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Department: SWDC

Track: Headway Testing

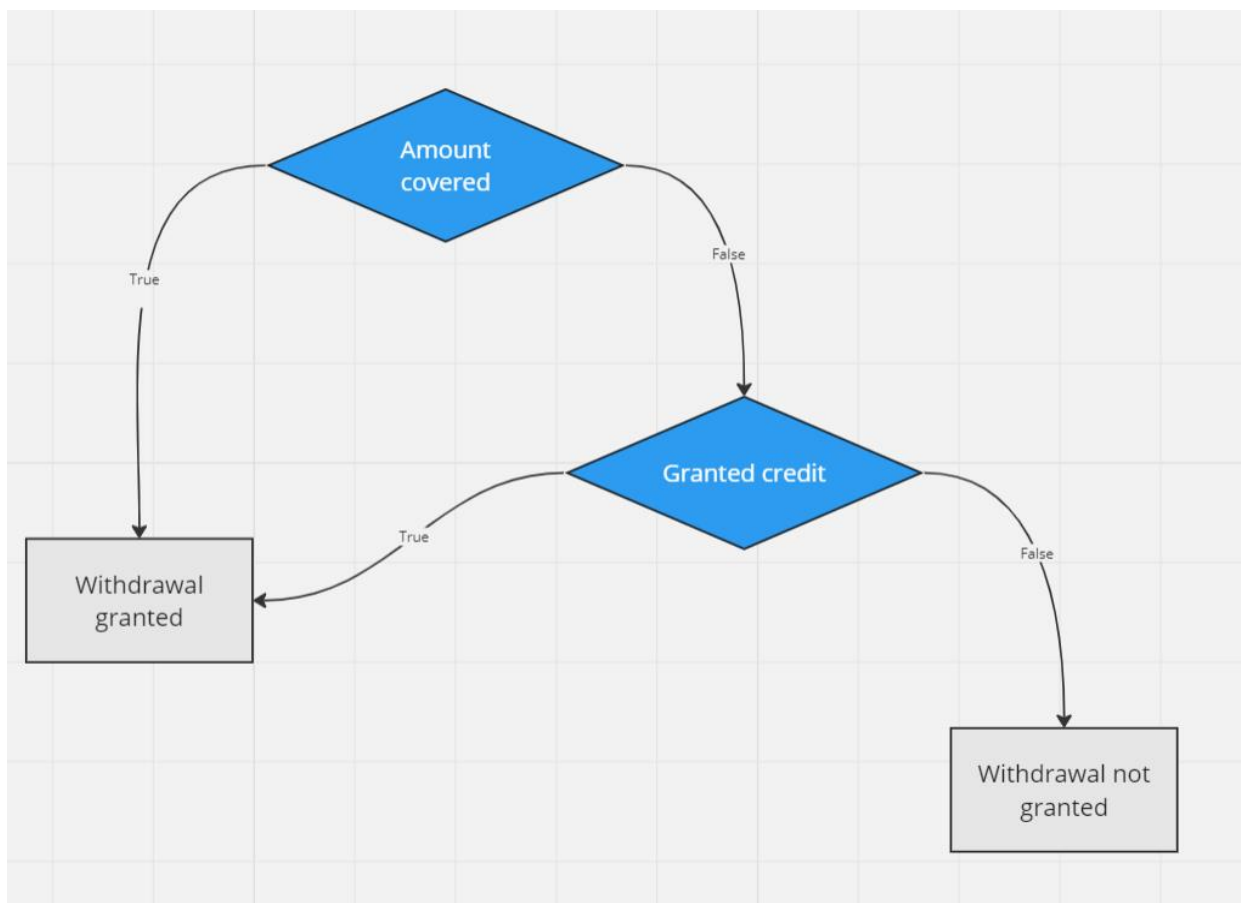**Submitted to: Eng. Abeer Abass**

Decision tables

1. ATM machine "Withdrawal is granted if requested amount is covered by the balance or if the customer is granted credit to cover the withdrawal amount"."

