

Case study – PayXpert

Yash Pandey

Main menu

```
--- PayXpert Payroll Management System ---  
1. Employee Management  
2. Payroll Processing  
3. Tax Calculation  
4. Financial Reporting  
5. Exit  
Enter your choice:
```

1- Employee Management

```
--- Employee Management ---  
1. Add Employee  
2. View Employee  
3. Update Employee  
4. Delete Employee  
5. View All Employees  
6. Back to Main Menu  
Enter your choice: █
```

a) Adding new employee

```
--- Employee Management ---
1. Add Employee
2. View Employee
3. Update Employee
4. Delete Employee
5. View All Employees
6. Back to Main Menu
Enter your choice: 1
First Name: Akash
Last Name: Gupta
Date of Birth (YYYY-MM-DD): 2000-01-01
Gender: Male
Email: akash@gupta.com
Phone Number: 9897876543
Address: 123 XPO street
Position: Sales Manager
Joining Date (YYYY-MM-DD): 2019-01-01
Termination Date (YYYY-MM-DD, optional):
Employee entered with ID: 2008
Employee added successfully.
```

b) View emp by id

```
--- Employee Management ---
1. Add Employee
2. View Employee
3. Update Employee
4. Delete Employee
5. View All Employees
6. Back to Main Menu
Enter your choice: 2
Enter Employee ID: 2008
{'employee_id': 2008, 'first_name': 'Akash', 'last_name': 'Gupta', 'date_of_birth': '2000-01-01', 'gender': 'Male', 'email': 'akash@gupta.com', 'phone_number': '9897876543', 'address': '123 XPO street', 'position': 'Sales Manager', 'joining_date': '2019-01-01', 'termination_date': None}
```

c) delete emp

```
--- Employee Management ---
1. Add Employee
2. View Employee
3. Update Employee
4. Delete Employee
5. View All Employees
6. Back to Main Menu
Enter your choice: 4
Enter Employee ID to delete: 2008
Successfully deleted Employee with ID: 2008.
```

d) View all emp

```
--- Employee Management ---
1. Add Employee
2. View Employee
3. Update Employee
4. Delete Employee
5. View All Employees
6. Back to Main Menu
Enter your choice: 5
(2004, 'yash', 'pandey', '2001-08-03', 'Male', 'yash@pandey.com', '6399780378', '1682 Bareilly', 'Software Engineer', '2022-01-01', None)
(2005, 'Sameer', 'pal', '2001-01-01', 'Male', 'sameer@pal.com', '9897876666', '123 ABc street', 'SE', '2021-01-01', None)
(2006, 'Shreyansh', 'Sharma', '2000-01-01', 'Male', 'shreyandh@sharma.com', '98988723232', '213 AXB street', 'SE', '2020-01-01', None)
(2007, 'ajay', 'singh', '2000-01-01', 'male', 'ajay@singh', '9897876545', '123 tuv street', 'Manager', '2010-01-01', None)
```

2 Payroll Processing

a) Generating payroll

```
--- Payroll Processing ---
1. Generate Payroll
2. View Payroll by ID
3. View Payrolls for Employee
4. View Payrolls for Period
5. Back to Main Menu
Enter your choice: 1
Enter Employee ID: 2007
Enter Pay Period Start Date (YYYY-MM-DD): 2023-01-01
Enter Pay Period End Date (YYYY-MM-DD): 2024-01-01
Enter Basic Salary: 100000
Enter Overtime Pay: 0
Enter Deductions: 1000
Payroll record created successfully.
Payroll generated successfully.
```

b) View payroll by emp id

```
--- Payroll Processing ---
1. Generate Payroll
2. View Payroll by ID
3. View Payrolls for Employee
4. View Payrolls for Period
5. Back to Main Menu
Enter your choice: 3
Enter Employee ID: 2007
{'PayrollID': 13, 'EmployeeID': 2007, 'PayPeriodStartDate': '2023-01-01', 'PayPeriodEndDate': '2024-01-01', 'BasicSalary': Decimal('100000.00'), 'OvertimePay': Decimal('0.00'), 'Deductions': Decimal('1000.00'), 'NetSalary': Decimal('99000.00')}
```

c) View payroll by payroll id

--- Payroll Processing ---

1. Generate Payroll
2. View Payroll by ID
3. View Payrolls for Employee
4. View Payrolls for Period
5. Back to Main Menu

Enter your choice: 2

Enter Payroll ID: 13

```
{'PayrollID': 13, 'EmployeeID': 2007, 'PayPeriodStartDate': '2023-01-01', 'PayPeriodEndDate': '2024-01-01', 'BasicSalary': Decimal('100000.00'), 'OvertimePay': Decimal('0.00'), 'Deductions': Decimal('1000.00'), 'NetSalary': Decimal('99000.00')}
```

