Vẽ DFD từ tập Ca Sử Dụng: Một ví dụ minh họa

Tập Ca Sử Dụng

Use Case Name: Record an offer		ID: UC-3	Priority: High

Actor: Salesperson

Description: This use case describes how the salesperson records a customer offer on a vehicle. The offer may be a new offer or a revision of a previously rejected offer.

Trigger: Customer decides to make an offer on a vehicle.

Type: ☑ External ☐ Temporal

Preconditions:
1. Salesperson is authenticated.
2. Pending offers datastore is available and on-line.
3. Vehicle inventory datastore is available and on-line.
4. Rejected offers datastore is available and on-line.

Normal Course: | **Information for Steps:**
| |
1. Salesperson specifies the offer vehicle using the Vehicle ID number. ← Vehicle ID
2. The system checks for any pending offers on the vehicle. ← Existing Pending Offers
3. If there is an offer pending on the vehicle, the system notifies the → Offer Pending Notice
   salesperson and the use case ends.
4. If there are no pending offers on the vehicle, the system asks if this is
   a new offer or an offer revision. ← Offer Type
5. If this is an offer revision,
   a. The salesperson specifies the ID of the previous offer. ← Offer ID
   b. The system fills the offer form with the content of the previous Offer from the ← Previous offer details
      Rejected Offers datastore.
   Otherwise,
   a. The system fills the offer form with details on the offer vehicle. ← Vehicle details
6. Salesperson supplies/modifies additional information for the offer, including
   customer information and the specific offer details (Cash Plus trade-in Value, ← Customer details
   desired dealer options). ← Offer details
7. The system displays offer summary. → Offer Summary
8. The salesperson is asked to obtain customer permission to confirm the offer. ← Offer Confirmation
9. If not confirmed, the offer is discarded, otherwise, the confirmed offer is stored as a
   Pending Offer. → New Pending Offer
10. A Copy of the Pending Offer is printed for the customer. → Pending Offer
11. A Pending Offer Notice is sent to the Sales Manager for evaluation → Pending Offer Notice
    and approval.

Postconditions:
1. Pending Offer is stored.
2. Sales Manager is sent notice of pending offer.

Summary

Inputs	Source	Outputs	Destination
Vehicle ID	Salesperson	Offer Pending Notice	Salesperson
Existing Pending Offers	Pending Offers datastore	Offer Summary New Pending Offer	Customer Pending Offer datastore
Offer Type	Salesperson		
Offer ID	Salesperson	Pending Offer	Customer
Previous Offer details	Rejected Offers datastore	Pending Offer Notice	Sales Manager
Vehicle datastore	Vehicle details		
Customer details	Customer		
Offer details	Salesperson		

Use Case Name: Evaluate an offer		ID: UC-4	Priority: High

Actor: Sales manager

Description: This use case describes how the sales manager evaluates an offer and accepts it or rejects it with a reason.

Trigger: A Pending offer is created and the sales manager is notified.

Type: ☑ External ☐ Temporal

Preconditions:
1. Sales manager is authenticated.
2. Pending offer is available in the Pending Offers datastore.

Normal Course:	Information for Steps:
1. The Sales Manager retrieves the Pending Offer from the Pending Offer datastore.	← Pending offer ID ← Pending offer
2. The sales Manager uses the Vehicle ID number to retrieve the Vehicle Record on the vehicle	← Vehicle ID ← Vehicle details
3. The system prompts the Sales Manager to Accept or Reject the offer.	← Offer decision
4. If the offer is rejected,	
a. The system prompts the Sales Manager to provide a reason for the rejection.	← Reason for Rejection
b. An offer rejection notice including the reason is sent to the salesperson.	→ Offer Rejection Notice
c. The Pending Offer is removed from the Pending Offers datastore and stored as a Rejected Offer in the Rejected Offers datastore accessible only to the logged in salesperson.	→ New Rejected Offer
5. If the offer is accepted,	
a. The system uses information from the Pending Offer to produce a Sales Contract.	→ New Sales Contract
b. The Sales Contract is stored in the Pending Sales Contracts datastore.	
c. Two copies of the Sales Contract are printed for the Salesperson and customer.	→ Sales Contract
d. The Pending Offer is removed from the Pending Offers datastore and stored in the Accepted Offers datastore.	→ New Accepted Offer
e. The customer deposit is recorded in the Deposits datastore	→ Purchase Deposit
f. Any dealer options specified in the offer are used to prepare a Shop Work Order, which is stored in the Shop Work Orders datastore and sent to the Shop Manager.	→ Shop Work Order