Conditions	Test Case1	Test Case2	Test Case3
Requested Amount <= Balance	T	-	F
Customer Granted Credit	F	T	F
Actions			
Withdrawal Granted	T	T	F

2.   If you are a new customer and you want to open a credit card account then there are three conditions first you will get a 15% discount on all your purchases today, second if you are an existing customer and you hold a loyalty card, you get a 10% discount and third if you have a coupon, you can get 20% off today (but it can't be used with the 'new customer' discount). Discount amounts are added, if applicable.

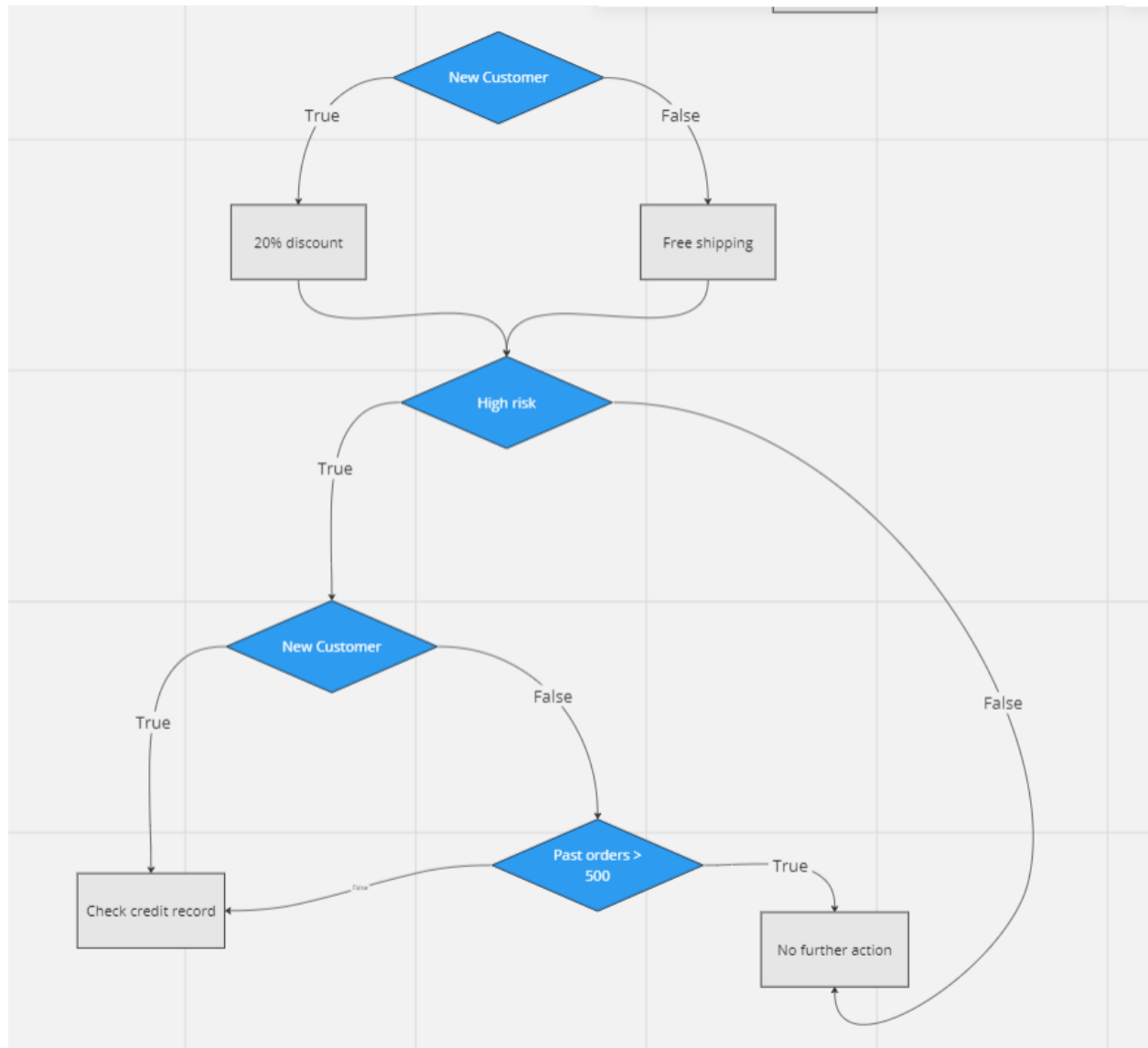| Conditions	Test Case1	Test Case2	Test Case3	Test Case4
New Customer	T	F	F	F
Existing customer with loyalty card	-	T	-	F
Has Coupon	-	-	T	F
Actions				
15% discount	T	F	F	F
10% discount	-	T	-	F
20% discount	F	-	T	F
No discount	F	F	F	T
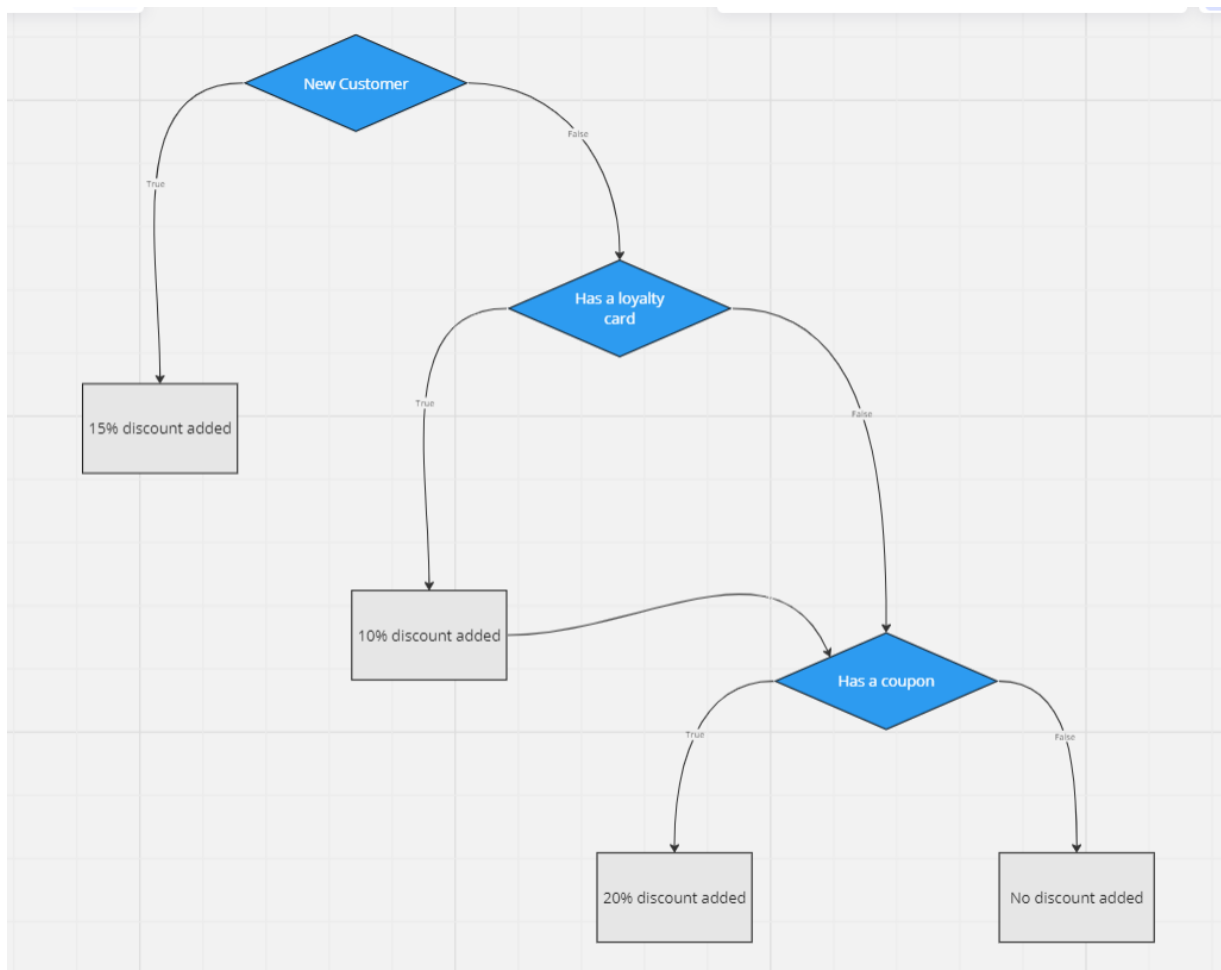
3.   If the customer is a new customer, offer 20% discount on next order

If the customer is a repeated customer, offer free shipping.

