Level: 2nd year Bachelor's degree in Computer Science (2024/2025)
Module: Information Systems
Exercise Series No. 7: CTM

Exercise 1:

When a citizen submits a bank loan application, their file is examined. The application is considered acceptable if the citizen's age is less than 55 years and their monthly salary exceeds 50,000 DA.
A committee chaired by the bank director reviews the acceptable applications, and a vote determines whether the opinion is favorable or not. If favorable, the bank loan is granted; otherwise, it is denied.

- Propose a conceptual treatment model (CTM) for this procedure.

Exercise 2:

The "Accounting and Finance" department of a company prepares a list of negligent customers (clients with more than 15 days of delay in bill payment). A payment request with a 10-day deadline is then sent to each delinquent client.
After the deadline expires, the "Accounting and Finance" department rechecks the status of these clients. Those who have settled their bills within this timeframe are added to an orange list. On the other hand, clients who have not paid their bills have their files forwarded to the legal department, which initiates judicial recovery procedures.

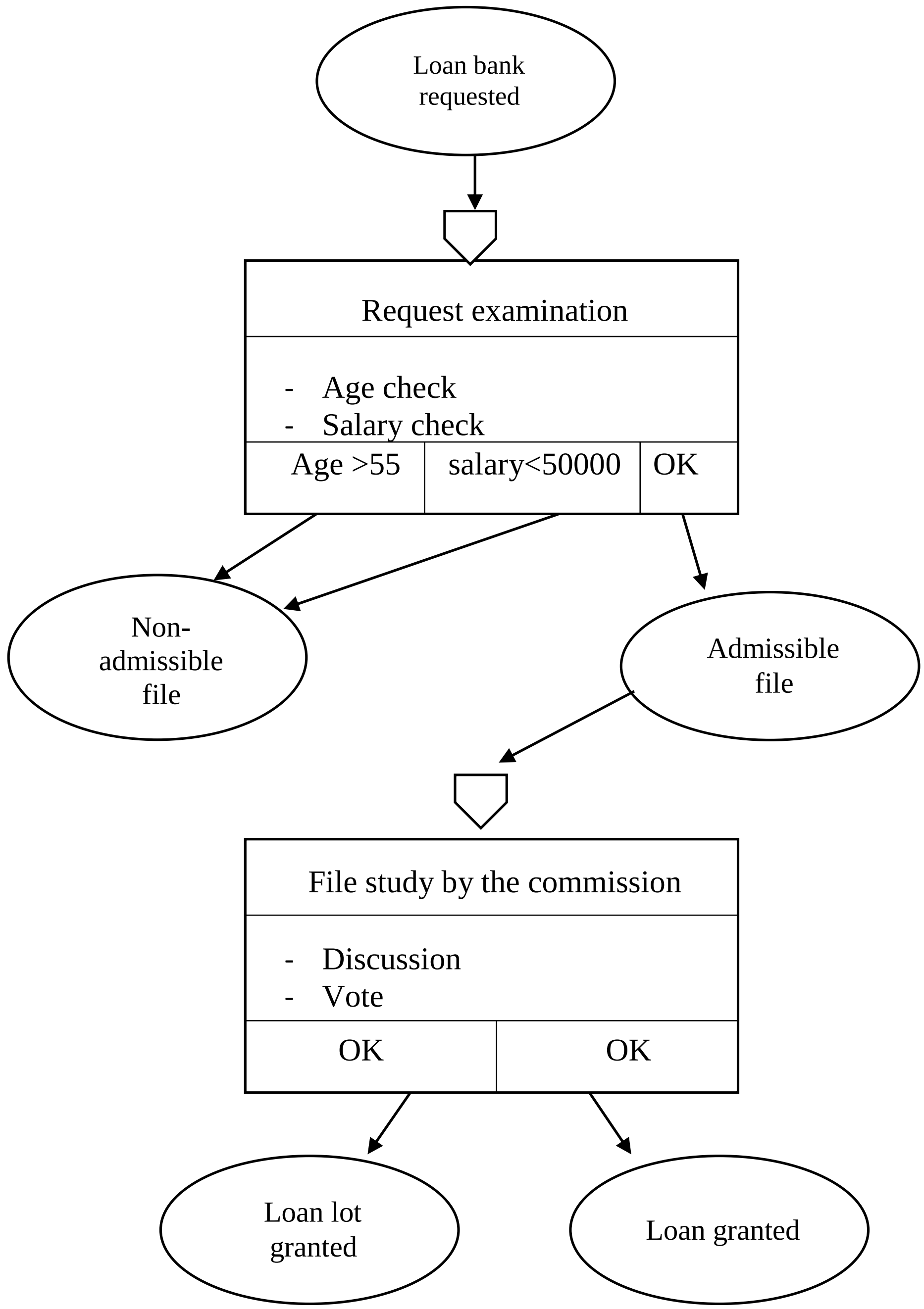
- Propose a conceptual treatment model (CTM) for this procedure.

