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**CASE#2 (Batch Payroll App):**

Use Case 1: Submit Timecard

Actor(s): Employee

Goal: Employee submits their timecard for payroll calculation.

Pre-condition: Employee is registered in the payroll system and the pay period is open.

Post-condition: Timecard data is recorded and available for processing.

Main flow:

1. Employee logs in to the payroll system.

2. Employee enters work hours for the current pay period.

3. System validates and stores the timecard.

4. Confirmation is displayed to the employee.

Alternative flow:

• Invalid time entry → System prompts correction.

• Submission after deadline → System rejects and notifies the employee.

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Use Case 2: Submit Sales Receipt

Actor(s): Employee (typically sales staff)

Goal: Record commission-based sales for payroll inclusion.

Pre-condition: Employee is authorized for sales commission entry.

Post-condition: Sales receipt recorded and ready for pay calculation.

Main flow:

1. Employee submits sales transaction details.

2. System verifies sales data and stores it.

3. Confirmation message shown.

Alternative flow:

• Invalid or duplicate receipt → System rejects entry.

• Connection error → Data saved locally and retried later.

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Use Case 3: Choose Payment Method

Actor(s): Employee

Goal: Select the preferred method to receive pay (mail, pickup, or direct deposit).

Pre-condition: Employee record exists and payroll settings are editable.

Post-condition: Selected payment method saved to employee profile.

Main flow:

1. Employee opens payment preferences.

2. System shows available options: mail, pickup, or direct deposit.

3. Employee selects a method.

4. System updates employee’s record.

Alternative flow:

• Invalid input or unauthorized change → System displays error.

• Direct deposit selected but bank details missing → System requests completion before saving.

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Use Case 4: Receive Paycheck

Actor(s): Employee, Paymaster, Postal Service, Bank System

Goal: Employee receives paycheck or funds through their chosen method.

Pre-condition: Payroll processed and paychecks generated.

Post-condition: Employee successfully receives payment.

Main flow:

1. Paymaster initiates paycheck distribution.

2. If by mail → Postal Service delivers the paycheck.

3. If by pickup → Employee collects from office.

4. If by direct deposit → Bank System deposits funds.

Alternative flow:

• Lost/delayed mail → Paymaster issues replacement.

• Bank deposit failure → Payment retried or flagged for manual resolution.

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Use Case 5: Deduction

Actor(s): Union

Goal: Apply applicable union deductions (e.g., dues, service charges).

Pre-condition: Employee is a member of the union.

Post-condition: Deductions recorded and reflected in payroll processing.

Main flow:

1. Union provides deduction details.

2. System receives and stores deduction data.

3. Payroll system applies these deductions during processing.

Alternative flow:

• Incorrect deduction data → System rejects and logs error.

• Employee not in union → Deduction ignored.

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Use Case 6: Add Charges

Actor(s): Union

Goal: Add specific service charges to member employees.

Pre-condition: Payroll system recognizes the employee as a union member.

Post-condition: Service charges recorded in payroll.

Main flow:

1. Union submits list of charges.

2. System validates and associates charges with employee accounts.

Alternative flow:

• Invalid entries → System requests correction.

• Employee not found → Charges skipped.

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Use Case 7: Calculate Pay

Actor(s): Paymaster, Payroll System

Goal: Calculate gross and net pay for each employee based on timecards, sales, and overtime.

Pre-condition: Valid timecards and sales data exist.

Post-condition: Pay amounts calculated and stored for paycheck generation.

Main flow:

1. System retrieves employee work hours and applicable rates.

2. Calculates base pay and includes overtime pay (via Overtime Pay use case).

3. Stores results for each employee.

Alternative flow:

• Missing timecard → Employee pay not calculated, system logs warning.

• Invalid rate data → System halts processing for affected employee.

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Use Case 8: Overtime Pay (Extended)

Actor(s): Payroll System

Goal: Compute additional pay for overtime hours.

Pre-condition: Employee timecard includes overtime hours.

