

1.

- A. This is a motor control. When it is state 'off', and we can run it by turn it on. When the time goes, it will be idle, but we can make it run again. Also, when the time goes again and be idle as well, we can turn it off.
- B. This is an automatic door. At first, it is locked. When the sensor detects movement, the door is opening, which means it is unlocked. 15 seconds later, it is closing. But when it is still unlocked, and when the sensor detects movement, it can be opening again, which means still unlocked. Again 15 seconds later, it is closing and 15 seconds later after the closing again, it will be locked.

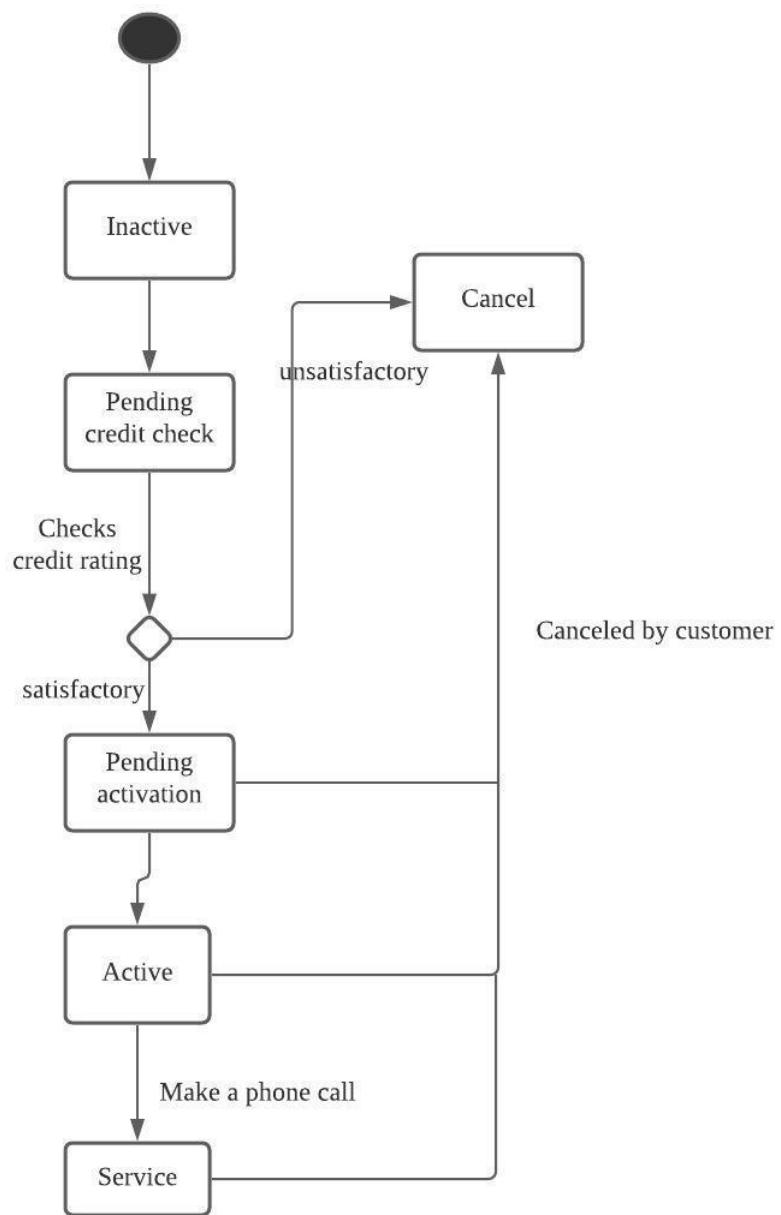
2.

- State : running
- Description: A Cassette player is running
- Event sequence that produces the state:
 - stopped
 - running
 - or
 - stopped
 - running
 - paused
 - running
- Condition that characterizes the state
 - When $s == "play"$

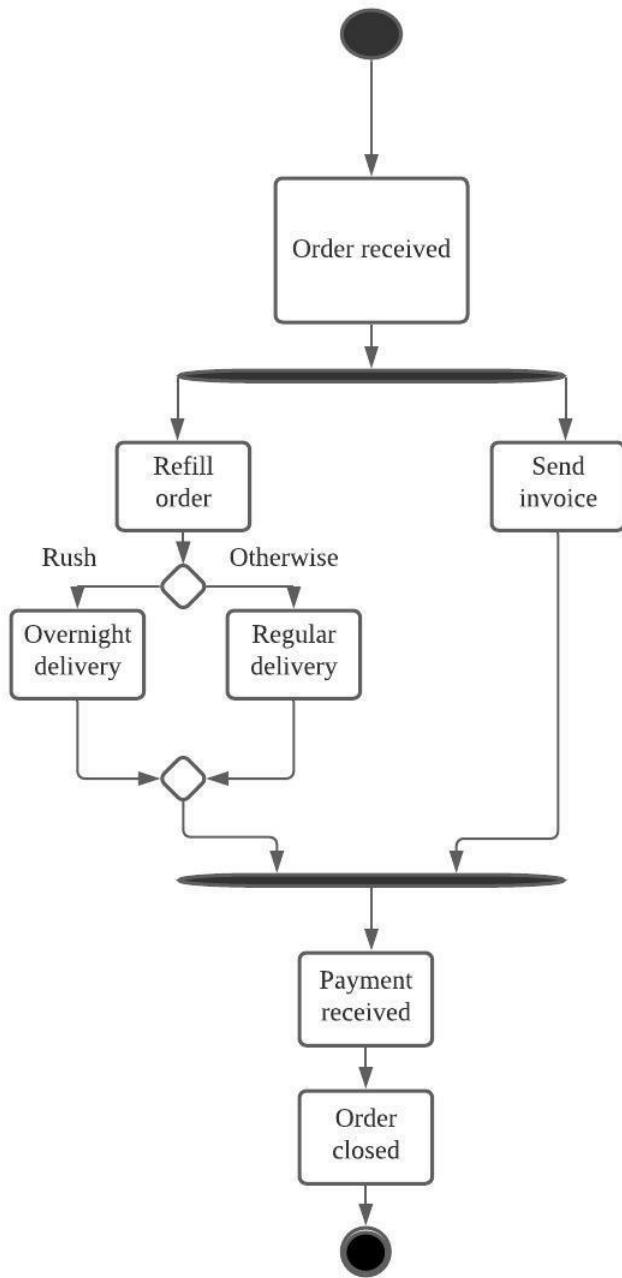
Events accepted in the state:

