Systems Analysis Assignment:

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Programme:	Computer Applications (CA)
Module (code):	Systems Analysis (ca214)
Assignment Title:	SSADM
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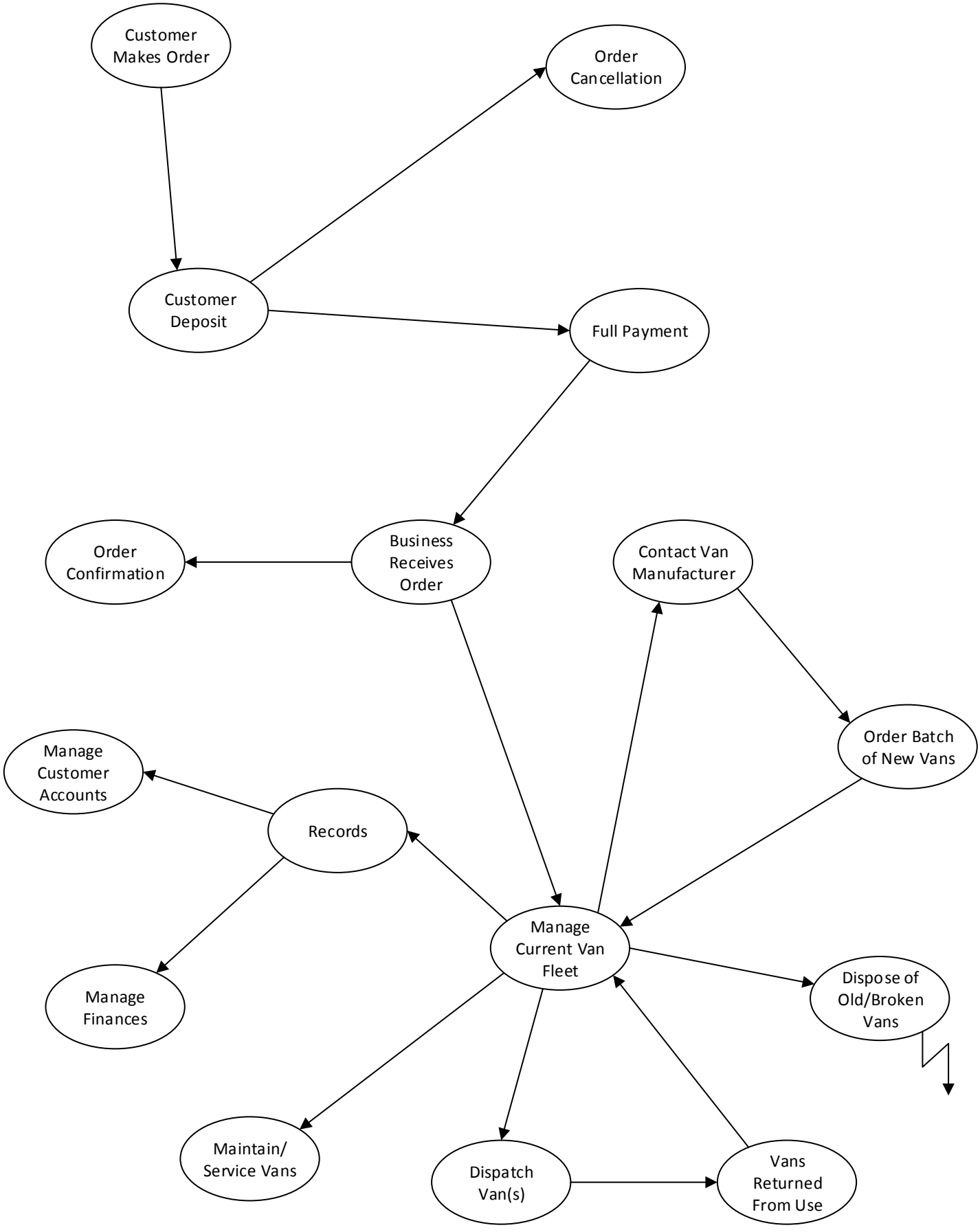
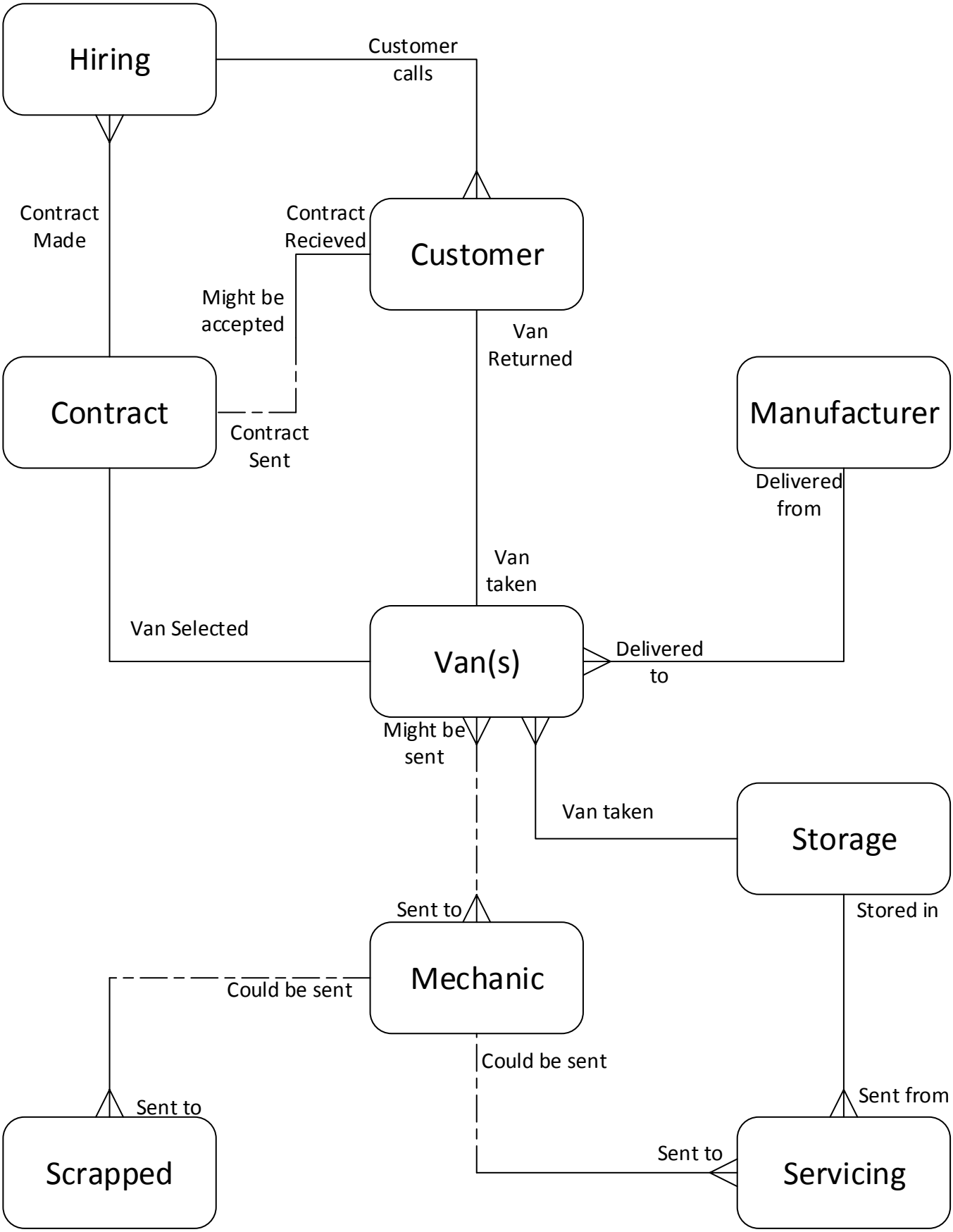
Name(s): Bryan McHugh *Date: 10 / 12 / 18*

