

SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE		DEPARTMENT OF COMPUTER SCIENCE ENGINEERING	
<b>Program Name:</b> B. Tech		<b>Assignment Type:</b> Lab	
<b>Course Coordinator Name</b>		Venkataramana Veeramsetty	
<b>Instructor(s) Name</b>		Dr. V. Venkataramana (Co-ordinator) Dr. T. Sampath Kumar Dr. Pramoda Patro Dr. Brij Kishor Tiwari Dr.J.Ravichander Dr. Mohammand Ali Shaik Dr. Anirodh Kumar Mr. S.Naresh Kumar Dr. RAJESH VELPULA Mr. Kundhan Kumar Ms. Ch.Rajitha Mr. M Prakash Mr. B.Raju Intern 1 (Dharma teja) Intern 2 (Sai Prasad) Intern 3 (Sowmya) NS_2 ( Mounika)	
<b>Course Code</b>	24CS002PC215	<b>Course Title</b>	AI Assisted Coding
<b>Year/Sem</b>	II/I	<b>Regulation</b>	R24
<b>Date and Day of Assignment</b>	Week9 - Tuesday	<b>Time(s)</b>	
<b>Duration</b>	2 Hours	<b>Applicable to Batches</b>	
<b>AssignmentNumber:</b> 16.2(Present assignment number)/24(Total number of assignments)			
<b>Q.No.</b>	<b>Question</b>		<b>Expected Time to complete</b>
1	1.1. Display all records from the employee's table. 2. 2. Display only employee names and their departments. 3. 3. Show unique department names. 4. 4. Find employees with salary greater than 50000. 5. 5. Find employees from the IT department. 6. 6. Display employees hired after 2020. 7. 7. Show employees in ascending order of salary.		Week9 - Monday

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| <p>8. 8. Show top 3 highest-paid employees.</p> <p>9. 9. Count total employees in the company.</p> <p>10. 10. Find the average salary of employees.</p> <p>11. 11. Find the highest and lowest salary.</p> <p>12. 12. Find total salary expenditure per department.</p> <p>13. 13. Display departments having more than one employee.</p> <p>14. 14. Show average salary by department.;</p> <p>15. 15. Count employees hired each year.</p> <p>16. 16. List employees with their department locations.</p> <p>17. 17. Find employees working in Bangalore.</p> <p>18. 18. Display all employees even if they don't belong to a department.</p> <p>19. 19. Find departments with no employees.</p> <p>20. 20. Count employees in each department.</p> <p>21. 21. Find employees earning above average salary.</p> <p>22. 22. Find the department with the highest average salary.</p> <p>23. 23. Find employees hired most recently.</p> <p>24. 24. Find employees earning the second highest salary.</p> <p>25. 25. Find all employees in the same department as 'Amit Sharma'.</p> <p>26. 26. Increase salary by 10% for IT employees.</p> <p>27. 27. Change department of employee 'Ravi' to Marketing.</p> <p>28. 28. Delete employees with salary below 40000.</p> <p>29. 29. Add a new column 'email' to employees.</p> <p>30. 30. Update email IDs for all employees.</p> <p>31. 31. Find top 2 departments by average salary.</p> <p>32. 32. Find how many employees work in each city.</p> <p>33. 33. Show employee count and total salary together.</p> <p>34. 34. Display employees with names starting with 'A'.</p> <p>35. 35. Display employees whose last name ends with 'a'.</p> <p>36. 36. Find employees hired in 2020.</p> <p>37. 37. Show number of days since each employee was hired.</p> <p>38. 38. Display employee names in uppercase.</p> <p>39. 39. Concatenate first and last names.</p> <p>40. 40. Find employees whose salary is between 45000 and 60000.</p> <p>41. 41. Create a view for high salary employees (&gt;55000).</p> <p>42. 42. Display all records from the view.</p> <p>43. 43. Add NOT NULL constraint to department name.</p> <p>44. 44. Drop the view.</p> <p>45. 45. Rename the employees table to staff.</p> <p>46. 46. Create a backup copy of the employees table.</p> <p>47. 47. Delete all data but keep the structure.</p> <p>48. 48. Drop the employees backup table.</p> |  |
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	49. 49. Create an index on employee last name. 50. 50. Drop the index.	
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Employee Table

emp_id	first_name	last_name	department	salary	hire_date
1	Amit	Sharma	HR	45000	2020-05-20
2	Priya	Patel	Finance	60000	2021-02-10
3	Ravi	Kumar	IT	55000	2019-08-14
4	Neha	Reddy	Marketing	48000	2022-01-05
5	Arjun	Singh	IT	62000	2020-09-12

Department Table

dept_id	dept_name	location
1	HR	Hyderabad
2	Finance	Mumbai
3	IT	Bangalore
4	Marketing	Chennai
5	Operations	Delhi

Code:

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1 CREATE DATABASE IF NOT EXISTS company;
2 USE company;
3
4 DROP TABLE IF EXISTS employees;
5 CREATE TABLE employees (
6     emp_id INT AUTO_INCREMENT PRIMARY KEY,
7     first_name VARCHAR(50),
8     last_name VARCHAR(50),
9     department VARCHAR(50),
10    salary DECIMAL(10,2),
11    hire_date DATE
12 );
13
14 DROP TABLE IF EXISTS departments;
15 CREATE TABLE departments (
16     dept_id INT AUTO_INCREMENT PRIMARY KEY,
17     dept_name VARCHAR(50) NOT NULL,
18     location VARCHAR(50)
19 );
20
21 INSERT INTO departments (dept_name, location) VALUES
22 ('HR', 'Hyderabad'),
23 ('Finance', 'Mumbai'),
24 ('IT', 'Bangalore'),
25 ('Marketing', 'Delhi'),
26 ('R&D', 'Chennai');
27
28 INSERT INTO employees (first_name, last_name, department, salary, hire_date) VALUES
29 ('Amit', 'Sharma', 'HR', 45000, '2020-05-20'),
30 ('Priya', 'Patel', 'Finance', 60000, '2021-02-10'),
31 ('Ravi', 'Kumar', 'IT', 55000, '2019-08-14'),
32 ('Neha', 'Reddy', 'Marketing', 48000, '2022-01-05'),
33 ('Arjun', 'Singh', 'IT', 62000, '2020-09-12')

```

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```

33 ('Arjun', 'Singh', 'IT', 62000, '2020-09-12'),
34 ('Sonja', 'Verma', 'Finance', 70000, '2021-06-01');

35
36 SELECT * FROM employees;
37 SELECT first_name, last_name, department FROM employees;
38 SELECT DISTINCT department FROM employees;
39 SELECT * FROM employees WHERE salary > 50000;
40 SELECT * FROM employees WHERE department = 'IT';
41 SELECT * FROM employees WHERE hire_date > '2020-12-31';
42 SELECT * FROM employees ORDER BY salary ASC;
43 SELECT * FROM employees ORDER BY salary DESC LIMIT 3;
44 SELECT COUNT(*) AS total_employees FROM employees;
45 SELECT AVG(salary) AS average_salary FROM employees;
46 SELECT MAX(salary) AS max_salary, MIN(salary) AS min_salary FROM employees;
47 SELECT department, SUM(salary) AS total_expenditure FROM employees GROUP BY department;
48 SELECT department FROM employees GROUP BY department HAVING COUNT(*) > 1;
49 SELECT department, AVG(salary) AS avg_salary FROM employees GROUP BY department;
50 SELECT YEAR(hire_date) AS hire_year, COUNT(*) AS employees_hired FROM employees GROUP BY hire_year ORDER BY hire_year;
51 SELECT e.first_name, e.last_name, e.department, d.location FROM employees e JOIN departments d ON e.department = d.dept_name;
52 SELECT e.* FROM employees e JOIN departments d ON e.department = d.dept_name WHERE d.location = 'Bangalore';
53 SELECT * FROM employees e LEFT JOIN departments d ON e.department = d.dept_name;
54 SELECT d.dept_name FROM departments d LEFT JOIN employees e ON d.dept_name = e.department WHERE e.emp_id IS NULL;
55 SELECT d.dept_name, COUNT(e.emp_id) AS employee_count FROM departments d LEFT JOIN employees e ON d.dept_name = e.department GROUP BY d.dept_name;
56 SELECT * FROM employees WHERE salary > (SELECT AVG(salary) FROM employees);
57 SELECT department FROM employees GROUP BY department ORDER BY AVG(salary) DESC LIMIT 1;
58 SELECT * FROM employees ORDER BY hire_date DESC LIMIT 1;
59 SELECT * FROM employees ORDER BY salary DESC LIMIT 1 OFFSET 1;
60 SELECT * FROM employees WHERE department = (SELECT department FROM employees WHERE first_name = 'Amit' AND last_name = 'Sharma');
61

```

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46 SELECT MAX(salary) AS max_salary, MIN(salary) AS min_salary FROM employees;
47 SELECT department, SUM(salary) AS total_expenditure FROM employees GROUP BY department;
48 SELECT department FROM employees GROUP BY department HAVING COUNT(*) > 1;
49 SELECT department, AVG(salary) AS avg_salary FROM employees GROUP BY department;
50 SELECT YEAR(hire_date) AS hire_year, COUNT(*) AS employees_hired FROM employees GROUP BY hire_year ORDER BY hire_year;
51 SELECT e.first_name, e.last_name, e.department, d.location FROM employees e JOIN departments d ON e.department = d.dept_name;
52 SELECT e.* FROM employees e JOIN departments d ON e.department = d.dept_name WHERE d.location = 'Bangalore';
53 SELECT * FROM employees e LEFT JOIN departments d ON e.department = d.dept_name;
54 SELECT d.dept_name FROM departments d LEFT JOIN employees e ON d.dept_name = e.department WHERE e.emp_id IS NULL;
55 SELECT d.dept_name, COUNT(e.emp_id) AS employee_count FROM departments d LEFT JOIN employees e ON d.dept_name = e.department GROUP BY d.dept_name;
56 SELECT * FROM employees WHERE salary > (SELECT AVG(salary) FROM employees);
57 SELECT department FROM employees GROUP BY department ORDER BY AVG(salary) DESC LIMIT 1;
58 SELECT * FROM employees ORDER BY hire_date DESC LIMIT 1;
59 SELECT * FROM employees ORDER BY salary DESC LIMIT 1 OFFSET 1;
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