


SQL CAPSTONE PROJECT ON

NEXGEN CORP

24TH MAY 2025

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CASE OVERVIEW

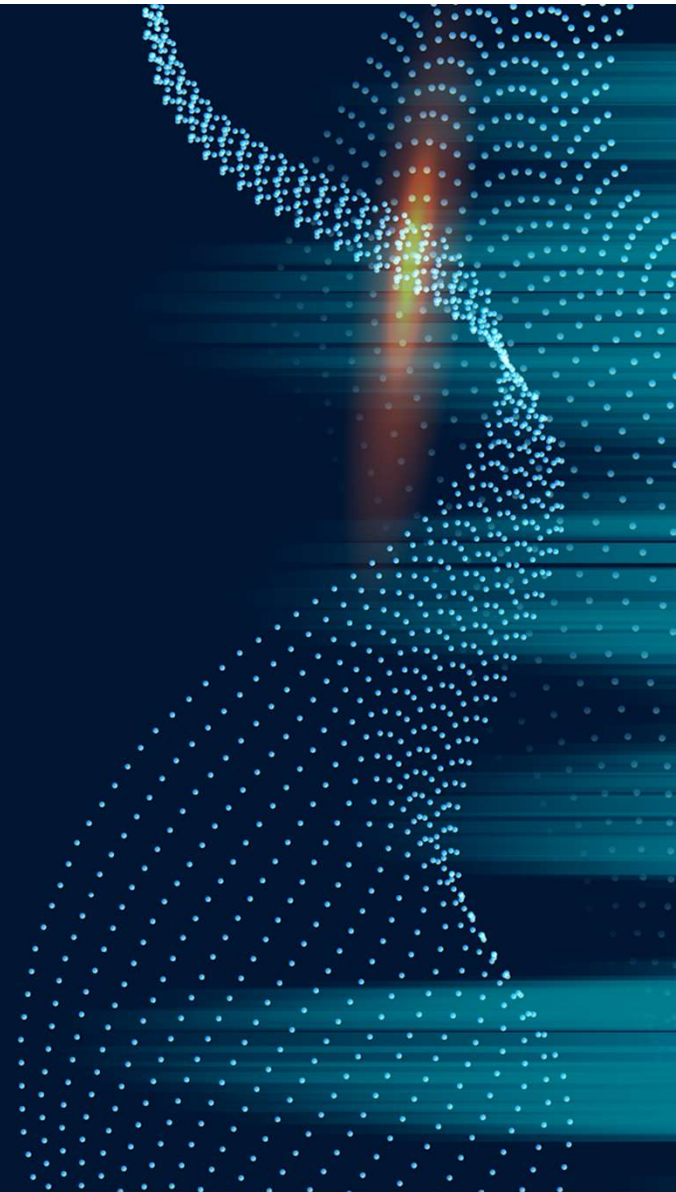
NextGen Corp is a growing technology company focused on developing innovative solutions in the software and hardware spaces. The company prides itself on attracting top talent and maintaining high employee satisfaction to drive growth. However, there are increasing concerns regarding employee turnover, performance variability, and salary disparities within departments.

To ensure continued success, NextGen Corp. needs to optimize employee retention, track employee performance consistently, and maintain fair salary structures across departments.



AIM/OBJECTIVES

- ❖ Identify trends and patterns in employee retention and turnover.
- ❖ Track and evaluate performance across different departments.
- ❖ Assess the relationship between salary and performance to ensure fairness and employee satisfaction.



EMPLOYEE RETENTION ANALYSIS

- WHO ARE THE TOP 5 HIGHEST SERVING EMPLOYEE?

Moore, Smith, Brown, Johnson and Doe are the Highest serving employee in NexGen Corp company.

| | employee_id [PK] integer | first_name character varying (30) | last_name character varying (30) | hire_date date |
|---------------|-----------------------------|--------------------------------------|-------------------------------------|-------------------|
| 1 | 8 | David | Moore | 2015-06-30 |
| 2 | 48 | Frank | Smith | 2015-09-08 |
| 3 | 67 | Jane | Brown | 2015-10-12 |
| 4 | 44 | John | Johnson | 2015-10-27 |
| 5 | 57 | John | Doe | 2016-02-16 |
| Total rows: 5 | | Query complete 00:00:00.241 | | |

EMPLOYEE RETENTION ANALYSIS

What is the turnover for each department?