Postconditions:
1. Sales Contract is recorded in Pending Sales Contract datastore.
2. Pending Offer is removed from Pending Offers and added to Accepted Offers or to Rejected Offers
3. Customer deposit amount is recorded for bookkeeper.
4. Work to be done on the sale vehicle is recorded as a Show Work Order and Shop Manager is notified.

Summary

Inputs	Source	Outputs	Destination
Pending offer ID	Sales Manager	Offer Rejection Notice	Salesperson
Pending offer	Pending Offers datastore	New Rejected Offer	Rejected Offers datastore
Vehicle ID	Sales Manager	New Sales Contract	Sales Contract datastore
Vehicle details	Vehicle datastore		
Offer decision	Sales Manager	Sales Contract	Customer/Salesperson
Reason for Rejection	Sales Manager	New Accepted Offer	Accepted Offers datastore
		Purchase Deposit	Deposits datastore
		Shop Work Order	Shop Work Orders Datastore
		Shop Work Order Notice	Shop Manager

Use Case Name: Take delivery		ID: UC-5	Priority: High

Actor: Salesperson

Description: This use case describes how the salesperson completes the vehicle sale to the customer.

Trigger: Customer has the final payment for the vehicle.

Type: ☑ External ☐ Temporal

Postconditions:
1. Salesperson is authenticated.
2. Sales Contract is available in Pending Sales Contract datastore.

Normal Course:

1. The Saleperson retrieves the Sales Contract using the contract number. ← Sales Contract ID
2. The System asks the salesperson to confirm that the customer accepts ← Vehicle accepted confirmation
   the vehicle and has provided the required payment (cash plus trade-in). ← Payment submission verification
3. If confirmed,
   a. the system stores the Sales Contract in the Final Sales Contract datastore. → New Final Sales Contract
   b. A Final Sales Contract is printed for the customer. → Final Sales Contract
   c. Payment is recorded. → Final Payment

Otherwise, the use case ends.

Information for Steps:

Postconditions:
1. The Sales Contract is recorded in the Final Sales Contract datastore.
2. Payment is recorded.

Summary

Inputs	Source	Outputs	Destination
Sales Contract ID	Salesperson	New Final Sales	Final Sales Contract
Vehicle accepted	Customer	Contract	datastore
confirmation		Final Sales Contract	Customer
Payment submission	Salesperson	Final Payment	Payments datastore
verification			