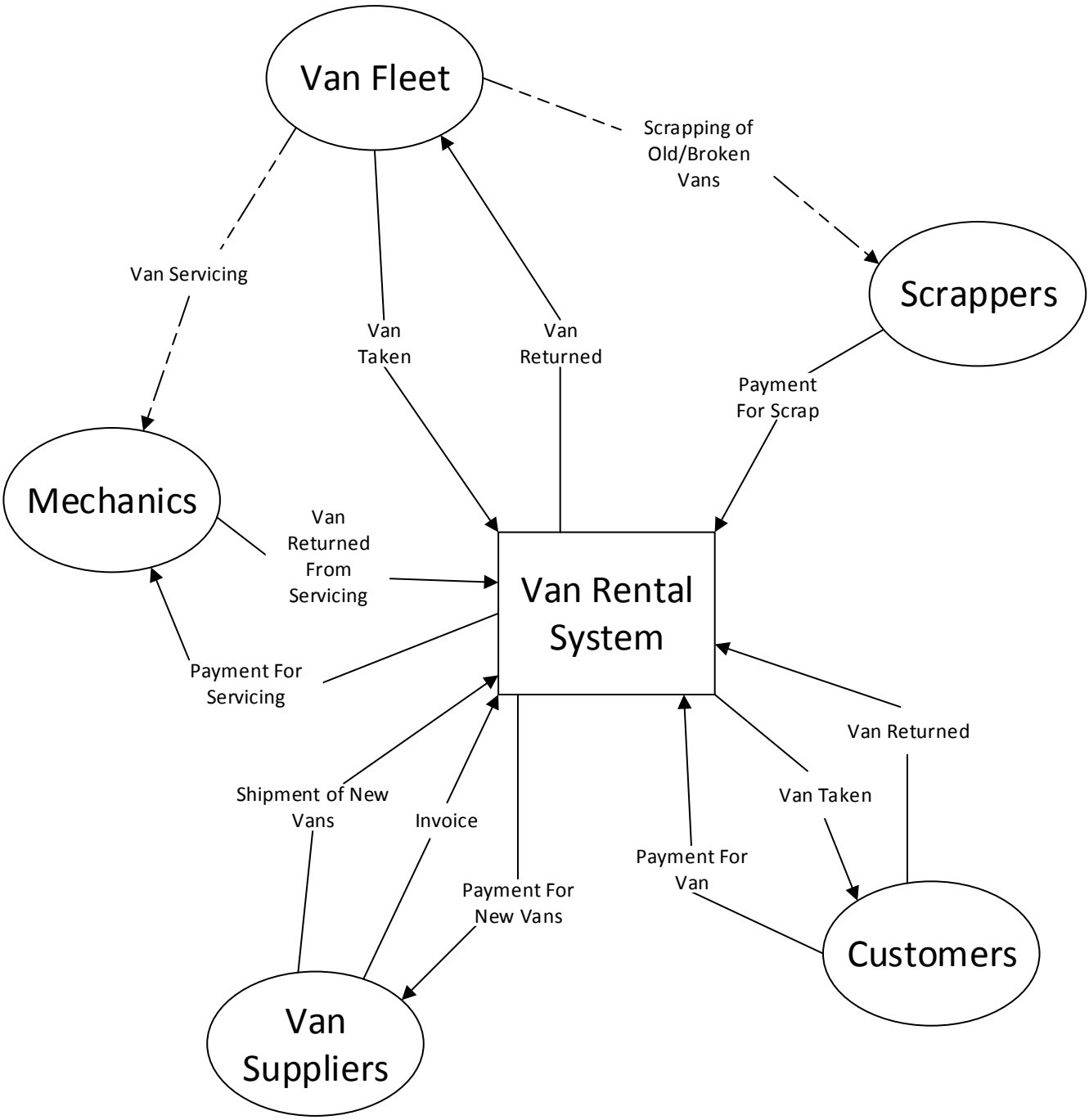
Business Activity Model:



