Question 1:

A. The state diagram is representing the behavior of a motor. The motor starts in the off state, and from there is then cranked into the running state. From the running state it goes to the idle state. Once in the idle state, it can either go back to the running state or can be turned off.
B. The state diagram is describing an automatic door. I'll start from the locked state. In the locked state, if the sensor detects movement, the door goes to the unlocked state and begins opening. After 15 seconds, the door is still in the unlocked state, but it begins closing. If sensor movement is detected while in the closing state, it goes back to the opening state. If movement is not detected after 15 seconds in the closing state, the door leaves the unlocked state and goes to the locked state. Then the cycle starts over.

Question 2:

State: Running
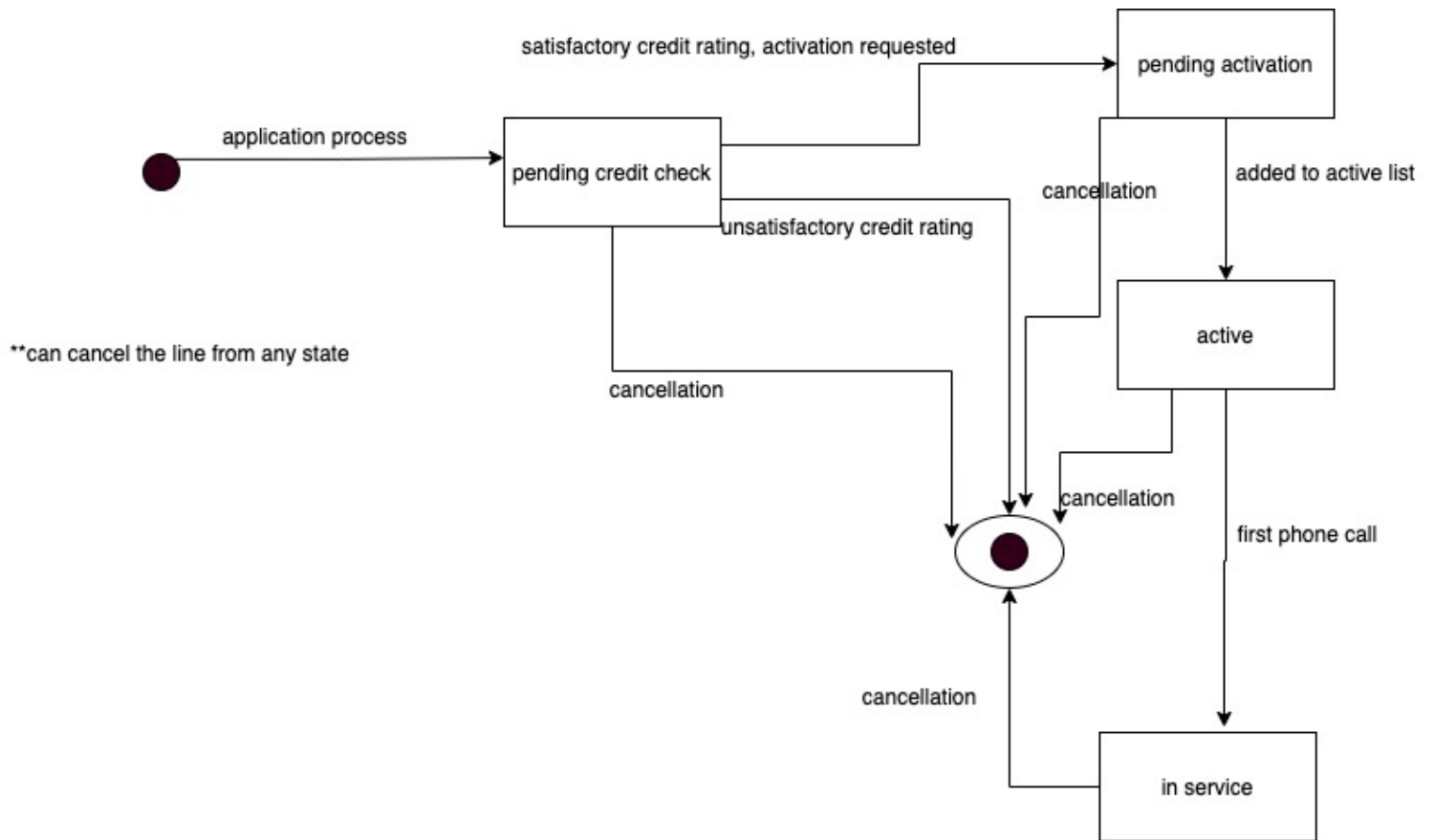**Description**: The cassette player is operational, active and is currently running
Event sequence that produce's the state: s== "play"
  - from the initial state, the motor is stopped. Then from the stop state if s == "play" you go to the running state
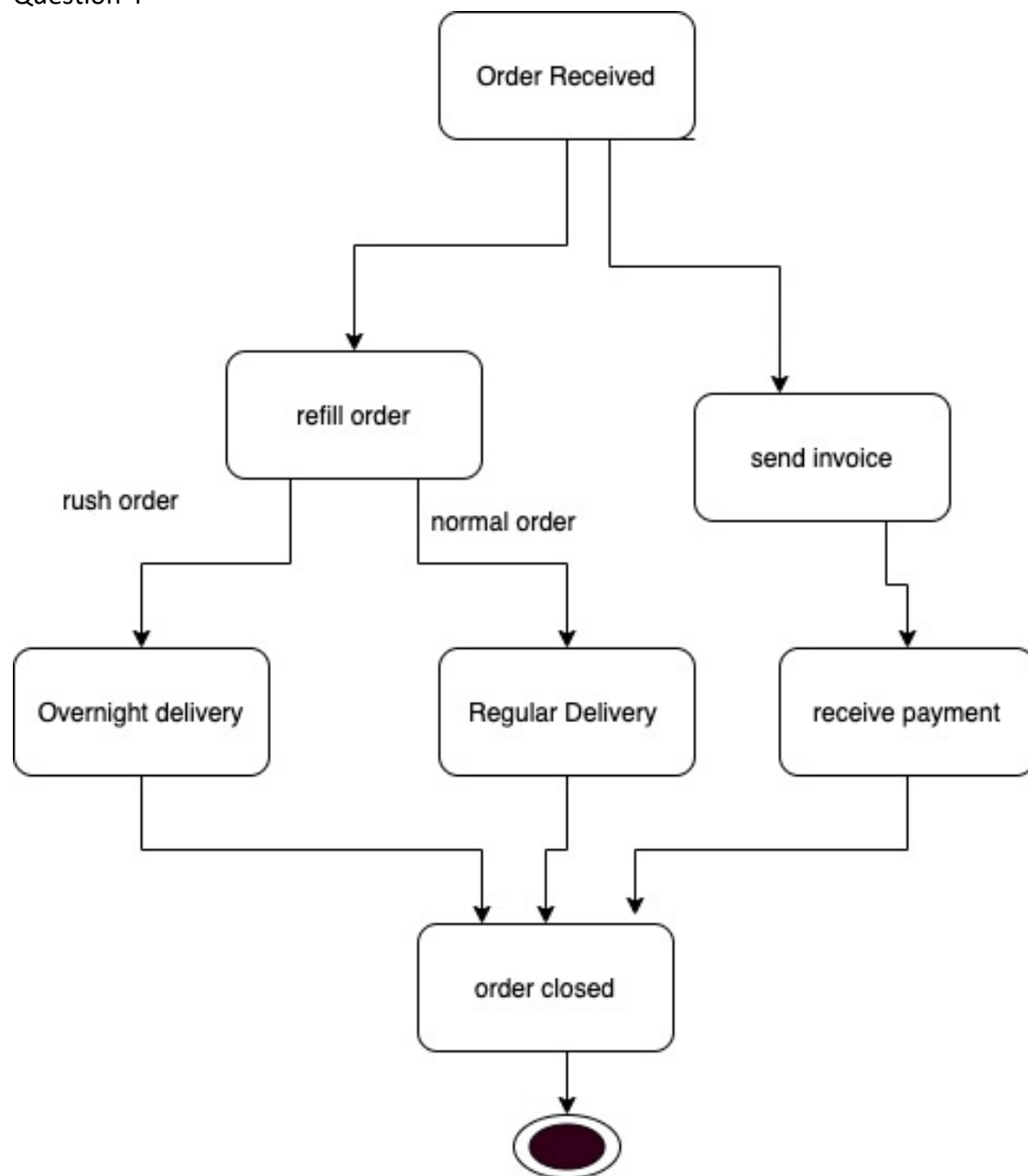 - from the paused state, if s== "play"
Events accepted in the state:

Event	Response	NextState
StopMotor	s == "stop"	stopped
pause	s == "pause"	paused

Question 3:

satisfactory credit rating, activation requested

pending activation

application process

pending credit check

added to active list

cancellation

unsatisfactory credit rating

active

**can cancel the line from any state

cancellation

cancellation

cancellation

first phone call

cancellation

in service

Question 4

Question 5A:

Print on Demand

- book
- flyer
- poster
- Submit an order
- select a product
- provide pdf
- create an account
- confirm account
- confirm payment
- place an order
- print the product
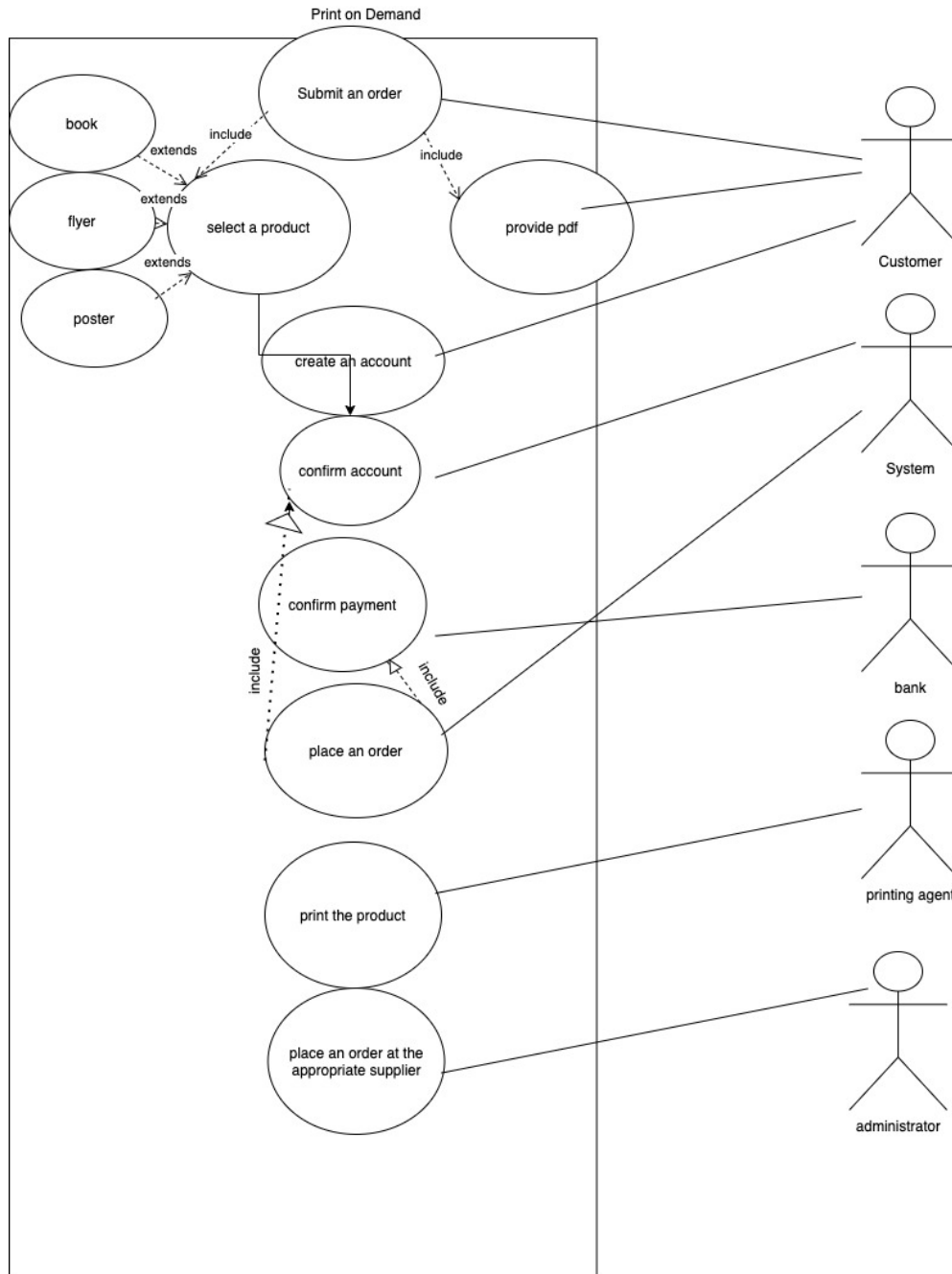- place an order at the appropriate supplier

extends, include

Customer

System

bank

printing agent

administrator

The way I interpreted the use case relationships was under two main umbrellas:
1. Submitting an order which contains the cases, select a product, create account, and submit a pdf
2. Place an order which contains confirm account and confirm payment

The use cases print the product and place order at appropriate supplier did not fall under either of these umbrellas

5b.