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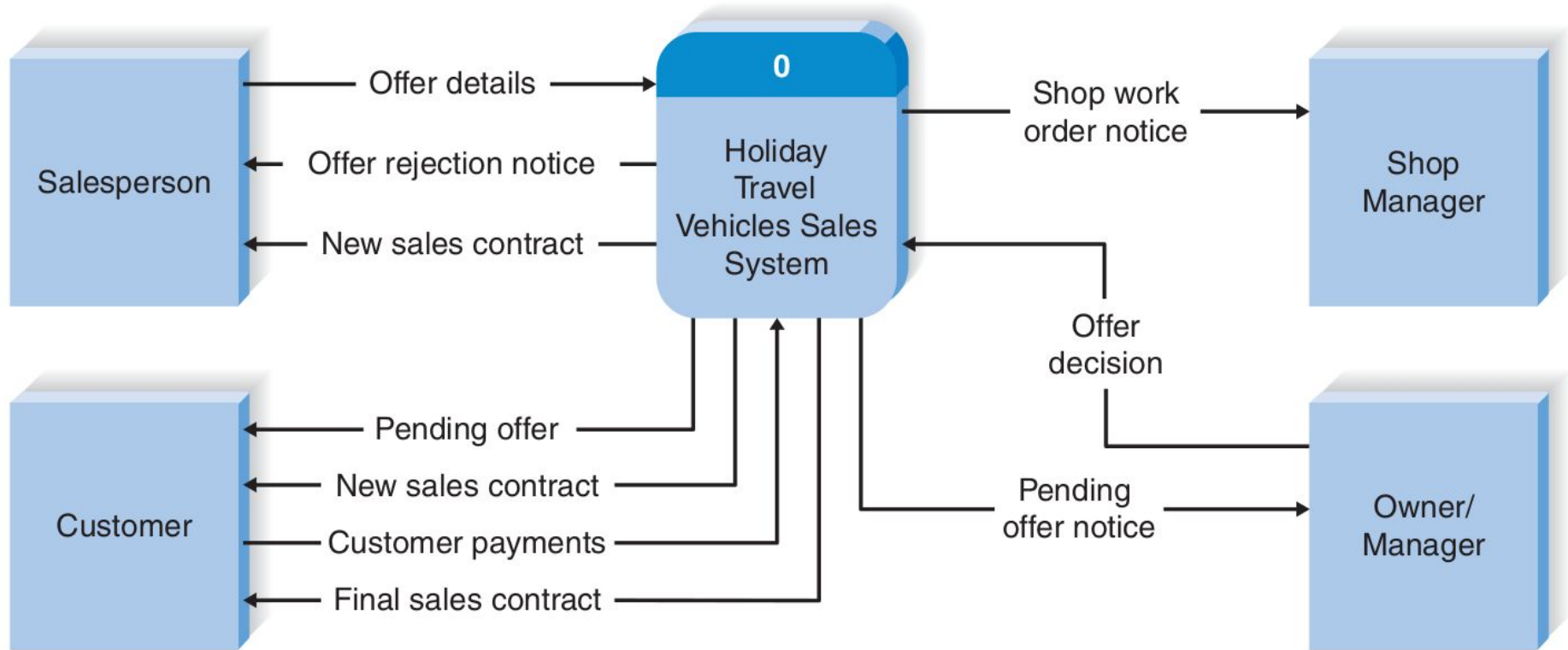**FIGURE 5-5**

Holiday Travel Vehicles Sales System Context Diagram

Use Case Name: Record an offer		ID: UC-3	Priority: High

Actor: Salesperson

Description: This use case describes how the salesperson records a customer offer on a vehicle. The offer may be a new offer or a revision of a previously rejected offer.

Trigger: Customer decides to make an offer on a vehicle.

Type: ☑ External ☐ Temporal

Summary

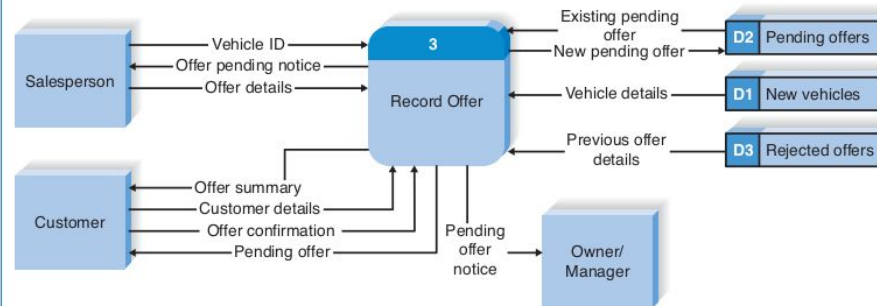| Inputs	Source	Outputs	Destination
Vehicle ID	Salesperson	Offer Pending Notice	Salesperson
Existing Pending Offer	Pending Offers datastore	Offer Summary	Customer
		New Pending Offer	Pending Offer datastore
Offer Type	Salesperson		Customer
Offer ID	Salesperson	Pending Offer	Owner/Manager
Previous offer details	Rejected Offers datastore	Pending Offer Notice	
Vehicle datastore	Vehicle details		
Customer details	Customer		
Offer details	Salesperson		