The highest turnover is Marketing department with the total of 23

| | department_name character varying (30) | total_turnovers bigint |
|---------------|---|-----------------------------|
| 1 | Marketing | 23 |
| 2 | Engineering | 20 |
| 3 | HR | 10 |
| 4 | Sales | 7 |
| Total rows: 4 | | Query complete 00:00:00.342 |

EMPLOYEE RETENTION ANALYSIS

WHICH EMPLOYEES ARE AT HIGH RISKS OF LEAVING BASED ON PERFORMANCE?

There are 8 employee with the high risks of leaving as they have the lowest performance of 3.0.

They include;

- ✓ Grace Wilson
- ✓ Frank Lee
- ✓ Grace Smith
- ✓ John Brown
- ✓ David Moore
- ✓ Charlie Smith
- ✓ Eve Davis
- ✓ Frank Wilson

| | employee_id integer | performance_score numeric (2,1) | first_name character varying (30) | last_name character varying (30) |
|---|------------------------|------------------------------------|--------------------------------------|-------------------------------------|
| 1 | 41 | 3.0 | Charlie | Smith |
| 2 | 12 | 3.0 | Eve | Davis |
| 3 | 8 | 3.0 | David | Moore |
| 4 | 98 | 3.0 | Frank | Wilson |
| 5 | 63 | 3.0 | Frank | Lee |

EMPLOYEE RETENTION ANALYSIS


WHAT ARE THE MAIN REASONS EMPLOYEE ARE LEAVING THE COMPANY?

The main reason employee are leaving is due to personal decision. From the table below, it shows that 18 employee left due to personal reason, while 17 employee left because they found another job.

| | Number of employees bigint | reason_for_leaving text |
|---|-------------------------------|----------------------------|
| 1 | 18 | Personal |
| 2 | 13 | Career Growth |
| 3 | 17 | Found Another Job |
| 4 | 12 | Retired |

Performances Analysis

- How many employees has left the company?
Sixty (60) people left the company due to personal reason, career growth ,retired or have found job.

| | count bigint  |
|---|---|
| 1 | 60 |

Performances Analysis

- HOW MANY EMPLOYEE HAVE A PERFFORMACE SCORE OF 5.0/ BELOW 3.5?

Nine(9) employee have a performance score of 5.0 while 71 employee have a performance score below 3.5.

| | Number of employee bigint | performance_score numeric (2,1) |
|---|------------------------------|------------------------------------|
| 1 | 9 | 5.0 |
| 2 | 13 | 3.4 |
| 3 | 15 | 3.3 |
| 4 | 19 | 3.2 |
| 5 | 16 | 3.1 |

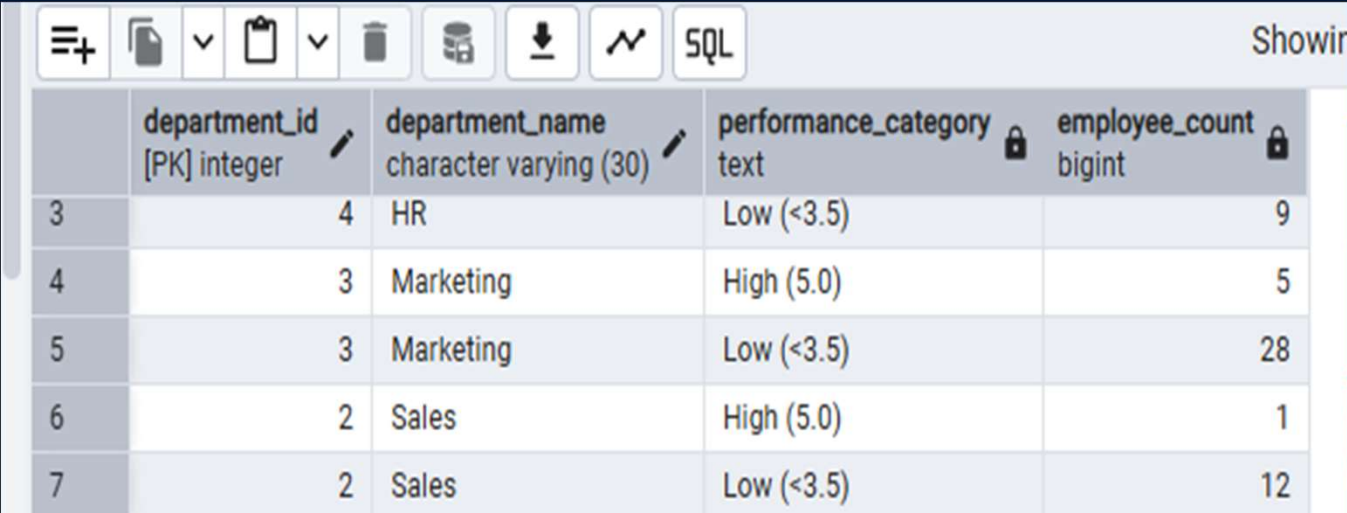
| Data Output | | Message |
|-------------|-----------------|---------|
| | count bigint | |
| 1 | 9 | |

| | | |
|---|-----------------|--|
| | count bigint | |
| 1 | 71 | |

Performances Analysis

- Which department has the most employees with a performance of 5.0 / below 3.5?