Use case: Place an order

pre: user has account

trigger: System places the order

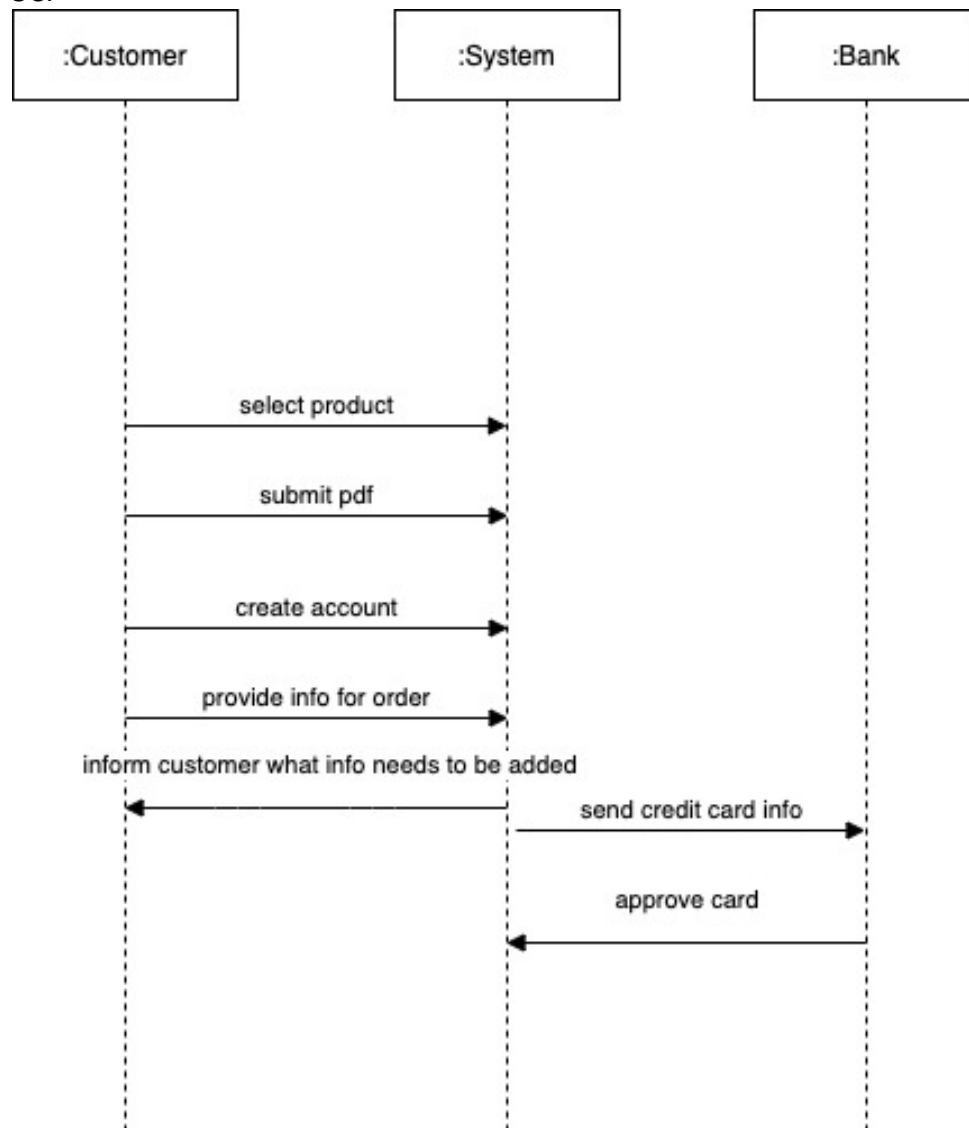guarantee: Credit card information is sent to bank for approval

main:

Customer creates an account by choosing username/password. His or her information is linked to the account. From there the system checks if all required information is there. Credit card information is sent to the bank. If the card is approved the order is finalized

Alternatives:

not enough information is provided, system goes back to customer and asks for more information

bank denies the card

5C:

:Customer	:System	:Bank

select product →

submit pdf →

create account →

provide info for order →

← inform customer what info needs to be added

send credit card info →

← approve card

5D.

Processing an Order

Accounting	Shipping	Printing	Online Sales

Send Order

send pdf

inspect pdf

file request to customer

Suitable?

charge credit card

payment done

send confirmation

payment confirmed

yes

no

inform accounting

request new file

ship product

print

send results