FIGURE 5-6

Holiday Travel Vehicles Process 3 (Record Offer) DFD Fragment

(a) Process 4 DFD Fragment

Process 4 (Evaluate Offer):
- Owner/Manager → Offer decision
- Owner/Manager → Vehicle ID
- Shop work order notice → Shop Manager
- Shop work order → D6 Shop Work Orders
- Vehicle details ← D1 New Vehicles
- Pending offer → 4
- Pending offer ID → 4
- Offer rejection notice → Salesperson
- New sales contract → Salesperson
- New sales contract → D5 Sales Contracts
- New accepted offer → D4 Accepted Offers
- Rejected offer → D3 Rejected Offers
- Deposit → Customer
- New sales contract → Customer
- Purchase deposit → D7 Deposits
- Pending offer → D2 Pending Offers

(b) Process 5 DFD Fragment

Process 5 (Take Delivery Of Vehicle):
- Salesperson → Sales contract ID
- Sales contract → Salesperson
- Payment verification → Salesperson
- Sales contract ← D5 Sales Contracts
- Final payment → D9 Payments
- Final payment → Customer (Customer → Final payment)
- Acceptance → Customer
- Final sales contract → Customer
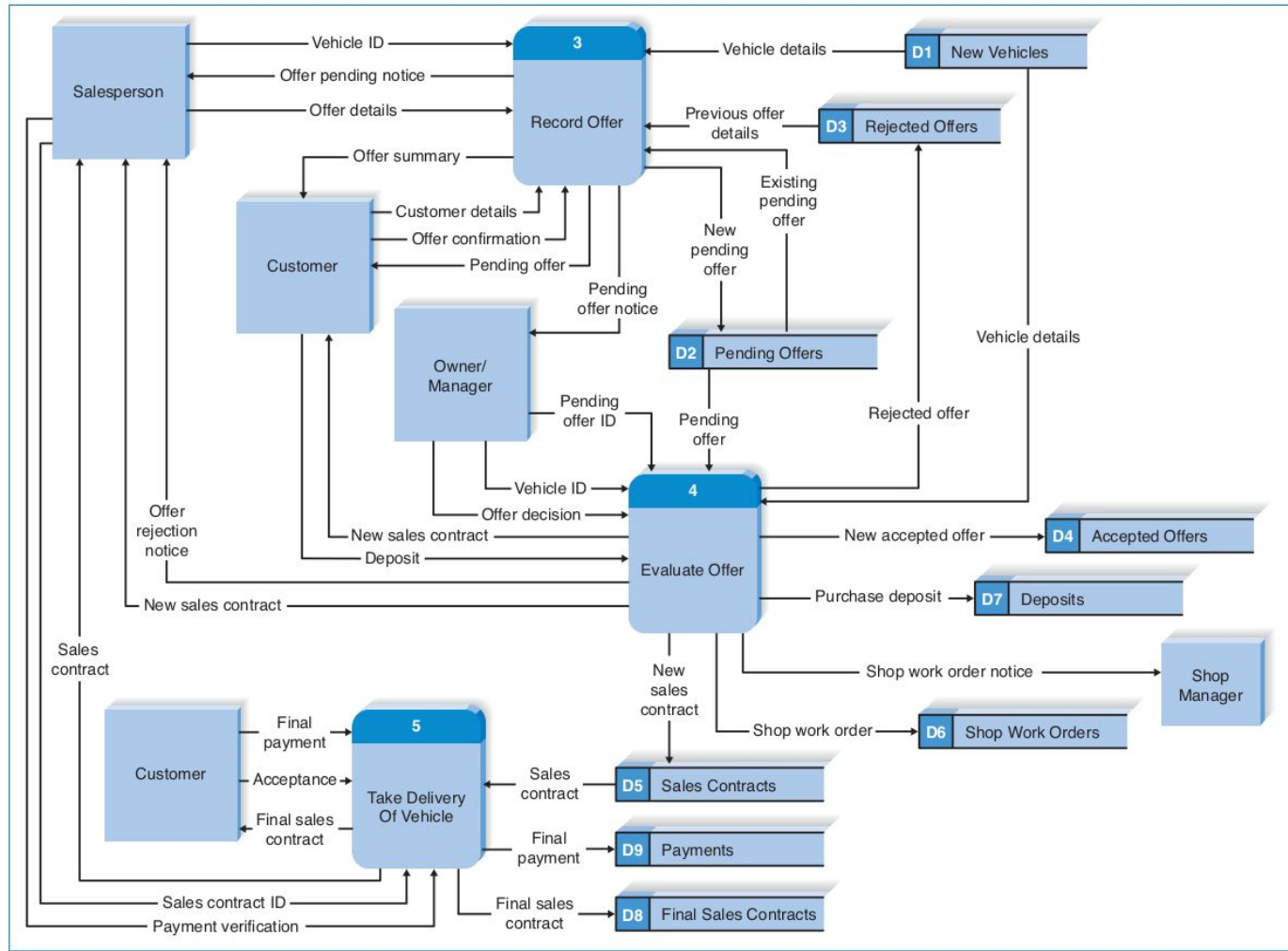- Final sales contract → D8 Final Sales Contracts