d) view payroll for specific period

--- Payroll Processing ---

1. Generate Payroll
2. View Payroll by ID
3. View Payrolls for Employee
4. View Payrolls for Period
5. Back to Main Menu

Enter your choice: 4

Enter Start Date (YYYY-MM-DD): 2023-01-01

Enter End Date (YYYY-MM-DD): 2024-01-01

```
{'PayrollID': 11, 'EmployeeID': 2004, 'PayPeriodStartDate': '2023-01-01', 'PayPeriodEndDate': '2024-01-01', 'BasicSalary': Decimal('200000.00'), 'OvertimePay': Decimal('20000.00'), 'Deductions': Decimal('5000.00'), 'NetSalary': Decimal('215000.00')}
```

```
{'PayrollID': 13, 'EmployeeID': 2007, 'PayPeriodStartDate': '2023-01-01', 'PayPeriodEndDate': '2024-01-01', 'BasicSalary': Decimal('100000.00'), 'OvertimePay': Decimal('0.00'), 'Deductions': Decimal('1000.00'), 'NetSalary': Decimal('99000.00')}
```

3) Tax Calculation

a) Calculating Tax

```
--- Tax Calculation ---
1. Calculate Tax
2. View Tax by ID
3. View Taxes for Employee
4. View Taxes for Year
5. Back to Main Menu
Enter your choice: 1
Enter Employee ID: 2007
Enter Tax Year: 2024
Tax is : 20000.00
Tax calculated successfully.
```

b) Calculating Tax by Emp_ID

```
--- Tax Calculation ---
1. Calculate Tax
2. View Tax by ID
3. View Taxes for Employee
4. View Taxes for Year
5. Back to Main Menu
Enter your choice: 3
Enter Employee ID: 2007
(8, 2007, 2024, Decimal('100000.00'), Decimal('20000.00'))
```

c) Calculating Tax by Tax_ID

```
--- Tax Calculation ---
1. Calculate Tax
2. View Tax by ID
3. View Taxes for Employee
4. View Taxes for Year
5. Back to Main Menu
Enter your choice: 2
Enter Tax ID: 8
(8, 2007, 2024, Decimal('100000.00'), Decimal('20000.00'))
```

D - Calculating Tax by Year

```
--- Tax Calculation ---  
1. Calculate Tax  
2. View Tax by ID  
3. View Taxes for Employee  
4. View Taxes for Year  
5. Back to Main Menu  
Enter your choice: 4  
Enter Tax Year: 2024  
(6, 2004, 2024, Decimal('200000.00'), Decimal('40000.00'))  
(8, 2007, 2024, Decimal('100000.00'), Decimal('20000.00'))
```

4) FinancialRecords

a) Generating financial record

```
--- Financial Reporting ---
1. Add Financial Record
2. View Financial Record by ID
3. View Financial Records for Employee
4. View Financial Records for Date
5. Back to Main Menu
Enter your choice: 1
Enter Employee ID: 2007
Enter Description: bought shares in the company
Enter Amount: 10000
Enter Record Type (income/expense): expense
Financial record added successfully.
```

b) Get Financial record of an emp by emp_id

```
--- Financial Reporting ---
1. Add Financial Record
2. View Financial Record by ID
3. View Financial Records for Employee
4. View Financial Records for Date
5. Back to Main Menu
Enter your choice: 3
Enter Employee ID: 2007
(5, 2007, '2024-10-14', 'bought shares in the company', Decimal('10000.00'), 'expense')
```

c) Get Financial record by record_id

```
--- Financial Reporting ---
1. Add Financial Record
2. View Financial Record by ID
3. View Financial Records for Employee
4. View Financial Records for Date
5. Back to Main Menu
Enter your choice: 2
Enter Financial Record ID: 5
(5, 2007, '2024-10-14', 'bought shares in the company', Decimal('10000.00'), 'expense')
```

D) Get financial record by date it got registered

```
--- Financial Reporting ---
1. Add Financial Record
2. View Financial Record by ID
3. View Financial Records for Employee
4. View Financial Records for Date
5. Back to Main Menu
Enter your choice: 4
Enter Date (YYYY-MM-DD): 2024-10-13
(3, 2004, '2024-10-13', 'Investment', Decimal('20000.00'), 'Expense')
```