If the risk level of goods is high, then:

•   If the customer is a new customer, check their credit record

•   If the customer is a repeated customer, then:

•   If the past orders total > £500, no further action, else check their credit record

Conditions	Test Case1	Test Case2	Test Case3	Test Case4	Test Case5	Test Case6	Test Case7
New Customer	T	F	F	F	F	F	F
Repeated Customer	-	T	T	-	T	T	-
High Risk Goods	-	-	-	T	T	T	F
Orders Total > £500	-	-	F	-	T	F	-
Actions							
20% Discount on next order	T	F	F	F	F	F	F
Free shipping	-	T	T	-	T	T	-
Check credit record	-	-	T	T	F	T	F
No further action	-	-	-	-	T	F	T

```
                    New Customer
              True                    False

        20% discount              Free shipping


                     High risk
              True                        False

        New Customer

    True              False


                        Past orders >
                            500        True

  Check credit record    False                No further action
```

New Customer

True — 20% discount
False — Free shipping

High risk

True — New Customer
False — No further action

New Customer

True — Check credit record
False — Past orders > 500

Past orders > 500

True — No further action
False — Check credit record

4.   A mailing is to be sent out to customers.

The content of the mailing is about the current level of discounting and potential levels of discounting. The content is different for different types of customers:

Customer Types A, B and C get a normal letter except Customer Type C, who get a special letter.

Any customer with 2 or more current lines or with a credit rating of 'X' gets a special paragraph added with an offer to subscribe to another level of discounting.