Post-condition: Overtime pay added to gross earnings.

Main flow:

1. System checks total hours against normal work limit.

2. Overtime hours identified and multiplied by overtime rate.

3. Result added to gross pay.

Alternative flow:

• No overtime hours → Step skipped.

• Incorrect rate → System flags for review.

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Use Case 9: Deduct Dues (Included)

Actor(s): Payroll System, Union

Goal: Deduct union dues from employee pay.

Pre-condition: Employee is marked as a union member.

Post-condition: Dues deducted from gross pay.

Main flow:

1. Payroll system fetches dues data from union.

2. Applies deductions to relevant employees.

3. Records details in transaction log.

Alternative flow:

• Union data unavailable → Dues skipped, error logged.

• Employee exemption → Dues not applied.

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Use Case 10: Deduct Service Charges (Extended)

Actor(s): Payroll System, Union

Goal: Deduct additional service-related charges for employees.

Pre-condition: Service charge records exist for applicable employees.

Post-condition: Charges deducted and stored in payroll records.

Main flow:

1. System retrieves charge data.

2. Applies deductions to employee’s gross pay.

3. Logs deduction details.

Alternative flow:

• Missing charge data → Step skipped.

• Overlapping deduction → System adjusts automatically.

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Use Case 11: Process Payroll

Actor(s): Paymaster, Payroll System

Goal: Execute full payroll run for the organization.

Pre-condition: Timecards, sales data, and deductions are available.

Post-condition: All employee paychecks calculated, generated, and ready for distribution.

Main flow:

1. Paymaster starts payroll process.

2. System performs pay calculations (Calculate Pay).

3. Deductions applied (Deduct Dues, Deduct Service Charges).

4. Paychecks generated (Generate Paycheck).

5. Pay distributed (Distribute Paycheck).

Alternative flow:

• Data validation error → Payroll halted; system reports issues.

• Insufficient funds → Payroll delayed until resolved.

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Use Case 12: Generate Paycheck (Included)

Actor(s): Payroll System

Goal: Create paycheck records for all employees.

Pre-condition: Payroll calculations completed.

Post-condition: Paychecks ready for distribution.

Main flow:

1. System compiles payment information for each employee.

2. Creates paycheck entries with unique IDs.

3. Stores checks digitally or prints them.

Alternative flow:

• Printer error → System retries or flags for reprint.

• File export failure → Logs error for admin.

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Use Case 13: Distribute Paycheck

Actor(s): Paymaster, Postal Service, Bank System

Goal: Deliver generated paychecks to employees based on their chosen method.

Pre-condition: Paychecks generated and validated.

Post-condition: Employees receive payment.

Main flow:

1. Paymaster selects distribution mode: mail, pickup, or deposit.

2. For mail → Postal Service delivers checks.

3. For pickup → Employees collect checks from office.

4. For deposit → Bank System deposits funds.

Alternative flow:

• Delivery delay → Notification sent to employee.

• Bank transfer failure → Payment retried or handled manually.

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Use Case 14: Perform Deposit

Actor(s): Bank System

Goal: Deposit payroll funds into employees’ accounts.

Pre-condition: Direct deposit list received from payroll system.

Post-condition: Employees’ accounts credited.

Main flow:

1. Bank System verifies account details.

2. Transfers payroll funds to each employee’s account.

3. Sends confirmation to payroll system.

Alternative flow:

• Invalid account → Bank rejects transfer and notifies payroll.

• Network issue → Transfer retried or queued.

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Use Case 15: Deliver Paycheck

Actor(s): Postal Service

Goal: Deliver physical paychecks to employees via mail.

Pre-condition: Paychecks printed and addressed.

Post-condition: Employees receive mailed checks.

Main flow:

1. Postal Service collects prepared envelopes.

2. Delivers to employees’ registered addresses.

3. Delivery confirmed.

Alternative flow:

• Wrong address → Check returned to sender.

• Lost mail → Replacement requested from Paymaster.