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FIGURE 5-8
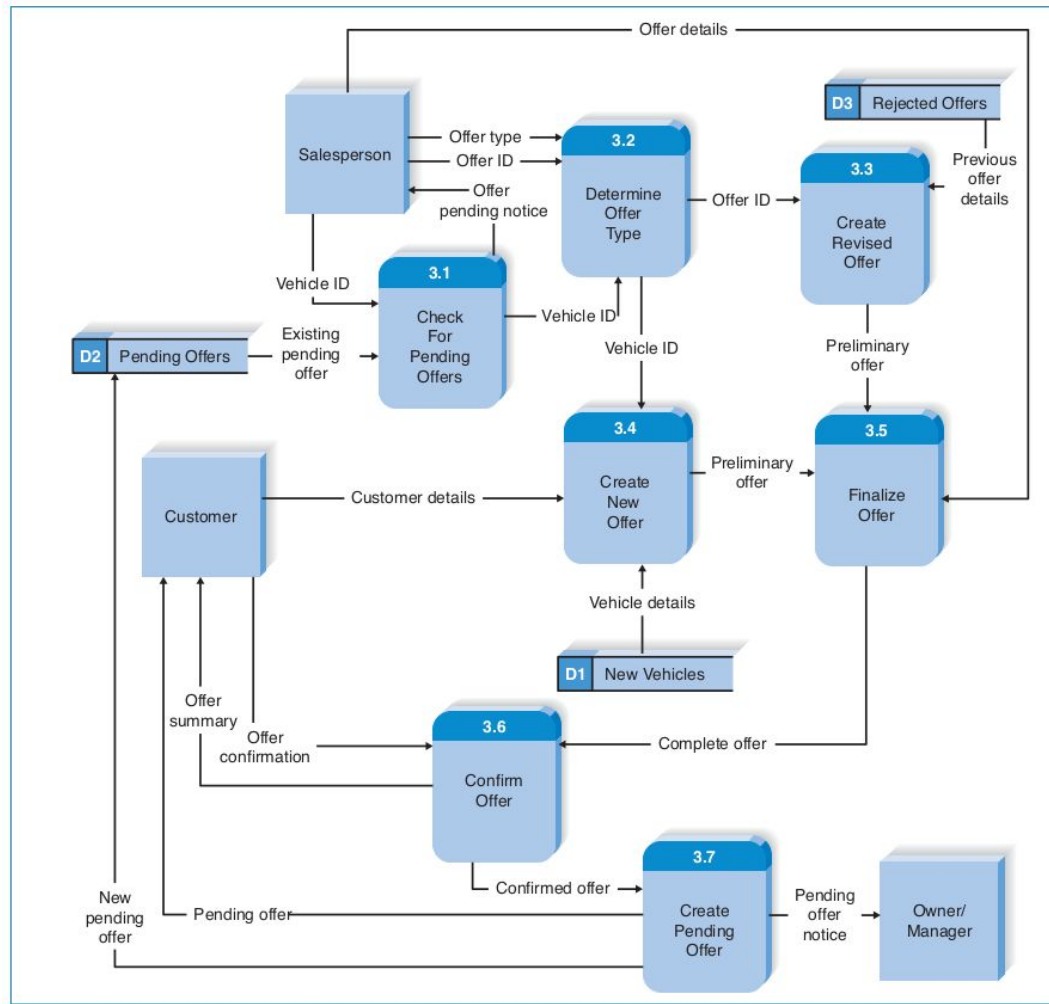Holiday Travel Vehicles Level 0 DFD

