LAPORAN HASIL PRATIKUM
BASIS DATA LANJUT
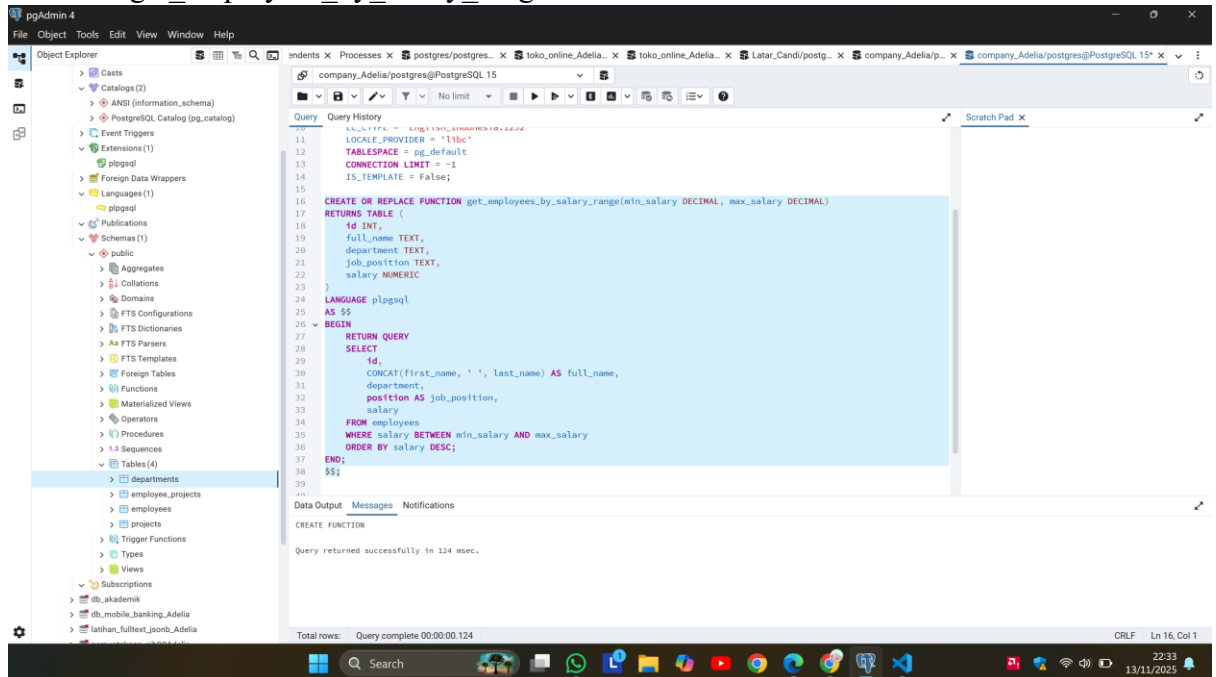

Oleh:

