Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam
(An Autonomous Institution, Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Date: 21-03-2023

<table>
<tr><td>Course Code</td><td colspan="2">UCS2411</td><td>Course Name</td><td colspan="6">Database Lab</td></tr>
<tr><td rowspan="2">Course Type</td><td colspan="2" rowspan="2">Lab</td><td rowspan="2">Course Category</td><td colspan="2" rowspan="2">Professional Core (PC)</td><td>L</td><td>T</td><td>P</td><td>E</td><td>C</td></tr>
<tr><td>0</td><td>0</td><td>3</td><td>0</td><td>1.5</td></tr>
<tr><td>Regulation</td><td colspan="3">2021</td><td colspan="2">Academic Year & Batch</td><td colspan="4">2022 - 23 & 2021 - 25</td></tr>
<tr><td colspan="4">Degree and Branch</td><td colspan="6">B.E. Computer Science & Engineering</td></tr>
<tr><td colspan="4">Semester</td><td colspan="6">IV</td></tr>
<tr><td colspan="2">Assignment No.</td><td colspan="2">2</td><td>Assigned Date</td><td>21-03-2023</td><td>Due Date</td><td colspan="3">06-04-2023</td></tr>
<tr><td colspan="4">Name of the Faculty</td><td colspan="6">Dr. N. Sujaudeen & Dr. P. Mirunalini</td></tr>
<tr><td colspan="10">Title: DML Fundamentals</td></tr>
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Manipulating Sailor Information Using DML

Aim: To learn the following:

a) Update operations such as INSERT, UPDATE, DELETE
b) Controlling the transactions using COMMIT, SAVEPOINT, ROLLBACK
c) SELECT Clause
   i) Using arithmetic operators, logical operators
   ii) Using LIKE, BETWEEN, IN keywords
   iii) Using Character, Date, Number and Aggregate functions
   iv) Using GROUP BY, HAVING, ORDER BY

1. Insert the following data into Sailor relation:

Sailor ID	*Name*	*rating*	*DOB*	*Salary*
S100	Raman	A	01-OCT-80	27000
S200	Krishna	B	04-JUL-78	21000
S300	Gokul	C	05-FEB-75	16000
S400	Ravi	D	06-APR-84	10000
S500	James	A	07-MAR-83	25000

S600	Vasanth	B	20-MAR-85	20600
S700	Rahul	C	13-DEC-85	15500
S800	Vijay	null	13-DEC-90	5000

2. Display the name and salary of sailors earning more than $10000.
3. Display the unique ratings of sailor from the SAILOR relation.
4. Display sailor name, hike salary by 10% and label the columns as `Sailor Name` and `New Salary` respectively.
5. List sailor id, name, salary of all sailor(s) who was not rated yet.
6. Show all data for sailors whose name starts with R and born before the year 1985.
7. Display name, rating, salary of all sailors whose rating is A or B and whose salary is not equal to $21000 and $25000.
8. Modify the query in 2 to display the name and salary of all sailors whose salary is not in the range of $10000 to $16000.
9. List the sailors who was born between Jan 1985 and Dec 1985.
10. Show the name of sailors together with their age in number of years and months. [E.g., 18 Yrs 4 Months].
11. Display the sailor id and name of a sailor whose name has second letter *a*. Sort the result by name in descending order.
12. Show those sailors whose name starts with J, K, or R.
13. How many sailors have a name that ends with letter *l*.
14. Display highest, lowest, sum and average salary earned by the sailors in rating-wise. Label the columns as Max, Min, Sum, and Avg respectively. Round your results to the nearest whole number. Sort your result by alphabetical order of rating.
15. Display the total salary for each rating. Exclude the ratings where the total salary is less than $25000.
16. Display the rating and salary of the lowest paid sailor in each rating. Exclude anyone whose rating is not known. Exclude any groups where the minimum salary is $15000 or less. Sort the output in descending order of salary.

<u>Using Update, Delete, TCL Statements</u>

17. Mark an intermediate point in the transaction (savepoint).

18. Update the rating, salary of S800 to A, 10000 respectively.
19. Mark an intermediate point in the transaction (savepoint).
20. Update the salary of all sailors with a hike by 5%.
21. Delete the sailor(s) who was born before 1985.
22. Display the sailor relation.
23. Discard the most recent update operations (rollback).
24. Commit the changes.

What you have to submit:

1. Schema Diagram with constraints
2. Demo script file