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DFD Mức 1

FIGURE 5-9
Holiday Travel Vehicles Process 3 (Record Offer) Level 1 DFD
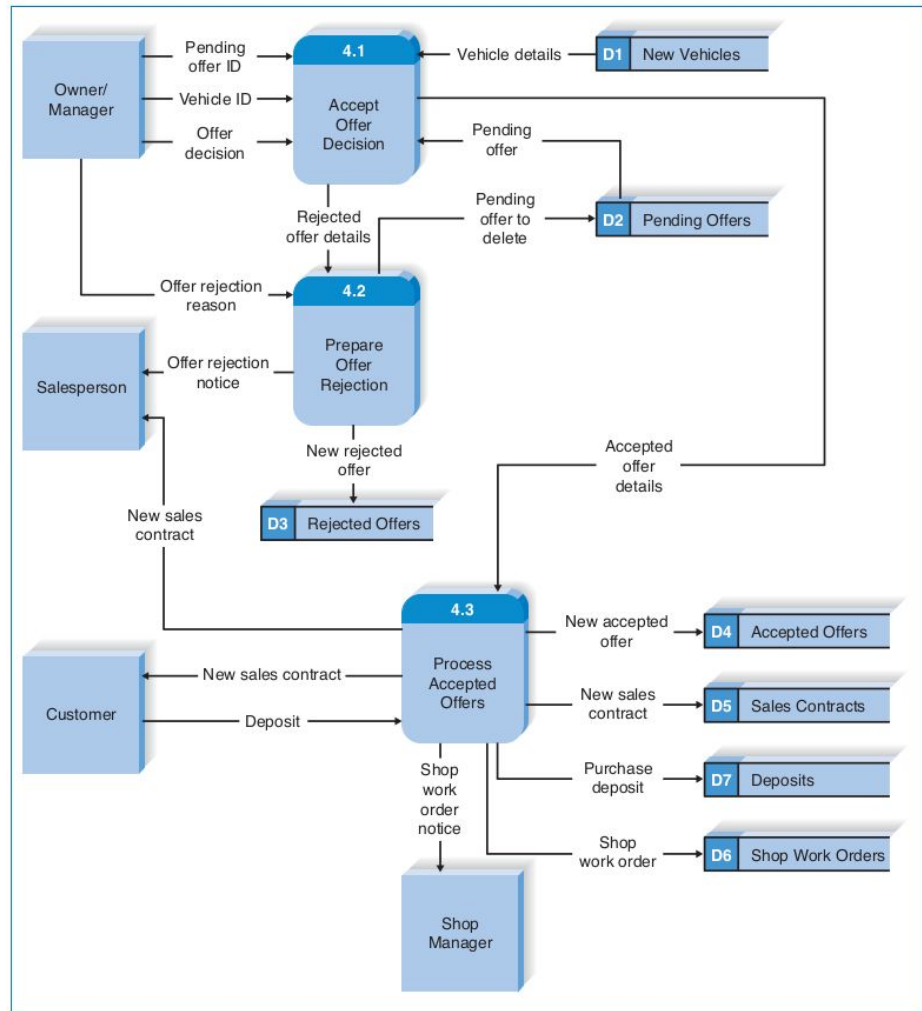
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FIGURE 5-10