ADELIA RIZKI EKA PUTRI

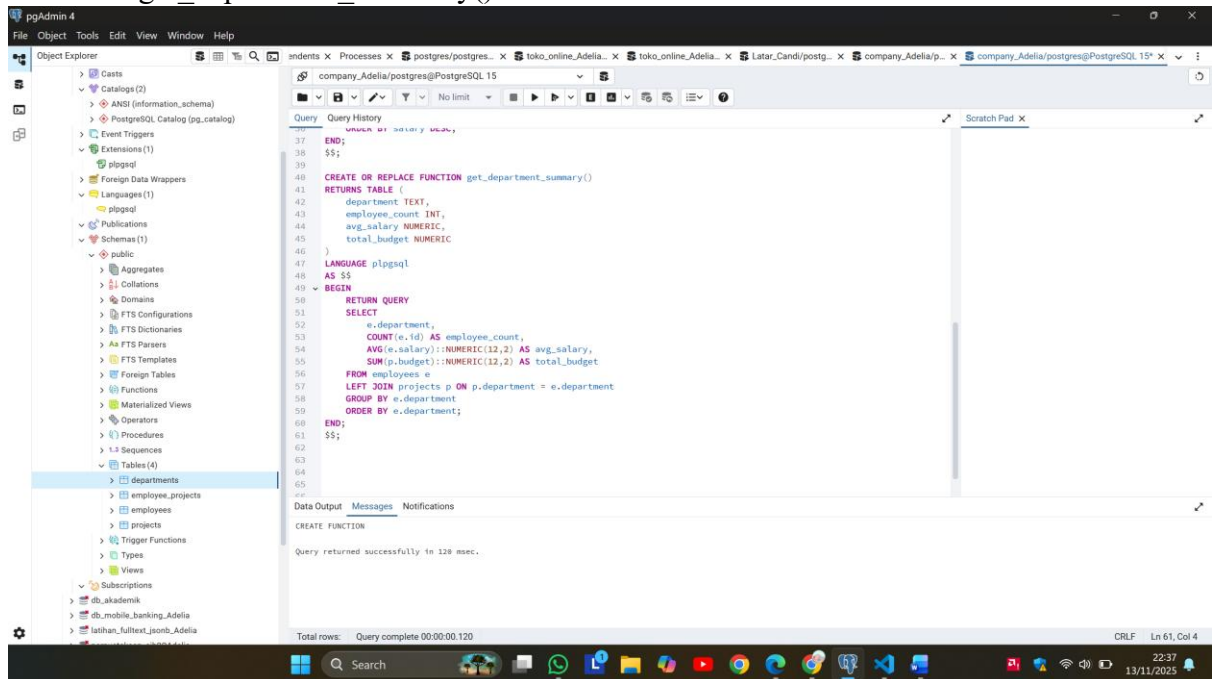**Nim:244107060043**

Kelas:2C

1. Function get_employees_by_salary_range

2. Function: get_department_summary()

3. Tambahkan method berikut di file imployee model

```php
114     public function getSalaryStats() {
115         $sql = "SELECT department,
116                         AVG(salary)::numeric(12,2) AS avg_salary,
117                         MAX(salary) AS max_salary,
118                         MIN(salary) AS min_salary
119                 FROM {$this->table_name}
120                 GROUP BY department
121                 ORDER BY department";
122         $stmt = $this->conn->prepare($sql);
123         $stmt->execute();
124         return $stmt;
125     }
126
127     public function getTenureStats() {
128         $sql = "SELECT category, COUNT(*) AS employee_count FROM (
129                     SELECT id, CONCAT(first_name,' ', last_name) AS full_name, hire_date,
130                         CASE
131                             WHEN DATE_PART('year', AGE(CURRENT_DATE, hire_date)) = 0 THEN 'Junior'
132                             WHEN DATE_PART('year', AGE(CURRENT_DATE, hire_date)) BETWEEN 1 AND 3 THEN 'Middle'
133                             ELSE 'Senior'
134                         END AS category
135                     FROM {$this->table_name}
136                 ) t
137                 GROUP BY category
138                 ORDER BY CASE WHEN category='Junior' THEN 1 WHEN category='Middle' THEN 2 ELSE 3 END";
139         $stmt = $this->conn->prepare($sql);
140         $stmt->execute();
141         return $stmt;
142     }
143
144     public function getEmployeeOverview() {
145         $sql = "SELECT
146                     COUNT(*) AS total_employees,
147                     SUM(salary) AS total_salary_per_month,
148                     AVG(EXTRACT(YEAR FROM AGE(CURRENT_DATE, hire_date)))::numeric(5,2) AS avg_years_service
149                 FROM {$this->table_name}";
150         $stmt = $this->conn->prepare($sql);
151         $stmt->execute();
152         return $stmt->fetch(PDO::FETCH_ASSOC);
153     }
154
155     // Methods to call the Postgres table functions (optional)
156     public function getEmployeesBySalaryRange($min, $max) {
157         $sql = "SELECT * FROM get_employees_by_salary_range(:min_salary, :max_salary)";
158         $stmt = $this->conn->prepare($sql);
159         $stmt->bindValue(':min_salary', $min);
160         $stmt->bindValue(':max_salary', $max);
161         $stmt->execute();
162         return $stmt;
163     }
```

