YOUR TP-NUMBER: TP074086
YOUR FULL NAME WITH SALUTATION(MS/MR): Mr. NG KIM CHYE

Answer all the questions below:

Use the datasets given and write program in SAS for the scenario given

Q1: List the details (name, salary, job position, department name, and location) of the salesmen or managers who work at **DALLASs** and whose salary is between 1200 and 3200.

ANSWER:

```
/*************************************************************************
Q1: List the details (name, salary, job position, department name, and location) of the salesmen or managers who work
at DALLASs and whose salary is between 1200 and 3200.
ANSWER
*************************************************************************/

TITLE1 'Q1 - List the details (name, salary, job position, department name, and location) of the salesmen or managers who work';
TITLE2 'at DALLASs and whose salary is between 1200 and 3200.';
FOOTNOTE '----------End----------';

PROC SQL;

SELECT e.emp_name Label = 'Employee Name',
     e.emp_salary Label = 'Salary',
        e.emp_job Label = 'Job',
      d.dept_name Label = 'Department Name',
       d.dept_loc Label = 'Department Location'
FROM DAP74086.EMPLOYEE_DS e
, DAP74086.DEPARTMENT_DS d
WHERE ( ( e.dept_no eq d.dept_no ) AND
        ( d.dept_loc eq 'DALLAS' ) AND                      /* work at DALLASs */
        ( e.emp_job IN ( 'SALESMAN','MANAGER' ) ) AND        /* salesmen or managers */
        ( e.emp_salary BETWEEN 1200 AND 3200 ) );           /* and whose salary is between 1200 and 3200. */

QUIT;
```

Q1 - List the details (name, salary, job position, department name, and location) of the salesmen or managers who work at DALLASs and whose salary is between 1200 and 3200.

Employee Name	Salary	Job	Department Name	Department Location
JONES	2975	MANAGER	RESEARCH	DALLAS

----------End----------

2 | MASTERING IN SAS PROGRAMMING

Q2: Find the employees (name, number, department name, salary) who earn more than **JONES** or **FORD**. Display the employee details in ascending order by salary.

ANSWER:

```
/*************************************************************************
Q2: Find the employees (name, number, department name, salary) who earn more than JONES or FORD. Display the employee
details in ascending order by salary.
ANSWER:
*************************************************************************/

TITLE1 'Q2 - Find the employees (name, number, department name, salary) who earn more than JONES or FORD. Display the employee';
TITLE2 'details in ascending order by salary.';
FOOTNOTE '----------End----------';

PROC SQL;

SELECT e.emp_name Label = 'Employee Name',
         e.emp_id Label = 'Employee Number',
      d.dept_name Label = 'Department Name',
     e.emp_salary Label = 'Salary'
FROM DAP74086.EMPLOYEE_DS e
, DAP74086.DEPARTMENT_DS d
WHERE ( ( e.dept_no eq d.dept_no ) AND
        ( e.emp_name NOT IN ('JONES','FORD') ) AND
        ( ( e.emp_salary gt (SELECT emp_salary Label = 'Salary of JONES'
                             FROM DAP74086.EMPLOYEE_DS
                             WHERE emp_name = 'JONES') ) OR
          /* Above is a sub-program to find the salary of JONES */

          ( e.emp_salary gt (SELECT emp_salary Label = 'Salary of FORD'
                             FROM DAP74086.EMPLOYEE_DS
                             WHERE emp_name = 'FORD') )
          /* Above is a sub-program to find the salary of FORD */
        )
      )
ORDER BY e.emp_salary;                                    /* ascending order by salary */

QUIT;
```

Q2 - Find the employees (name, number, department name, salary) who earn more than JONES or FORD. Display the employee details in ascending order by salary.

Employee Name	Employee Number	Department Name	Salary
SCOTT	7788	RESEARCH	3000
KING	7839	ACCOUNTING	5000

----------End----------

3 | MASTERING IN SAS PROGRAMMING

Q3: Provide the department number, sum of salaries for all personnel in each department, number of employees working in each department, lowest salary in each department, and highest salary in each department.

