-- بسم الله الرحمن الرحيم

Database Schema

```
Employee (
    employee_id,
    first_name, last_name,
    national_id,
    email,
    gender,
    salary,
    address,
    official_day_off,
    emergency_phone_number, emergency_name,
    hire_date,
    last_working_date,
    years_of_experience,
    type_of_contract,
    employment_status,
    entitlement_to_annual_leave_balance,
    entitlement_to_accidental_leave_balance
)

--multi-valued attribute
PhoneNumber (
    employee_id, number
)
PhoneNumber.employee_id references Employee.employee_id


-- each role works in one and only one department
Role (
    role_name,
    title,
    rank,
    description,
    base_salary,
    initial_annual_leave,
    initial_accidental_leave,
    salary_increase_factor,
    overtime_factor,
    dept_name
)
Role.dept_name references Department.dept_name


Department (
    dept_name,
    location
)
```

```
replaces (
    replacement_id,
    employee_on_leave,
    replacement_employee,
    start_date,
    end_date
)
replaces.employee_on_leave references Employee.employee_id
replaces.replacement_employee references Employee.employee_id


-- many to many relationship
has_role (
    employee_id, role_name
)
has_role.employee_id references Employee.employee_id
has_role.role_name references Role.role_name


Leave (
    request_id,
    employee_id,
    date_of_request,
    approval_status,
    start_date,
    end_date,
    total_num_of_days
)
Where Leave.total_num_of_days = Leave.end_date - Leave.start_date
Leave.employee_id references Employee.employee_id


reviews (
    employee_id, request_id
)
reviews.request_id references Leave.request_id
reviews.employee_id references Employee.employee_id


Accidental_Leave (
    request_id
)
Accidental_Leave.request_id references Leave.request_id


Annual_Leave (
    request_id
)
Annual_Leave.request_id references Leave.request_id
```

```
Medical_Leave (
    request_id,
    insurance_status,
    disability_details
)
Medical_Leave.request_id references Leave.request_id


Sick_Leave (
    request_id
)
Sick_Leave.request_id references Medical_Leave.request_id


Maternity_Leave (
    request_id
)
Maternity_Leave.request_id references Medical_Leave.request_id


-- Unpaid leave requests are required to have a memo document
Unpaid_Leave (
    request_id,
    document_id
)
Unpaid_Leave.request_id references Leave.request_id
Unpaid_Leave.document_id references Document.document_id


Compensation_Leave (
    request_id,
    date_of_extra_workday,
    reason
)
Compensation_Leave.request_id references Leave.request_id


Document (
    document_id,
    type,
    size,
    creation_date,
    expiry_date,
    status,
    storage_location,
    description,
    filename,
    employee_id
)
Document.employee_id references Employee.employee_id


-- Medical leave requests are required to submit document(s).
-- Done as a separate entity to avoid NULL values in the Document table
Medical_Document (
    document_id, request_id
)
Medical_Document.document_id references Document.document_id
Medical_Document.request_id references Medical_Leave.reqeust_id
```

```
Performance (
    performance_id,
    rating,
    employee_id
)
Performance.employee_id references Employee.employee_id


-- Multi-valued attribute
Performance_Comments (
    performance_id,comment
)
Performance_Comments.performance_id references Performance.performance_id


Payroll (
    payroll_id,
    bonuses_amount,
    final_salary_amount,
    deductions_amount,
    payment_date,
    employee_id
)
Payroll.employee_id references Employee.employee_id


-- Multi-valued attribute
Payroll_Comments (
    payroll_id, comment
)
Payroll_Comments.payroll_id references Payroll.payroll_id


Attendance (
    attendance_record_id,
    date,
    check_in_time,
    check_out_time,
    total_duration,
    employee_id
)
Attendance.employee_id references Employee.employee_id
Where total_duration = check_out_time - check_in_time


-- weak entity → employee_id in PK
Deduction (
    deduction_id, employee_id
    amount,
    type,
    date,
    status,

)
Deduction.employee_id references Employee.employee_id
```