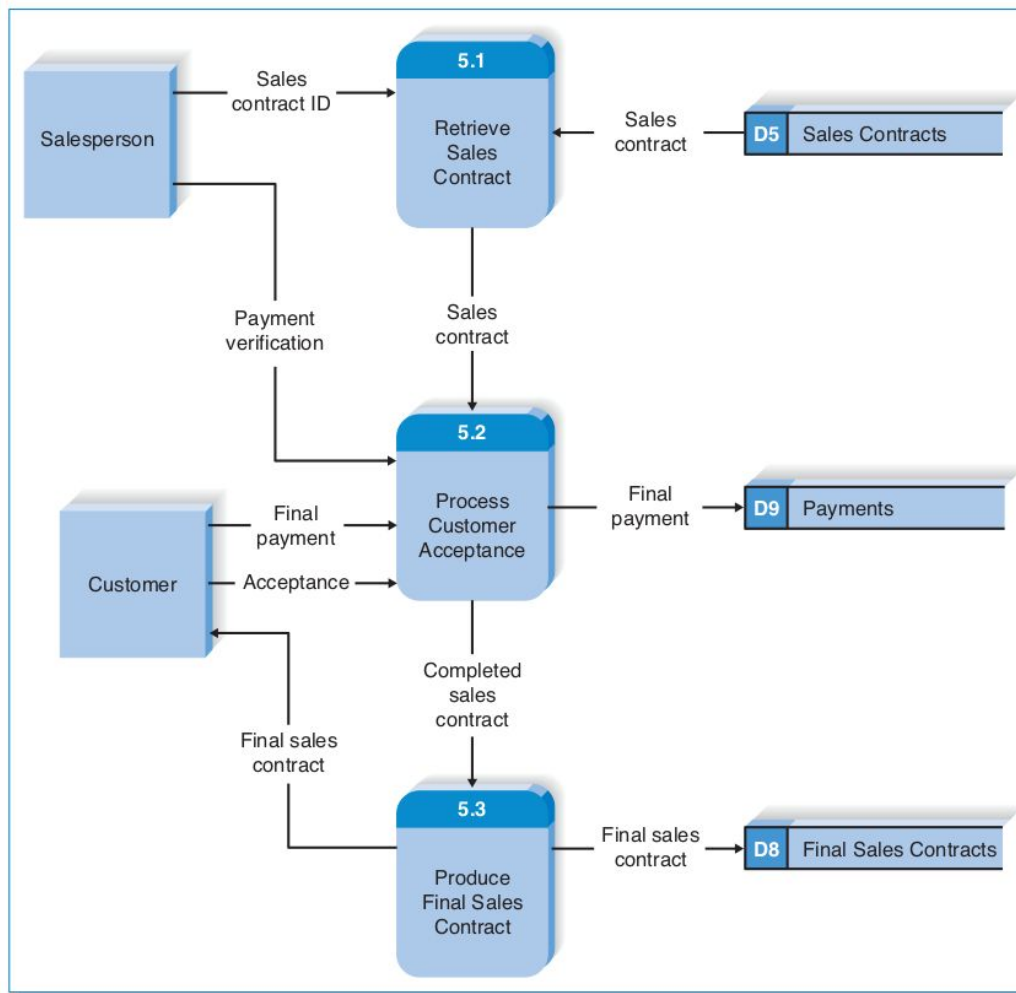Holiday Travel Vehicles Process 4 (Evaluate Offer) Level 1 DFD