Marketing have the highest number of employee of 5 for the performance of 5.0 and also 28 number of employee of less than 3.5



The screenshot shows a database management interface with a table containing employee performance data. The table has five columns: an index, department_id, department_name, performance_category, and employee_count. The data is as follows:

| | department_id [PK] integer | department_name character varying (30) | performance_category text | employee_count bigint |
|---|-------------------------------|---|------------------------------|--------------------------|
| 3 | 4 | HR | Low (<3.5) | 9 |
| 4 | 3 | Marketing | High (5.0) | 5 |
| 5 | 3 | Marketing | Low (<3.5) | 28 |
| 6 | 2 | Sales | High (5.0) | 1 |
| 7 | 2 | Sales | Low (<3.5) | 12 |

Performances Analysis

- What is the average performance score by department?

| | department_id [PK] integer | department_name character varying (30) | Avg performance numeric |
|---|-------------------------------|---|----------------------------|
| 1 | 1 | Engineering | 4.10 |
| 2 | 3 | Marketing | 4.13 |
| 3 | 2 | Sales | 4.00 |
| 4 | 4 | HR | 4.05 |

SALARY ANALYSIS

- What is the total salary expense for the company?
The total salary expenses for salary for NexGen Corp is **4850000**

| | total expenses bigint |
|---|--------------------------|
| 1 | 4850000 |

SALARY ANALYSIS

- What is the average salary by job title?

Sales have the average salary of **82857.14**

Engineering have the average salary of **80000.00**

HR have the average salary of **83000.00**

Marketing have the average salary of **80000.00**

HR have the highest average salary while
Marketing and Engineering
have the lowest.

| | department_id bigint | department_name character varying (30) | avg salary amt numeric |
|---|-------------------------|---|---------------------------|
| 1 | 7 | Sales | 82857.14 |
| 2 | 20 | Engineering | 80000.00 |
| 3 | 10 | HR | 83000.00 |
| 4 | 23 | Marketing | 80000.00 |

SALARY ANALYSIS

- How many employees earn above 80,000?

26 employee earn above 80000.

In which 14 earn 10000 while 12 earn 90000

| | number_of_employee bigint | salary_amount integer |
|---|------------------------------|--------------------------|
| 1 | 14 | 100000 |
| 2 | 12 | 90000 |

| | Highest_Earners bigint |
|---|---------------------------|
| 1 | 26 |

SALARY ANALYSIS

- How does performance correlate with salary across departments?

Engineering (department ID 1) have the average performance of **4.10** with avg salary of **80000**

Marketing (department ID 3) have avg performance of **4.13** with avg salary of **80000**

Sales (department ID 2) have average performance of **4.00** with avg salary of **82857.13**

HR (department ID 4) have average performance of **4.05** with avg salary of **83000.00**

This shows that sales department with the lowest performance of 4.00 earn higher than Marketing and Engineering with the performance of 4.13 and 4.10 respectively.

| | depaartment_id integer | salary amt per depart numeric | Avg performace numeric |
|---|---------------------------|----------------------------------|---------------------------|
| 1 | 1 | 80000.00 | 4.10 |
| 2 | 3 | 80000.00 | 4.13 |
| 3 | 2 | 82857.14 | 4.00 |
| 4 | 4 | 83000.00 | 4.05 |



RECOMMENDATION

- ❑ NexGen Corp should work on the salary of their employee as it is unfair for employee with low performance score to have high salary than those with high performance score.
- ❑ The company should give bonuses or awards to the best employee across each department in order to motivate or inspire other employee.
- ❑ There should be a monthly , quarterly or yearly feedback from the employee in order for them to talk about the challenges they face. This might reduce the rate in which employee leave the company.



RECOMMENDATION

- ❑ NexGen Corp should employee more young people than over aged people in other to reduce the rate of turnover due to retirement.