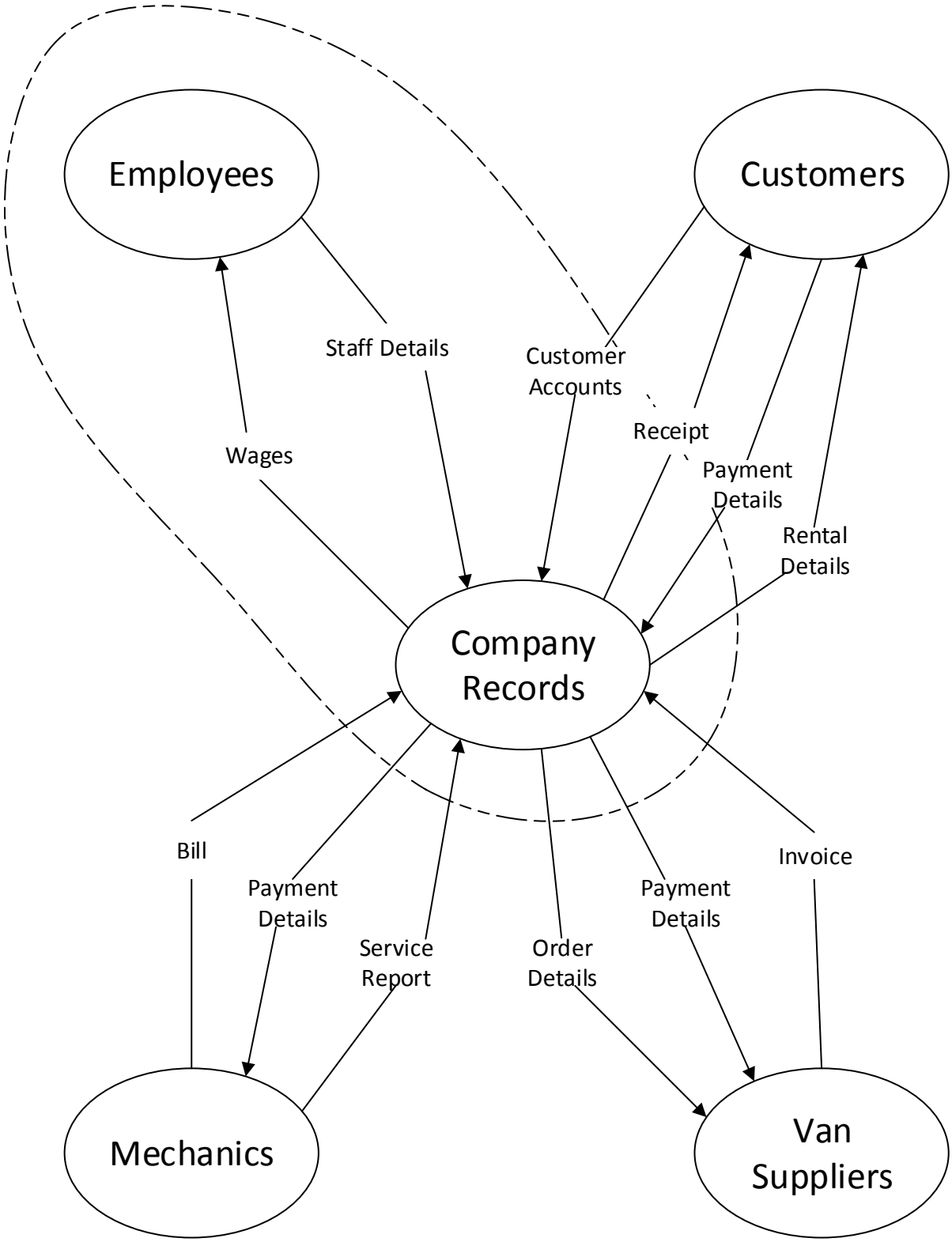
Logical Data Model:



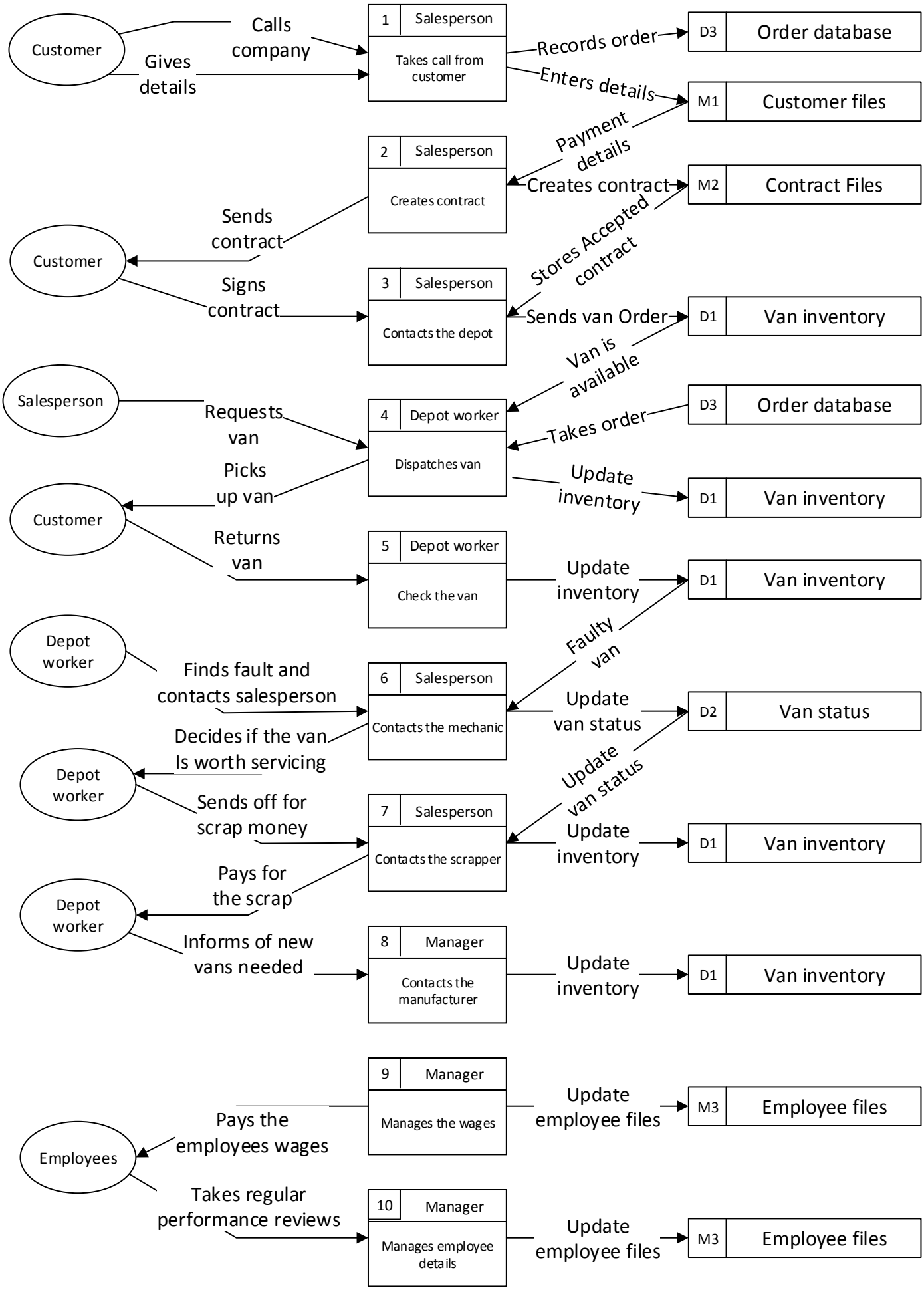
Data Flow Diagram:



