34	40000
7	Dan	41	52000
8	Ken	57	115000
11	Joe	38	38000

Orders

Number	order_date	cust_id	salesperson_id	Amount
10	8/2/96	4	2	540
20	1/30/99	4	8	1800
30	7/14/95	9	1	460
40	1/29/98	7	2	2400
50	2/3/98	6	7	600
60	3/2/98	6	7	720
70	5/6/98	9	7	150

Given the tables above, find the following:

92. The names of all salespeople that have an order with Samsonic.
93. The names of all salespeople that do not have any order with Samsonic.
94. The names of salespeople that have 2 or more orders.
94. Write a SQL statement to insert rows into a table called highAchiever(Name, Age), where a salesperson must have a salary of 100,000 or greater to be included in the table.

EXP-NO.9

Consider the following database for a Banking Enterprise

BRANCH (***branch_name***: char, branch_city: char, assets: int)
ACCOUNT (***accno***: int, **branch_name**: char, balance: int)
CUSTOMER (***customer_name***: char, customer_street: char, city: char)
DEPOSITOR (***customer_name***: varchar, ***accno***: int)
LOAN (***loan_number***: int, **branch_name**: varchar, amount: float)
BORROWER (***customer_name***: varchar, ***loan_number***: int)

(1) Create the above tables by properly specifying the primary keys and the foreign keys.
(2) Enter at least five tuples for each relation.
(3) Find all the customers who at least two accounts at the ***MAIN*** branch.
(4) Find all the customers who have an account at ***all*** branches located in a specific city.
(5) Demonstrate how you delete all account tuples at every branch located in a specific. city
(7) Generation of suitable reports.
[a] Display the names of all the customer who have taken loan , count of the number of loans taken and the total amount taken up each customer.
[b] Find the names of all the customers who have taken the loan in a particular branch.
[c] Update the balance for the customer with a given customer name to 10000.

EXP-NO.10

Consider the following relations for the details maintained by a B**ook Dealer**.

AUTHOR (Author-id: int, Name: Varchar, City: string, Country: Varchar)
PUBLISHER (Publisher-id: int, Name: string, City: varchar, Country: Varchar)
CATALOG (Book-id: int, title: string, author-id: int, Publisher-id: int, Category-id: int, Year: int, Price: int)
CATEGORY (Category-id: int, Description: varchar)
ORDER-DETAILS (Order-no : int, Book-id: int, Quantity: int)

(1) Create the above tables by properly specifying the primary keys and the foreign keys.
(2) Enter at least five tuples for each relation.
(4) Give the details of the authors who have 2 or more books in the catalog and the price of
the books is greater than the average price of the books in the catalog and the year of publication is after 2000.
(4) Find the author of the book which has maximum sales.
(5) Demonstrate how you increase the price of books published by a specific publisher by 10%.