Event	Response	Next state
$s, [s == "pause"]$	Start motor	pause
$s, [s == "stop"]$	Stop motor	stopped

3.

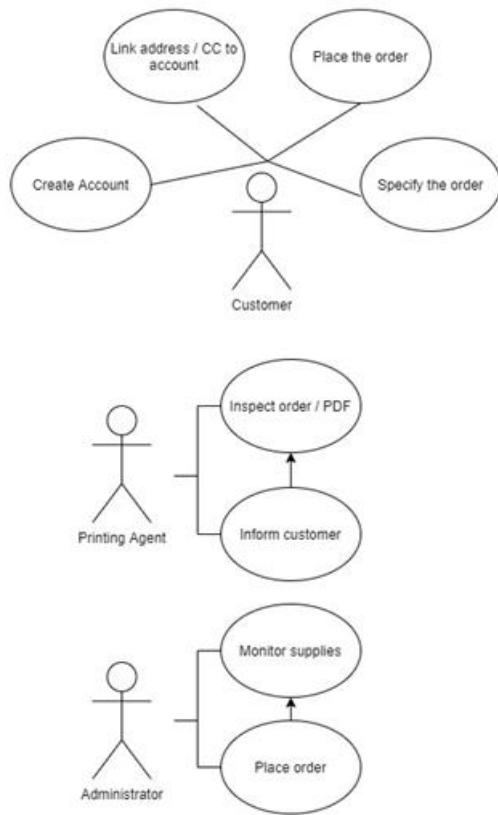


4.



5.

a.



b.

Use case : Place an order

Pre : User has account

Trigger : User to be able to place an order

Guarantee : Order is placed

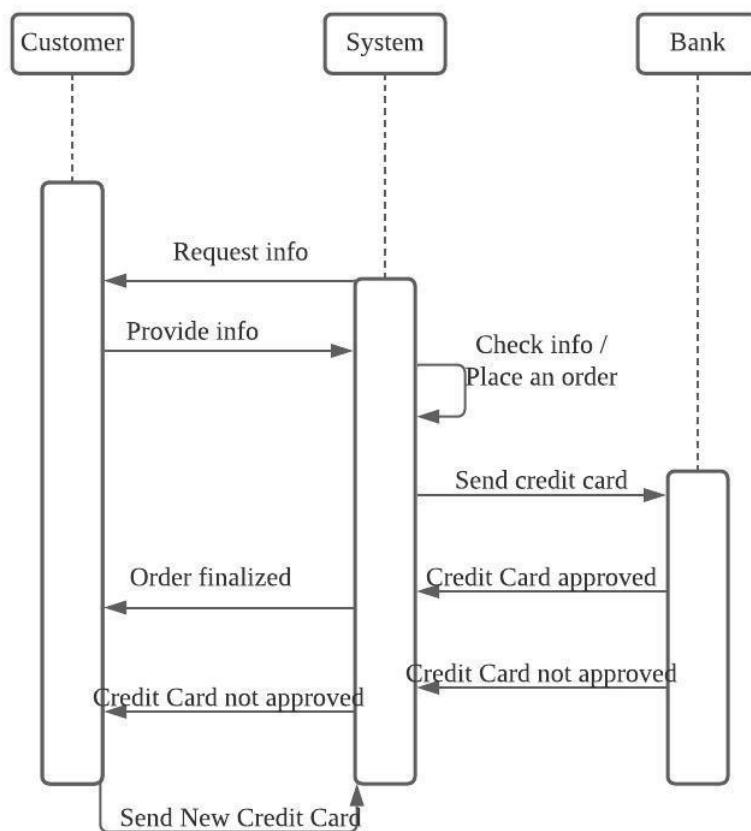
Main :

1. Send an order
2. Information is identified
3. Place an order
4. Send Credit Card to bank
5. Order done

Alternatives : Go back to step b if the information is missed by requesting it from the users.

Also, go back to step d when the credit card is not approved by requesting new credit card from the user

C.



d.