4. views/salary_stats.php

```php
<?php
include 'views/header.php';
?>
<h2>Statistik Gaji per Departemen</h2>

<?php
$stats = $employeeModel->getSalaryStats();
$rows = $stats->fetchAll(PDO::FETCH_ASSOC);
if (count($rows) > 0):
?>
<table class="data-table">
    <thead>
        <tr><th>Departemen</th><th>Rata-rata Gaji</th><th>Gaji Tertinggi</th><th>Gaji Terendah</th></tr>
    </thead>
    <tbody>
    <?php foreach($rows as $r): ?>
        <tr>
            <td><?php echo htmlspecialchars($r['department']); ?></td>
            <td>Rp <?php echo number_format($r['avg_salary'],0,',','.'); ?></td>
            <td>Rp <?php echo number_format($r['max_salary'],0,',','.'); ?></td>
            <td>Rp <?php echo number_format($r['min_salary'],0,',','.'); ?></td>
        </tr>
    <?php endforeach; ?>
    </tbody>
</table>
<?php else: ?>
    <p>Tidak ada data gaji.</p>
<?php endif; ?>

<?php include 'views/footer.php'; ?>
```
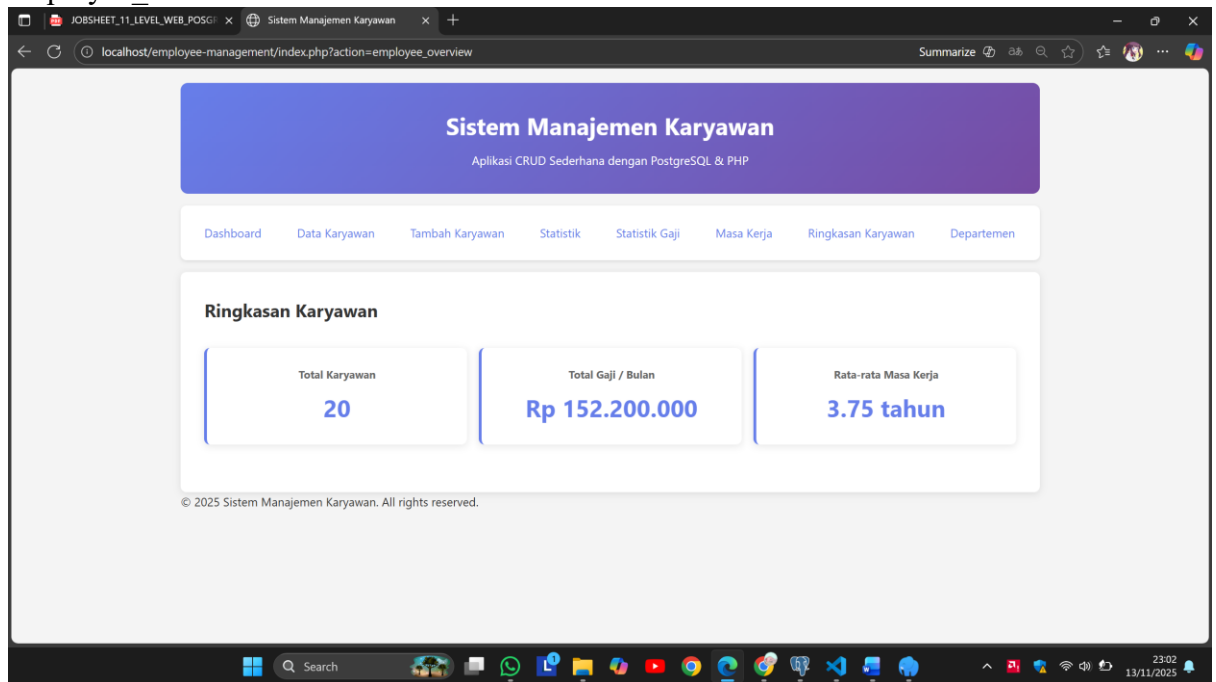
5. views/tenure_stats.php

```php
<?php
include 'views/header.php';
?>
<h2>Statistik Masa Kerja</h2>

<?php
$stats = $employeeModel->getTenureStats();
$rows = $stats->fetchAll(PDO::FETCH_ASSOC);
if (count($rows) > 0):
?>
<table class="data-table">
    <thead>
        <tr><th>Kategori</th><th>Jumlah Karyawan</th></tr>
    </thead>
    <tbody>
    <?php foreach($rows as $r): ?>
        <tr>
            <td><?php echo htmlspecialchars($r['category']); ?></td>
            <td style="text-align:center;"><?php echo $r['employee_count']; ?></td>
        </tr>
    <?php endforeach; ?>
    </tbody>
</table>
<?php else: ?>
    <p>Tidak ada data masa kerja.</p>
<?php endif; ?>

<?php include 'views/footer.php'; ?>
```

6. views/employee_overview.php

```php
views > 🐘 employee_overview.php > ...
  1   <?php
  2   include 'views/header.php';
  3   ?>
  4   <h2>Ringkasan Karyawan</h2>
  5
  6   <?php
  7   $overview = $employeeModel->getEmployeeOverview();
  8   ?>
  9   <div class="dashboard-cards">
 10       <div class="card">
 11           <h3>Total Karyawan</h3>
 12           <div class="number"><?php echo $overview['total_employees']; ?></div>
 13       </div>
 14       <div class="card">
 15           <h3>Total Gaji / Bulan</h3>
 16           <div class="number">Rp <?php echo number_format($overview['total_salary_per_month'],0,',','.'); ?></
 17       </div>
 18       <div class="card">
 19           <h3>Rata-rata Masa Kerja</h3>
 20           <div class="number"><?php echo $overview['avg_years_service']; ?> tahun</div>
 21       </div>
 22   </div>
 23
 24   <?php include 'views/footer.php'; ?>
 25
```

7. employee_overview

8. tenure_stats

9. salary_stats