## Practice 3

### Part 1

1. Write a query to display the system date. Label the column as `Date`.

   **Note:** If your database is remotely located in a different time zone, the output will be the date for the operating system on which the database resides.

| | Date |
|---|---|
| 1 | 31-MAY-07 |

2. The HR department needs a report to display the employee number, last name, salary, and salary increased by 15.5% (expressed as a whole number) for each employee. Label the column `New Salary`. Save your SQL statement in a file named `lab_03_02.sql`.

3. Run your query in the `lab_03_02.sql` file.

| | EMPLOYEE_ID | LAST_NAME | SALARY | New Salary |
|---|---|---|---|---|
| 1 | 100 | King | 24000 | 27720 |
| 2 | 101 | Kochhar | 17000 | 19635 |
| 3 | 102 | De Haan | 17000 | 19635 |
| 4 | 103 | Hunold | 9000 | 10395 |
| 5 | 104 | Ernst | 6000 | 6930 |
| 6 | 107 | Lorentz | 4200 | 4851 |
| 7 | 124 | Mourgos | 5800 | 6699 |
| 8 | 141 | Rajs | 3500 | 4043 |
| 9 | 142 | Davies | 3100 | 3581 |
| 10 | 143 | Matos | 2600 | 3003 |
| ▪ ▪ ▪ | | | | |
| 19 | 205 | Higgins | 12000 | 13860 |
| 20 | 206 | Gietz | 8300 | 9587 |

4. Modify your query `lab_03_02.sql` to add a column that subtracts the old salary from the new salary. Label the column `Increase`. Save the contents of the file as `lab_03_04.sql`. Run the revised query.

| | EMPLOYEE_ID | LAST_NAME | SALARY | New Salary | Increase |
|---|---|---|---|---|---|
| 1 | 100 | King | 24000 | 27720 | 3720 |
| 2 | 101 | Kochhar | 17000 | 19635 | 2635 |
| 3 | 102 | De Haan | 17000 | 19635 | 2635 |
| 4 | 103 | Hunold | 9000 | 10395 | 1395 |
| 5 | 104 | Ernst | 6000 | 6930 | 930 |
| ▪ ▪ ▪ | | | | | |
| 20 | 206 | Gietz | 8300 | 9587 | 1287 |

## Practice 3 (continued)

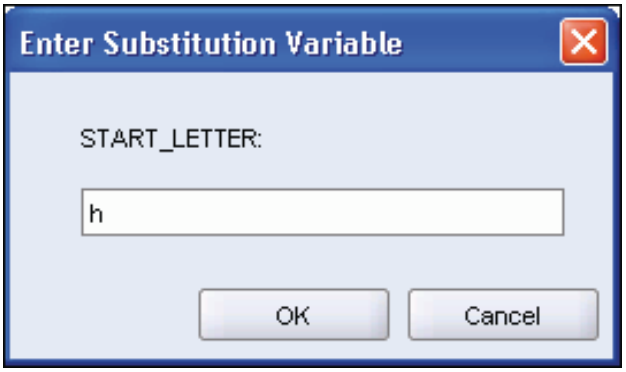
5. Write a query that displays the last name (with the first letter in uppercase and all the other letters in lowercase) and the length of the last name for all employees whose name starts with the letters "J," "A," or "M." Give each column an appropriate label. Sort the results by the employees' last names.

| | Name | Length |
|---|---|---|
| 1 | Abel | 4 |
| 2 | Matos | 5 |
| 3 | Mourgos | 7 |

Rewrite the query so that the user is prompted to enter a letter that the last name starts with. For example, if the user enters "H" (capitalized) when prompted for a letter, then the output should show all employees whose last name starts with the letter "H."

| | Name | Length |
|---|---|---|
| 1 | Hartstein | 9 |
| 2 | Higgins | 7 |
| 3 | Hunold | 6 |

Modify the query such that the case of the entered letter does not affect the output. The entered letter must be capitalized before being processed by the `SELECT` query.




| | Name | Length |
|---|---|---|
| 1 | Hartstein | 9 |
| 2 | Higgins | 7 |
| 3 | Hunold | 6 |

## Practice 3 (continued)

6. The HR department wants to find the duration of employment for each employee. For each employee, display the last name and calculate the number of months between today and the date on which the employee was hired. Label the column as `MONTHS_WORKED`. Order your results by the number of months employed. Round the number of months up to the closest whole number.
   **Note:** Because this query depends on the date when it was executed, the values in the `MONTHS_WORKED` column will differ for you.

| | LAST_NAME | MONTHS_WORKED |
|---|---|---|
| 1 | Zlotkey | 88 |
| 2 | Mourgos | 90 |
| 3 | Grant | 96 |
| 4 | Lorentz | 100 |
| 5 | Vargas | 107 |
| 6 | Taylor | 110 |
| 7 | Matos | 111 |
| 8 | Fay | 117 |
| 9 | Davies | 124 |
| 10 | Abel | 133 |
| 11 | Hartstein | 135 |
| 12 | Rajs | 139 |
| 13 | Higgins | 156 |
| 14 | Gietz | 156 |
| 15 | De Haan | 173 |
| 16 | Ernst | 192 |
| 17 | Hunold | 209 |
| 18 | Kochhar | 212 |
| 19 | Whalen | 236 |
| 20 | King | 239 |

## Practice 3 (continued)

If you have time, complete the following exercises:

7. Create a query to display the last name and salary for all employees. Format the salary to be 15 characters long, left-padded with the $ symbol. Label the column as `SALARY`.

| | LAST_NAME | SALARY |
|---|---|---|
| 1 | King | $$$$$$$$$24000 |
| 2 | Kochhar | $$$$$$$$$17000 |

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| | | |
|---|---|---|
| 20 | Gietz | $$$$$$$$$$8300 |

8. Create a query that displays the first eight characters of the employees' last names and indicates the amounts of their salaries with asterisks. Each asterisk signifies a thousand dollars. Sort the data in descending order of salary. Label the column as `EMPLOYEES_AND_THEIR_SALARIES`.

| | EMPLOYEES_AND_THEIR_SALARIES |
|---|---|
| 1 | King ************************ |
| 2 | Kochhar ***************** |
| 3 | De Haan ***************** |
| 4 | Hartstei ************ |
| 5 | Higgins ********** |

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| | | |
|---|---|---|
| 19 | Matos | ** |
| 20 | Vargas | ** |

9. Create a query to display the last name and the number of weeks employed for all employees in department 90. Label the number of weeks column as `TENURE`. Truncate the number of weeks value to 0 decimal places. Show the records in descending order of the employee's tenure.
**Note:** The `TENURE` value will differ as it depends on the date on which you run the query.

| | LAST_NAME | TENURE |
|---|---|---|
| 1 | King | 1041 |
| 2 | Kochhar | 923 |
| 3 | De Haan | 750 |