ANSWER:

```
/*************************************************************************
Q3: Provide the department number, sum of salaries for all personnel in each department, number of employees working in
each department, lowest salary in each department, and highest salary in each department.
ANSWER:
*************************************************************************/

TITLE1 'Q3 - Provide the department number, sum of salaries for all personnel in each department, number of employees working in';
TITLE2 'each department, lowest salary in each department, and highest salary in each department.';
FOOTNOTE '----------End----------';

PROC SQL;

SELECT    d.dept_name Label = 'Department Name',
  SUM( e.emp_salary ) Label = 'Total Salary',                  /* sum of salaries for all personnel in each department */
    COUNT( e.emp_id ) Label = 'Number of employee',            /* number of employees working in each department */
  MIN( e.emp_salary ) Label = 'Lowest Salary',                 /* lowest salary in each department */
  MAX( e.emp_salary ) Label = 'Highest Salary'                 /* highest salary in each department. */

FROM DAP74086.EMPLOYEE_DS e
, DAP74086.DEPARTMENT_DS d
WHERE ( ( e.dept_no eq d.dept_no ) )
GROUP BY d.dept_name;

QUIT;
```

Q3 - Provide the department number, sum of salaries for all personnel in each department, number of employees working in each department, lowest salary in each department, and highest salary in each department.

Department Name	Total Salary	Number of employee	Lowest Salary	Highest Salary
ACCOUNTING	8750	3	1300	5000
RESEARCH	10875	5	800	3000
SALES	9400	6	950	2850

----------End----------

4 | MASTERING IN SAS PROGRAMMING

Q4: Raise staff salaries by 10% for those working in the 'NEW YORK' department or for those who work as salesmen or managers.

ANSWER:

```
/*************************************************************************
Q4: Raise staff salaries by 10% for those working in the 'NEW YORK' department or for those who work as salesmen or
managers.
ANSWER:
*************************************************************************/

TITLE1 "(Before) Q4 - Raise staff salaries by 10% for those working in the 'NEW YORK' department or for those who work as salesmen or";
TITLE2 'managers.';
FOOTNOTE '----------End----------';

PROC SQL;

SELECT e.emp_id Label = 'Employee Number',
     e.emp_name Label = 'Name',
   e.emp_salary Label = 'Salary'
FROM DAP74086.EMPLOYEE_DS e
, DAP74086.DEPARTMENT_DS d
WHERE ( ( e.dept_no eq d.dept_no ) AND
        ( d.dept_loc = 'NEW YORK' ) AND
        ( e.emp_job IN ( 'SALESMAN','MANAGER' ) ) );

QUIT;
```

```
/* Update the employee salary */
PROC SQL;

UPDATE DAP74086.EMPLOYEE_DS
SET emp_salary = ( emp_salary * 1.1)
WHERE ( ( emp_job IN ( 'SALESMAN','MANAGER' ) ) AND
        ( dept_no eq ( SELECT dept_no
                       FROM DAP74086.DEPARTMENT_DS
                       WHERE dept_loc = 'NEW YORK') ) );

QUIT;

TITLE1 "(After) Q4 - Raise staff salaries by 10% for those working in the 'NEW YORK' department or for those who work as salesmen or";
TITLE2 'managers.';
FOOTNOTE '----------End----------';

PROC SQL;

SELECT e.emp_id Label = 'Employee Number',
     e.emp_name Label = 'Name',
   e.emp_salary Label = 'Salary'
FROM DAP74086.EMPLOYEE_DS e
, DAP74086.DEPARTMENT_DS d
WHERE ( ( e.dept_no eq d.dept_no ) AND
        ( d.dept_loc = 'NEW YORK' ) AND
        ( e.emp_job IN ( 'SALESMAN','MANAGER' ) ) );

QUIT;
```

```
92          UPDATE DAP74086.EMPLOYEE_DS
93          SET emp_salary = ( emp_salary * 1.1)
94          WHERE ( ( emp_job IN ( 'SALESMAN','MANAGER' ) ) AND
95                  ( dept_no eq ( SELECT dept_no
96                                 FROM DAP74086.DEPARTMENT_DS
97                                 WHERE dept_loc = 'NEW YORK') ) );
NOTE: 1 row was updated in DAP74086.EMPLOYEE_DS.
```

(Before) Q4 - Raise staff salaries by 10% for those working in the 'NEW YORK' department or for those who work as salesmen or managers.