Conditions	Test Case1	Test Case2	Test Case3	Test Case4	Test Case5
Customer C	T	-	-	-	-
Customer A or B	-	T	-	-	-
Customer with 2 or more current lines	-	-	T	F	F
Customer with credit rating X	-	-	F	T	F
Actions					
Normal Letter	-	T	-	-	-
Special Letter	T	-	-	-	-
Normal Paragraph	-	-	-	-	T
Special Paragraph	-	-	T	T	-

```
                    ┌───────────────┐
                    │ Customer type │
                    │     is C      │
                    └───────────────┘
         False                          True
          │                              │
          ▼                              ▼
  ┌───────────────┐            ┌───────────────┐
  │ Normal Letter │            │ Special Letter│
  └───────────────┘            └───────────────┘
          │                              │
          └──────────────┬───────────────┘
                         ▼
                  ┌───────────────┐
                  │ Current Lines │
                  │     >=2       │
                  └───────────────┘
         True                    False
          │                        │
          │                        ▼
          │                ┌───────────────┐
          │        True    │ Credit rating is│
          │  ◄─────────────│       X        │
          │                └───────────────┘
          │                        │ False
          ▼                        ▼
  ┌───────────────┐        ┌───────────────┐
  │Special Paragraph│      │Normal Paragraph│
  └───────────────┘        └───────────────┘
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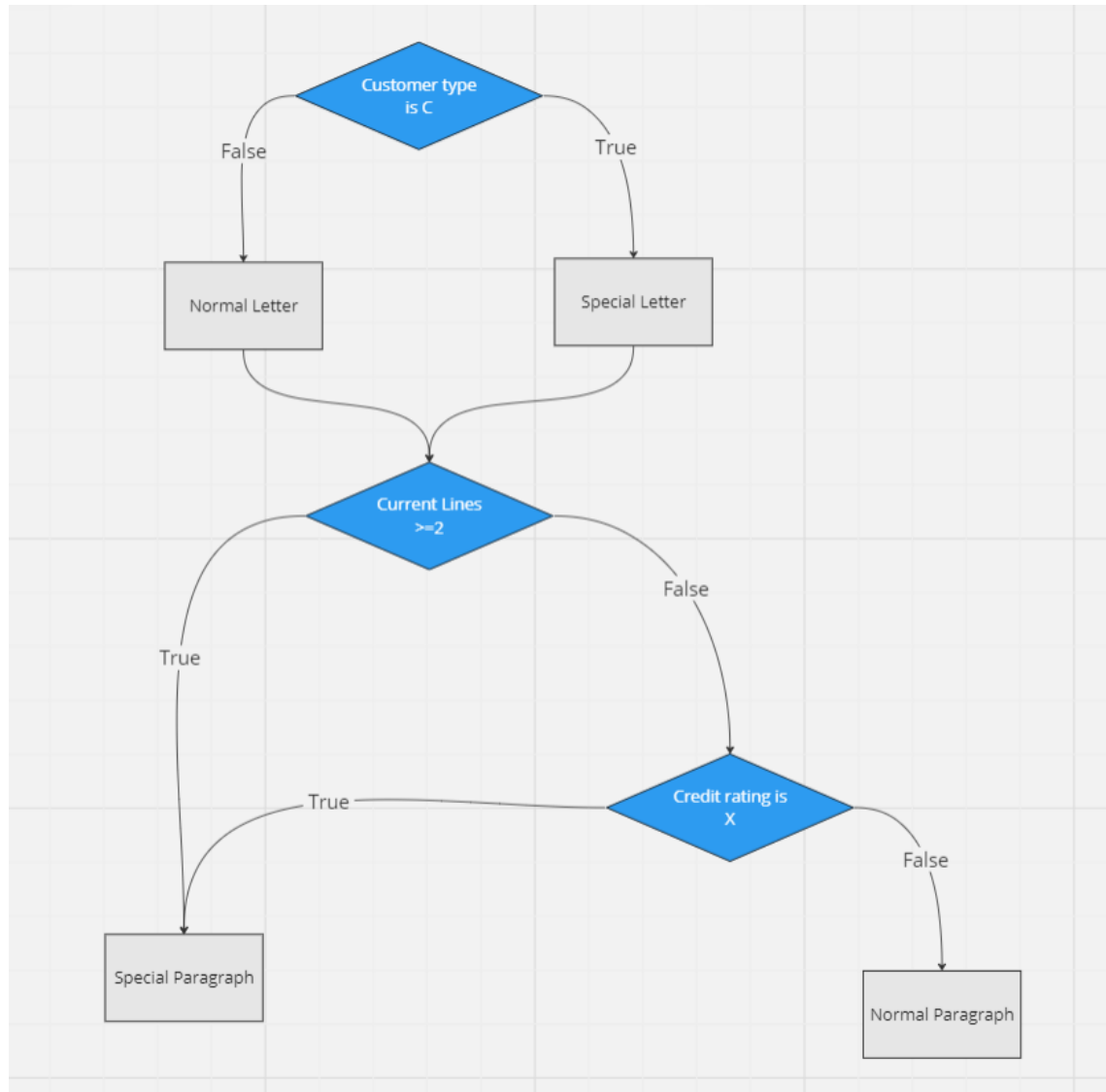
State Transition:

1.
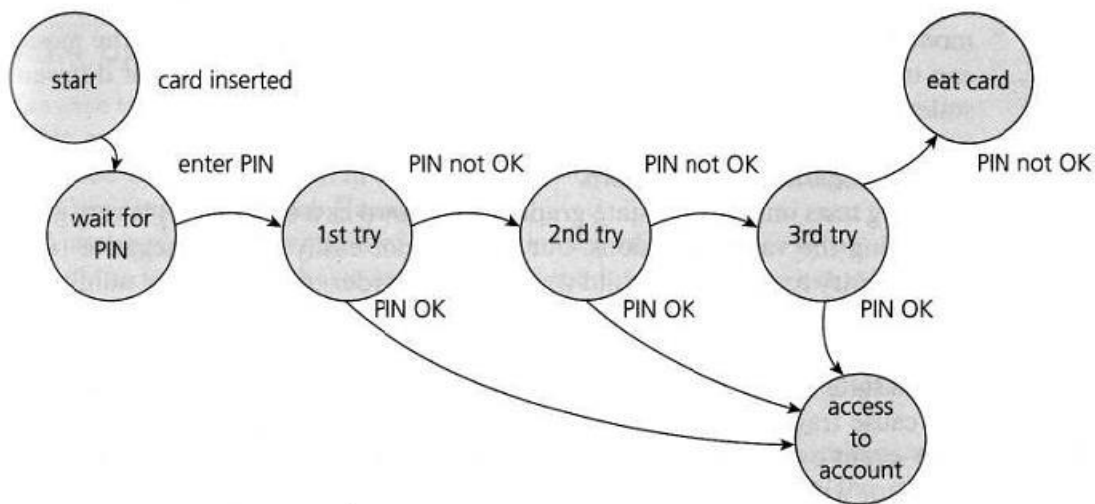
FIGURE 4.2 State diagram for PIN entry

Test Case	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8
Start State	-	Wait for PIN	1st try	1st try	2nd try	2nd try	3rd try	3rd try
Input (events)	Card inserted	Enter PIN	PIN OK	PIN not OK	PIN OK	PIN not OK	PIN OK	PIN not OK
Output (actions)	-	-	Access to account	-	Access to account	-	Access to account	Eat card
End State	Wait for PIN	1st try	Access to account	2nd try	Access to account	3rd try	Access to account	Eat card

Test Scenario	
TS1	TC1+TC2+TC3
TS2	TC1+TC2+TC4+TC5
TS3	TC1+TC2+TC4+TC6+TC7
TS4	TC1+TC2+TC4+TC6+TC8

2.

Disbursement order
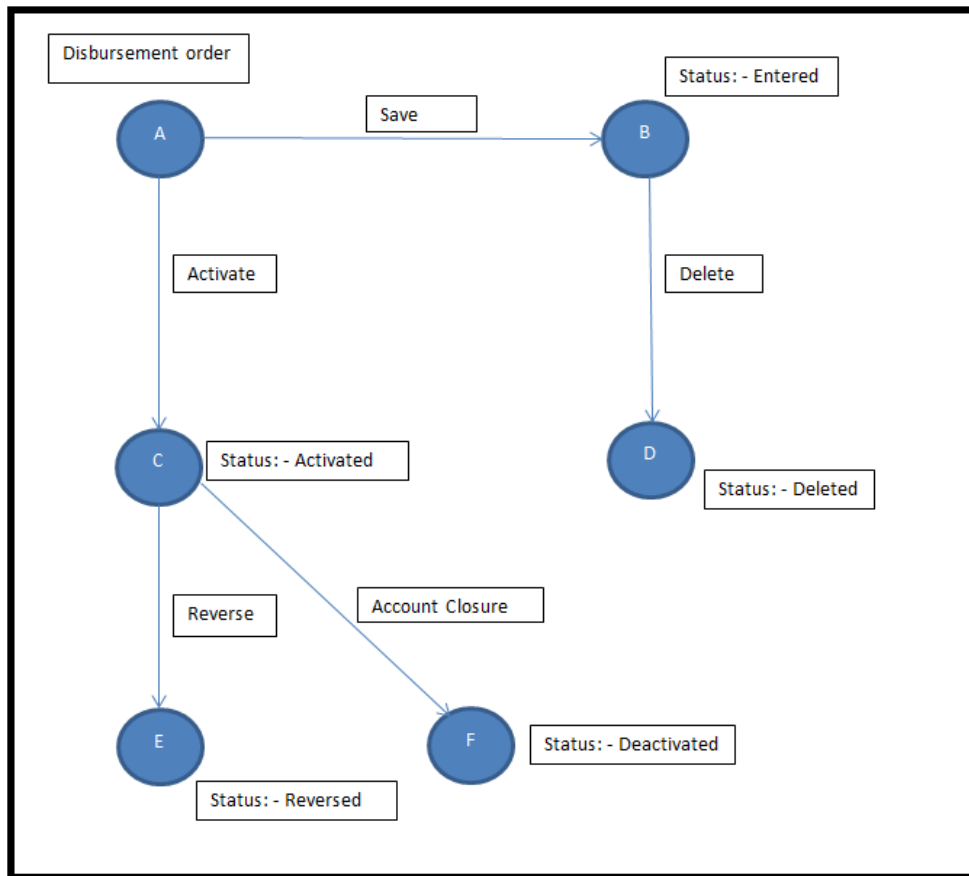
Test Case	TC1	TC2	TC3	TC4	TC5
Start State	A	A	B	C	C
Input (events)	Save	Activate	Delete	Reverse	Account closure
Output (actions)	Status: Entered	Status: Activated	Status: Deleted	Status: Reversed	Status: Deactivated
End State	B	C	D	E	F

Test Scenario	
TS1	TC1+TC3
TS2	TC2+TC4
TS3	TC2+TC5

THE END