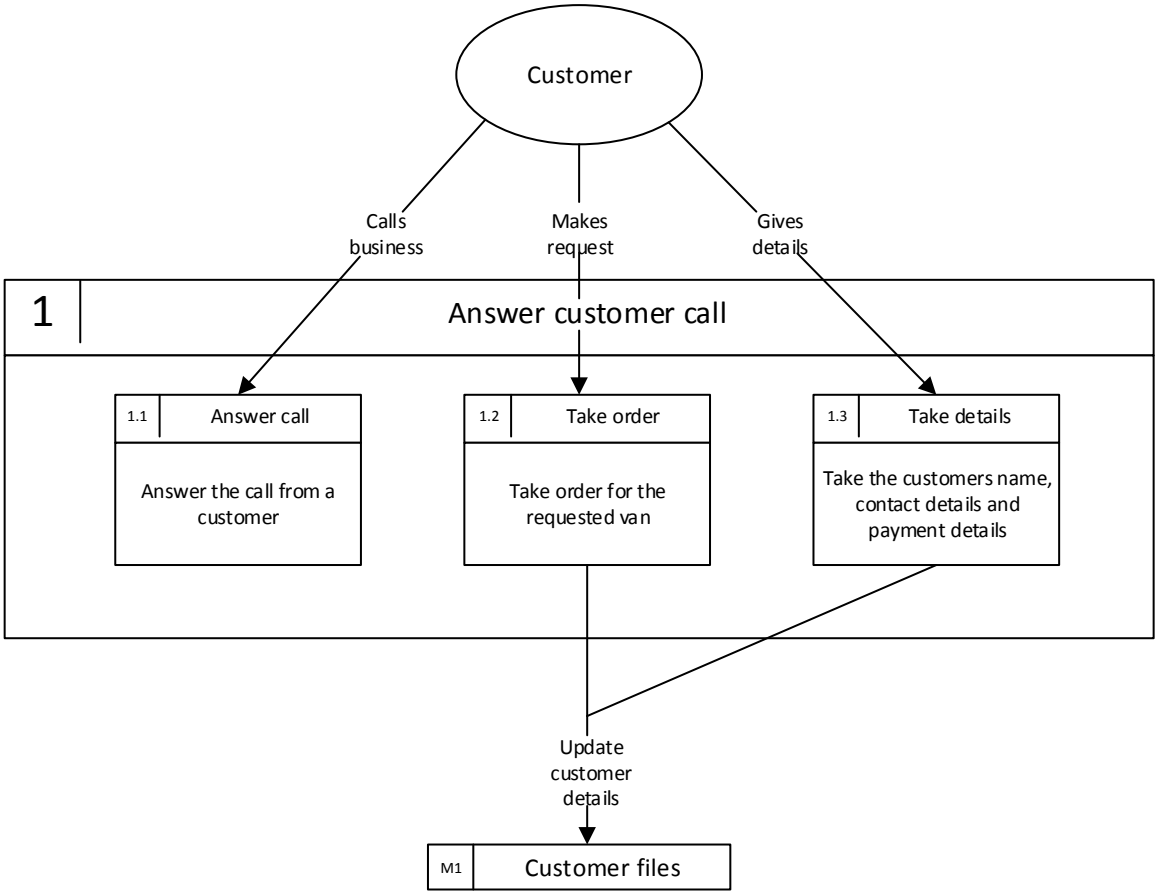
Document Flow Diagram:



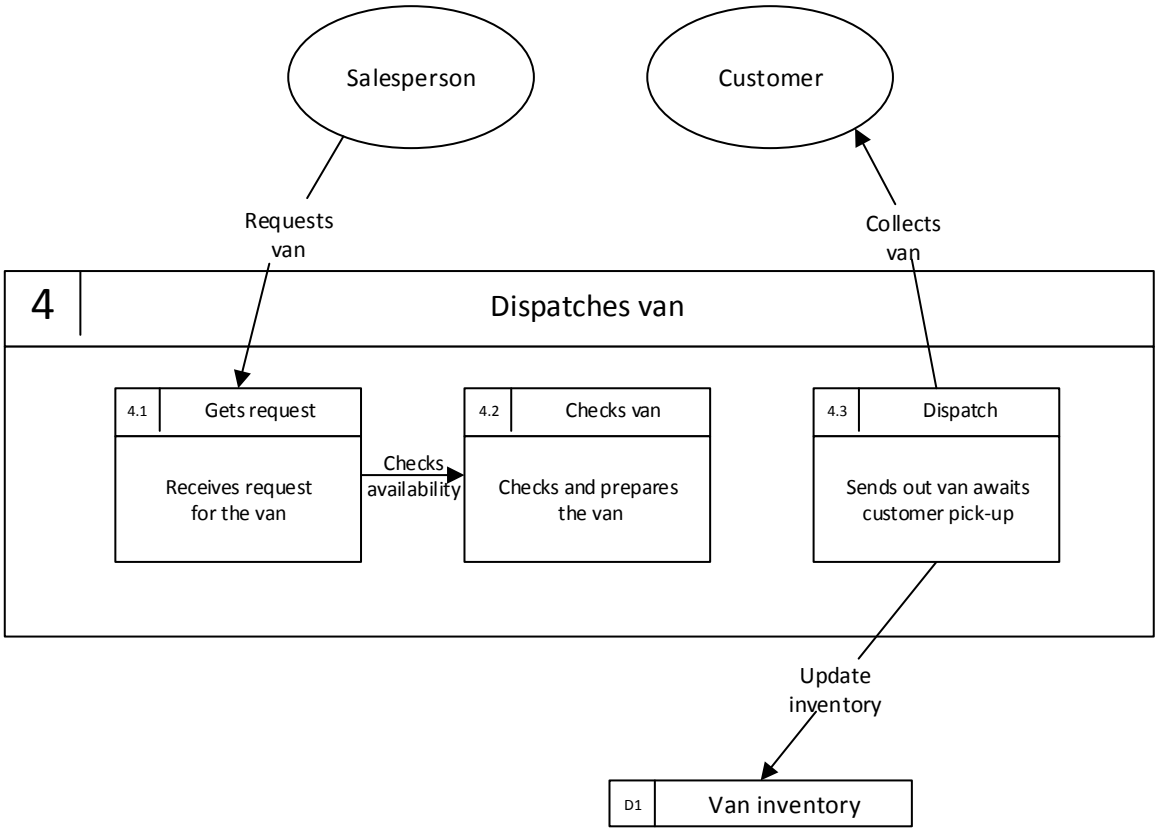
Physical Level 1 DFD:



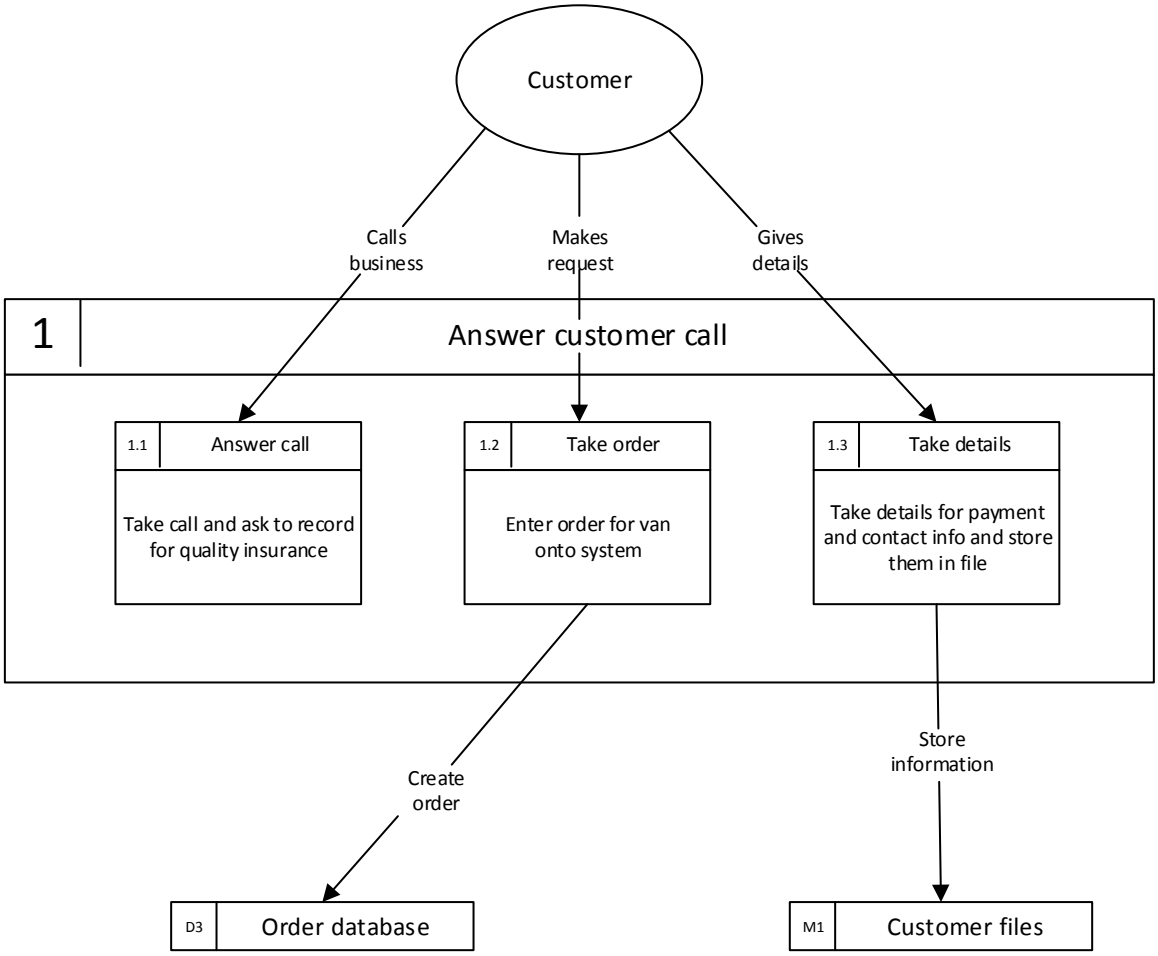
Physical Level 2 DFD 1:



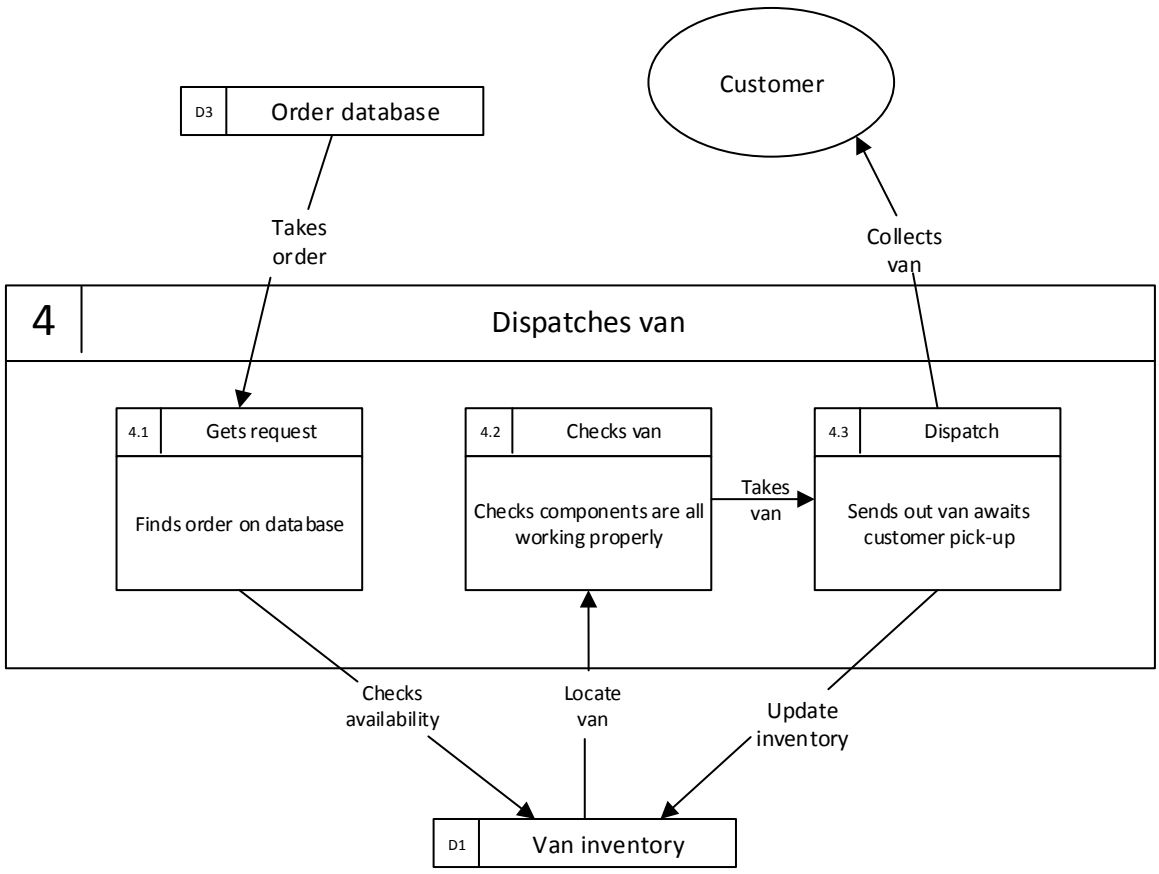
Physical Level 2 DFD 2:



Logical Level 2 DFD 1:



Logical Level 2 DFD 2:



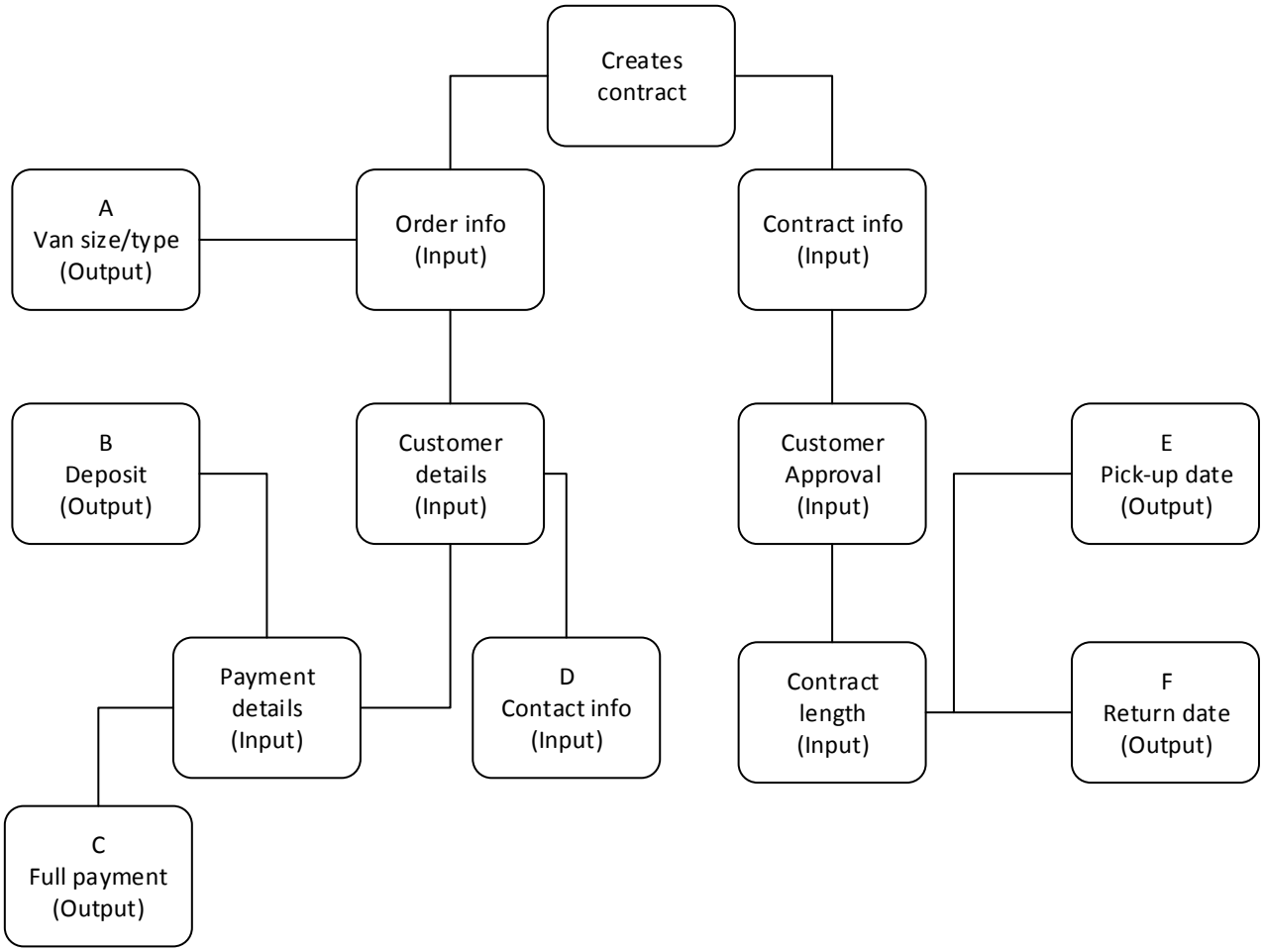
Function 1: Creates Contract

```
start
for order in order database:
        if new customer:
                add details to customer files
        else:
                find customer details
        return order to salesperson
        make contract
end
```

Function 2: Contact Mechanic

```
start
for van in van inventory:
        if van in van status is red:
                send mechanic van
                remove van from van inventory
        else:
                do nothing
for van in mechanic:
        if van fixed:
                return van
                update van status
end
```

I/O Diagram:



I/O Structure Description		
Creates contract:		
I/O Structure Element	**Data Item**	**Comments**
A	Van size/type	The customer selects the van they want when ordering
B	Deposit	They must then pay a deposit fee
C	Full payment	Then they pay the full fee
D	Contact info	They also must supply their contact details if they are a new customer
E	Pick-up date	The customer then selects a date in which they want to begin the contract
F	Return date	Finally the customer selects the length of their contract within the maximum time frame

Data Dictionary:
Process Description 1:
Takes call from customer

```
start
if phone rings:
        answer
        while call is happening:
                if customer makes order:
                        add order to order database
                        if new customer:
                                add details to customer files
                        else:
                                get details from customer files
end
```

Data Dictionary:
Process Description 2:
Contacts scrapper

```
start
call scrapper
For van in fleet:
        if van needs servicing:
                if van worth repairing:
                        send to mechanic
                else:
                        send to scrapper
                update van inventory
end
```

Data Dictionary: Data Flow

Purchase of new vans				
From:	To:	Name:	Content:	Additional info:
Van Suppliers	Van Fleet	Shipment Invoice	The new vans and a list of all the necessary expenses	The van suppliers should keep a copy of the invoice as
Van Fleet	Van Suppliers	Payment	The full payment for all the new vans	The van fleet should be updated when the vans arrive

Data Dictionary: Entity Description

Entity Name	Van Order		
Description	An order for the hiring of a van by a customer		
Attribute	**Primary Key**	**Foreign Key**	**Mandatory /Optional**
Van Order Number	X		M
Order Status			M
Customer ID		X	M
Pick-up Date			O
Return Date			O
Invoice			M

Must/may be	**Link phrase**	**One $ only one/ One or more**	**Entity Name**
Must be	Sent with	One & only one	Van order
May	End with	One or more	Van invoice
Must	Come with	One & only one	Customer payment

Entity Volumes:	Max. 2	Min. 1	Average. 1

User	**Access**
Customer	Read, Create, Delete
Salesperson	Read, Create, Delete, Modify
Depot worker	Read, Modify

Archiving The van hire business should keep all records of customer orders and cancellations on a database

Data Dictionary: Data Store

Name: Customer files		
Contents	**Stored by**	**Used by**
Customer ID	Customer	Salesperson
Past orders	Salesperson	Customer/ Salesperson
Current orders	Salesperson	Customer/ Salesperson
Payment details	Customer	Salesperson
Pending payments	Salesperson	Customer/ Salesperson
Customer blacklist	Manager	Manager
Proof of drivers licence	Customer	Salesperson/ Manager