FIGURE 5-12
Holiday Travel Vehicles Process 5 (Take Delivery of Vehicle) Level 1 DFD
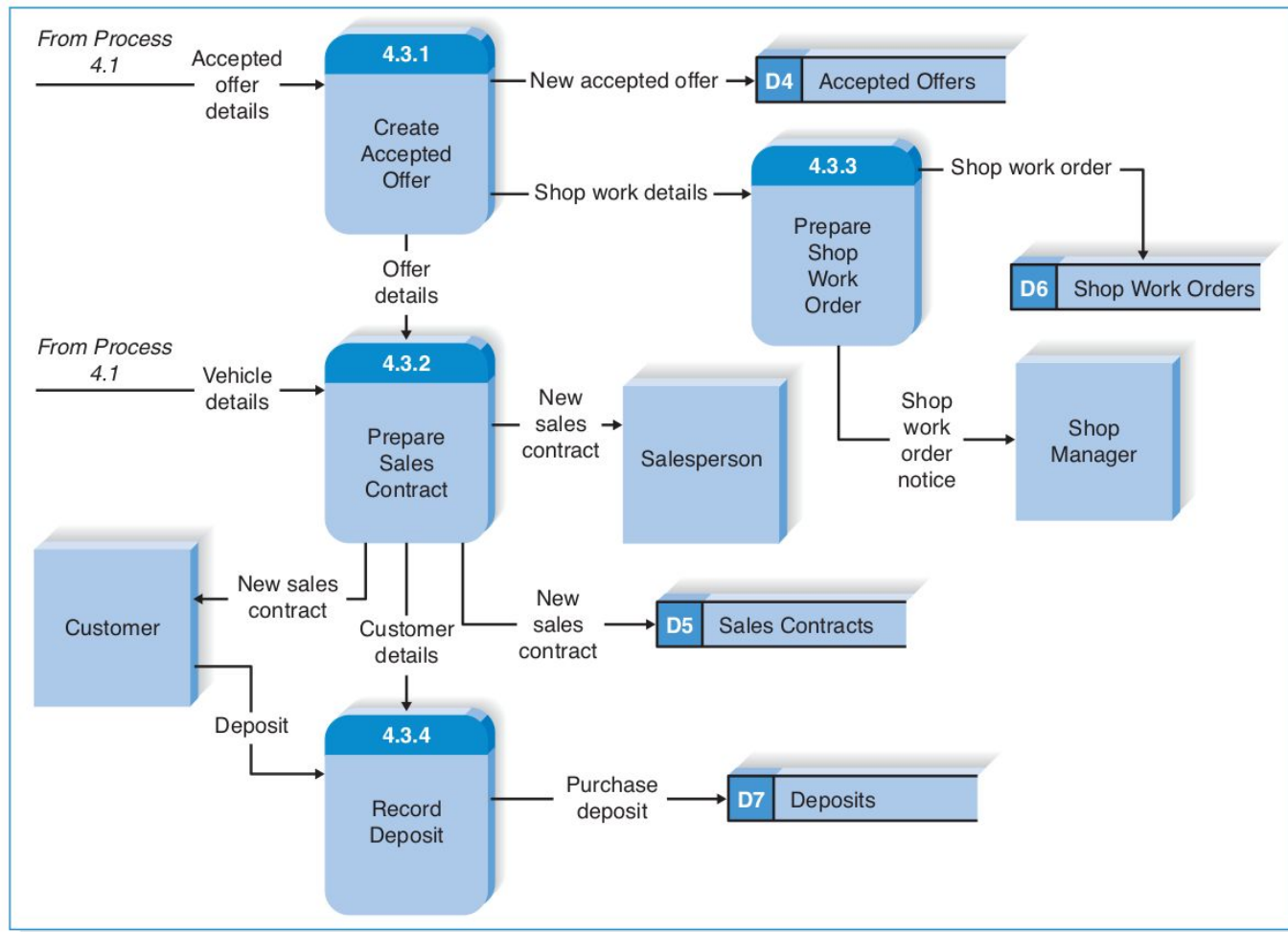
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DFD Mức 2

FIGURE 5-11
Holiday Travel Vehicles Process 4.3 (Process Accepted Offers) Level 2 DFD

Tổng kết

Sử dụng Tập ca sử dụng chi tiết để vẽ DFD

Thông thường 1 ca sử dụng có thể tương đương 1 tiến trình mức 0

Một hoạt động trong luồng sự kiện của ca sử dụng có thể tương đương 1 tiến trình mức 1