These are my original use cases. They all work correctly within the program.

I developed a use case diagram for an electronic bank vault which involves a bank teller, a timer, an alarm, floodlights, and an electronic keypad with display. The vault is connected to the bank headquarters via hardened phone line.

Use Case Name: Open Vault

Summary: The teller successfully opens the vault.
Primary Actor: Bank teller.
Precondition: The vault door is closed, and the time is between 7:00am and 5:00pm.

Primary Scenario: Opening the vault during business hours.

1. The teller enters their user id and password.
2. The teller selects to open the vault and enters the vault password.
3. The system logs the time that the "vault open" command was received.
4. The vault door unlocks.
5. Motors engage to open the vault door.
6. The teller is alerted that the vault door is now in the open position.

Alternative Scenarios:

Selecting to open vault outside of business hours

1. The careless teller/unauthorized person enters a valid username or password.
2. The careless teller/unauthorized person selects to open the vault.
3. The system logs the teller and time that the "vault open" command was received. It also notes that it is an unauthorized entry.
4. The system displays that the bank is locked down.
5. These emergency systems can only be deactivated by a "remote reset" command from headquarters.

Invalid username and password entered

1. The teller enters an invalid username or password.
2. The system prompts the user for a correct username/password.
3. The system logs the invalid username and password.
4. After 3 incorrect attempts the system locks out all attempts at entry for 1 hour, or until a "remote reset" command is received from headquarters.
5. The system notes that three incorrect attempts were made, and the system was locked out.

Postcondition: The vault is open.

Exception: The vault alarm is on requiring a "remote reset" from headquarters.

Use Case Name: Close Vault

Summary: The teller closes the bank vault.
Primary Actor: Bank teller.
Precondition: The vault is open, the teller is logged in, and it is between 7:00 am and 5:00pm.

Primary Scenario:

Teller closes vault during business hours.

1. The teller selects to close the vault.
2. The system logs time that the "vault close" command was received.
3. Motors engage to close the vault door.
4. The vault door locks.
5. The teller is alerted that the vault door is now in the closed position.

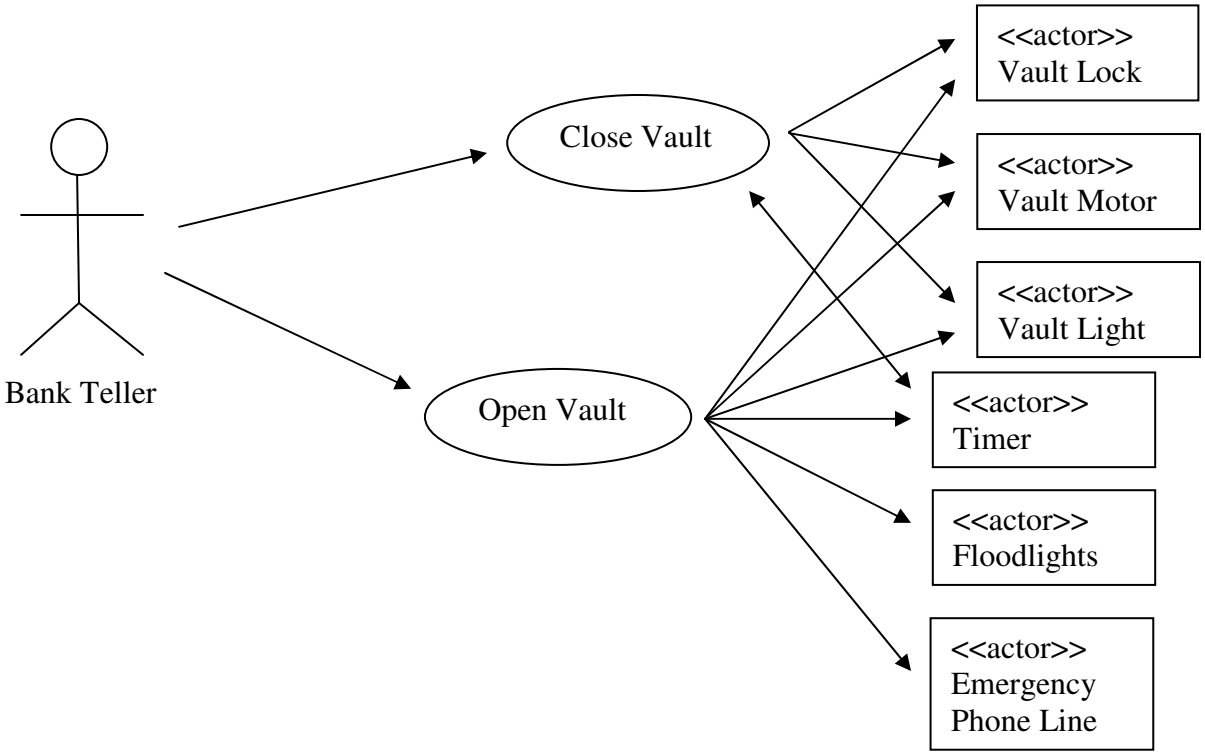
Alternative Scenarios:

Closing by timer.

1. The system alerts staff that it is 5:00 pm and the vault should have been closed.
2. At 5:05 pm, the system logs that the vault is being closed based on time.
3. Motors engage to close the vault door.
4. The vault door locks.

Postcondition: The vault door is closed and locked.

Exception: None.


Bank Teller
Close Vault
Open Vault
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Vault Lock
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Vault Motor
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Vault Light
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Timer
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Floodlights
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Emergency
Phone Line