Exercise 3:
At the start of the day (8:30 AM), the cashier of a bank hands over a "cash fund" (a sum of money enabling agents to cash checks for bank members). After verifying the cash fund, the agent can open their counter and serve clients.
When a client presents a check at the counter, the agent verifies the check, and if it is valid, the client receives their amount.
At the end of the day (6:00 PM), the agent generates a summary report of their cash transactions based on valid checks, noting any discrepancies with the initial cash fund. This report is then submitted to the bank cashier.

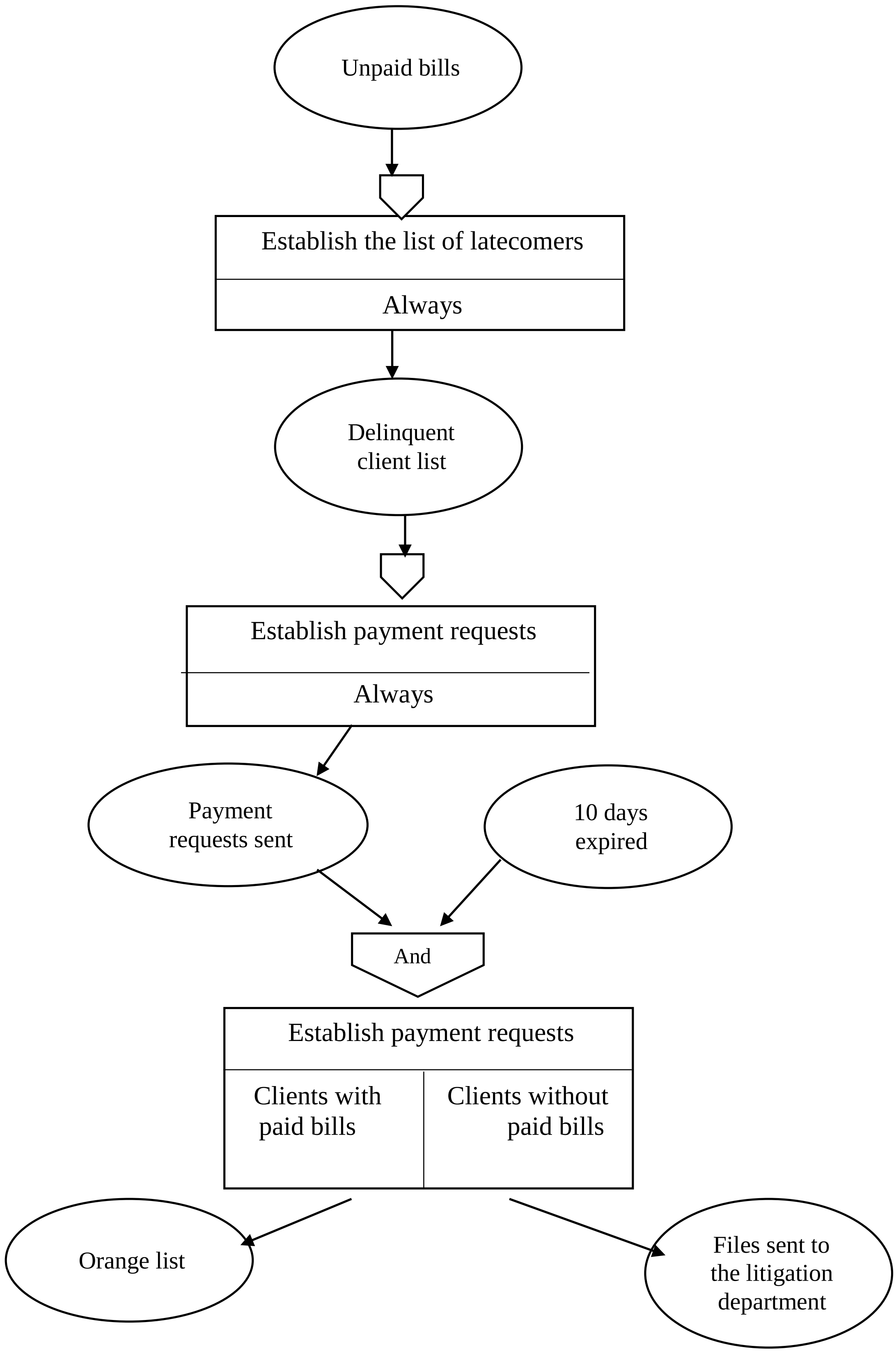
- Propose a conceptual treatment model (CTM) for this procedure.