Employee Number	Name	Salary
7782	CLARK	2450

----------End----------

(After) Q4 - Raise staff salaries by 10% for those working in the 'NEW YORK' department or for those who work as salesmen or managers.

Employee Number	Name	Salary
7782	CLARK	2695

----------End----------

5 | MASTERING IN SAS PROGRAMMING

Q5: Delete the details of the managers and salesmen who work in the 'NEW YORK' department and earn salaries between 3200 and 5000.

ANSWER:

```
/*************************************************************************
Q5: Delete the details of the managers and salesmen who work in the 'NEW YORK' department and earn salaries between
3200 and 5000.
ANSWER:
*************************************************************************/

TITLE1 "(Before) Q5 - Delete the details of the managers and salesmen who work in the 'NEW YORK' department and earn salaries between ";
TITLE2 '3200 and 5000.';
FOOTNOTE '----------End----------';

PROC SQL;

SELECT e.emp_id Label = 'Employee Number',
     e.emp_name Label = 'Name',
   e.emp_salary Label = 'Salary'
FROM DAP74086.EMPLOYEE_DS e
, DAP74086.DEPARTMENT_DS d
WHERE ( ( e.dept_no eq d.dept_no ) AND
        ( d.dept_loc = 'NEW YORK' ) AND
        ( e.emp_job IN ( 'SALESMAN','MANAGER' ) ) AND
        ( e.emp_job BETWEEN 3200 AND 5000 ) );

QUIT;
```

```
/* Delete the employee detail */
PROC SQL;

DELETE FROM DAP74086.EMPLOYEE_DS
WHERE ( ( emp_job IN ( 'SALESMAN','MANAGER' ) ) AND
        ( emp_job BETWEEN 3200 AND 5000 ) AND
        ( dept_no eq ( SELECT dept_no
                       FROM DAP74086.DEPARTMENT_DS
                       WHERE dept_loc = 'NEW YORK') ) );

QUIT;

TITLE1 "(After) Q5 - Delete the details of the managers and salesmen who work in the 'NEW YORK' department and earn salaries between ";
TITLE2 '3200 and 5000.';
FOOTNOTE '----------End----------';

PROC SQL;

SELECT e.emp_id Label = 'Employee Number',
     e.emp_name Label = 'Name',
   e.emp_salary Label = 'Salary'
FROM DAP74086.EMPLOYEE_DS e
, DAP74086.DEPARTMENT_DS d
WHERE ( ( e.dept_no eq d.dept_no ) AND
        ( d.dept_loc = 'NEW YORK' ) AND
        ( e.emp_job IN ( 'SALESMAN','MANAGER' ) ) AND
        ( e.emp_job BETWEEN 3200 AND 5000 ) );

QUIT;
```

```
93          DELETE FROM DAP74086.EMPLOYEE_DS
94          WHERE ( ( emp_job IN ( 'SALESMAN','MANAGER' ) ) AND
95                  ( emp_job BETWEEN 3200 AND 5000 ) AND
96                  ( dept_no eq ( SELECT dept_no
97                                 FROM DAP74086.DEPARTMENT_DS
98                                 WHERE dept_loc = 'NEW YORK') ) );
NOTE: No rows were deleted from DAP74086.EMPLOYEE_DS.
```

(Before) Q5 - Delete the details of the managers and salesmen who work in the 'NEW YORK' department and earn salaries between 3200 and 5000.

----------End----------

(After) Q5 - Delete the details of the managers and salesmen who work in the 'NEW YORK' department and earn salaries between 3200 and 5000.

----------End----------