Solutions

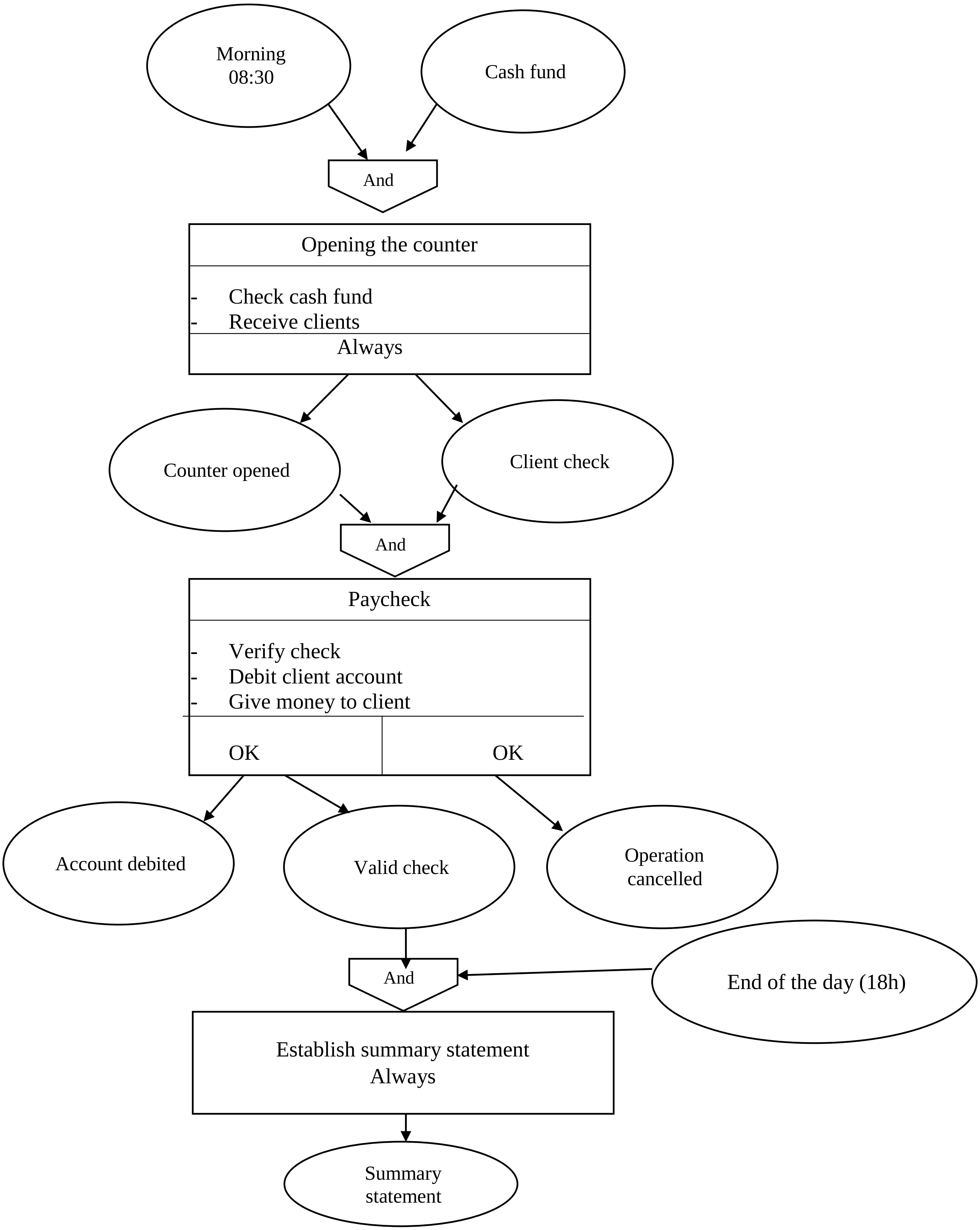
Exo1



Exo2


Unpaid bills
Establish the list of latecomers
Always
Delinquent client list
Establish payment requests
Always
Payment requests sent
10 days expired
And
Establish payment requests
Clients with paid bills
Clients without paid bills
Orange list
Files sent to the litigation department

Exo3


Morning
08:30
Cash fund
And
Opening the counter
- Check cash fund
- Receive clients
Always
Counter opened
Client check
And
Paycheck
- Verify check
- Debit client account
- Give money to client
OK
OK
Account debited
Valid check
Operation cancelled
And
End of the day (18h)
Establish summary statement
Always
Summary statement