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Programme: Computer Applications and Software Engineering (CASE)
Module Code: CA214
Assignment Title: SSADM Project
Submission Date: 09/12/2018
Module Coordinator: Renaat Verbruggen

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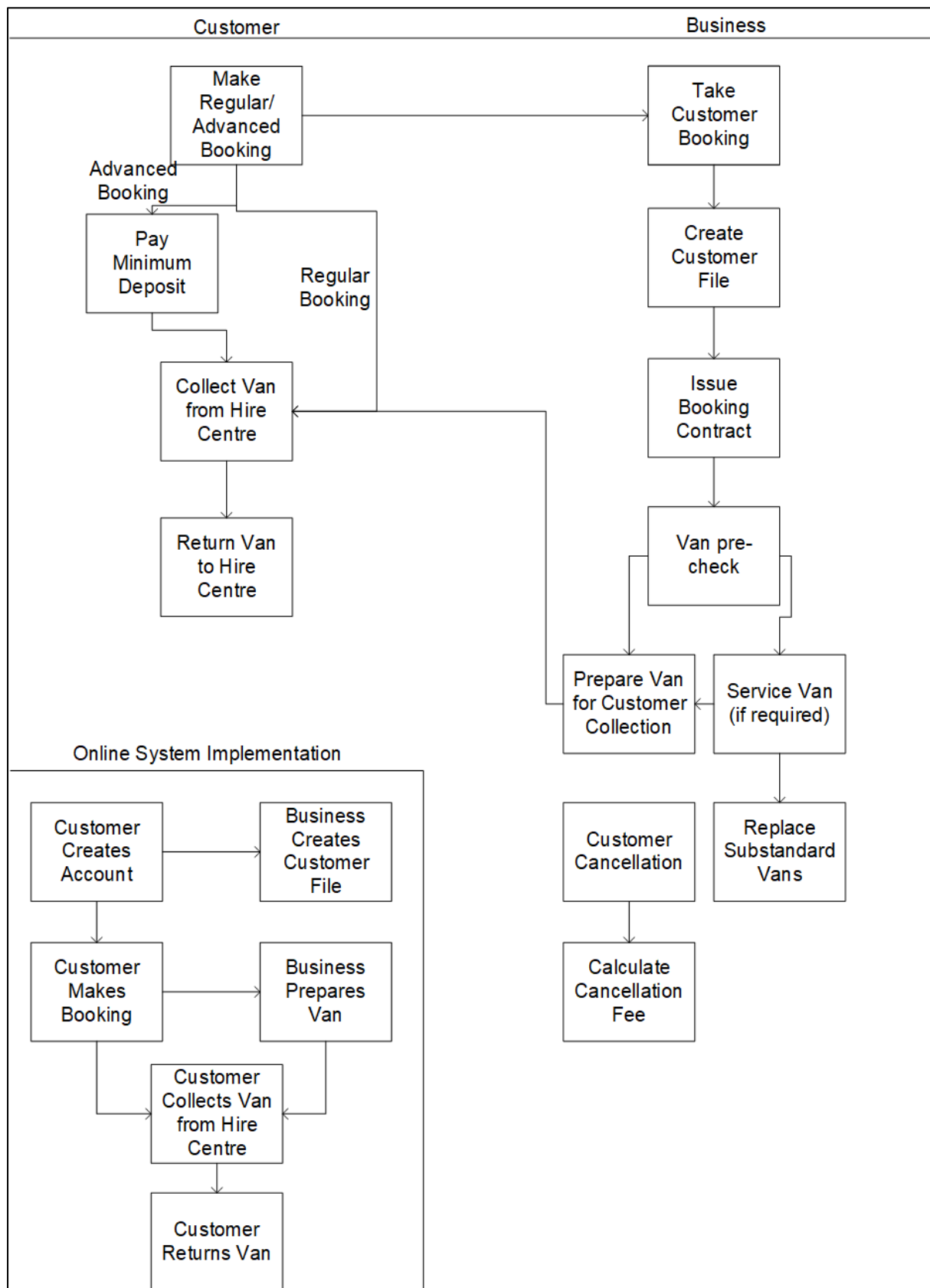
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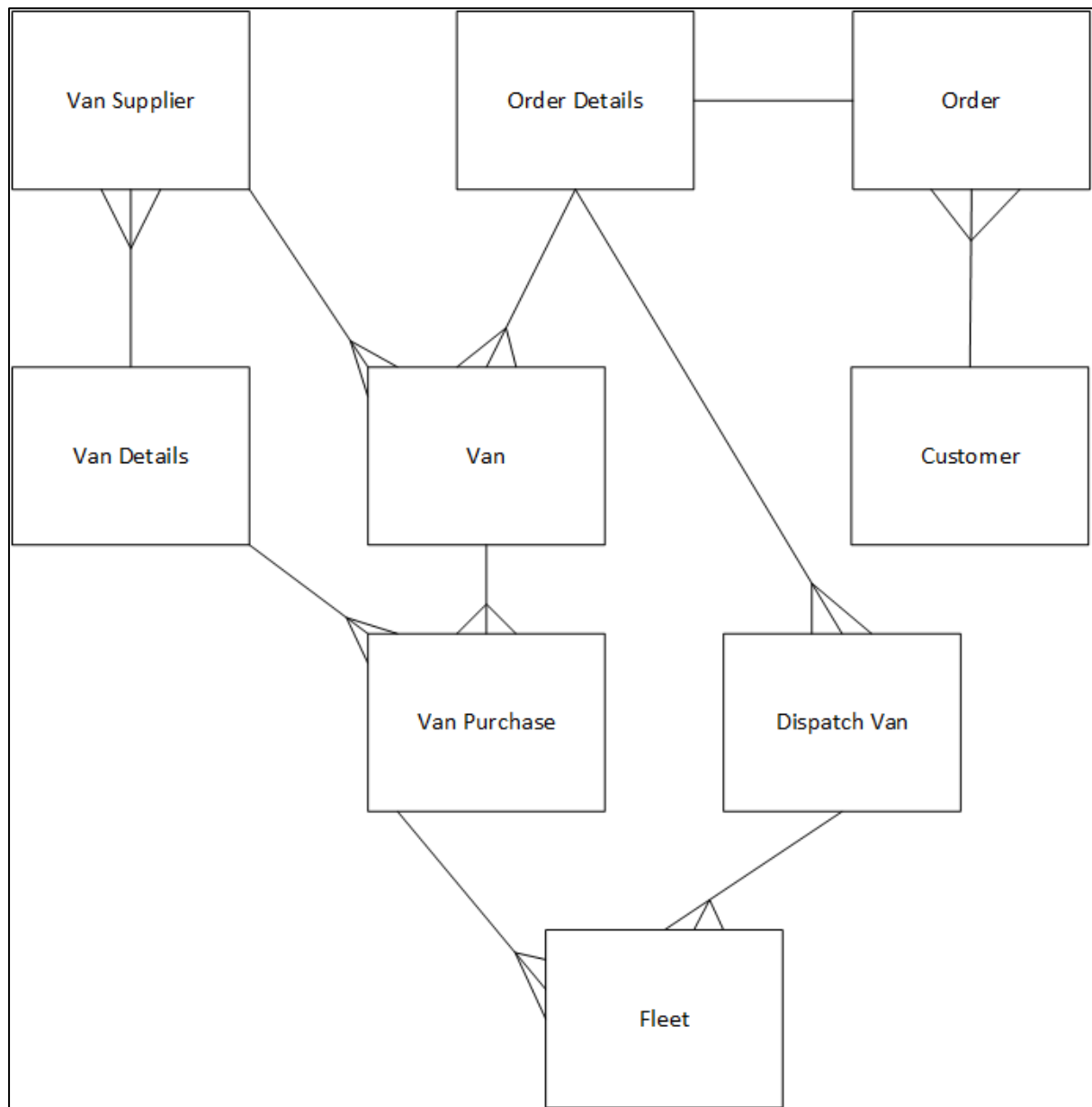http://www.dcu.ie/info/regulations/plagiarism.shtml   ,

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Name(s): Caelan Smyth Date: 09/12/2018

Business Activity Model

Customer	Business

Make Regular/ Advanced Booking → **Take Customer Booking**

Advanced Booking

Regular Booking

Pay Minimum Deposit

Collect Van from Hire Centre

Return Van to Hire Centre

Create Customer File

Issue Booking Contract

Van pre-check

Prepare Van for Customer Collection

Service Van (if required)

Customer Cancellation

Replace Substandard Vans

Calculate Cancellation Fee

Online System Implementation

Customer Creates Account → **Business Creates Customer File**

Customer Makes Booking → **Business Prepares Van**
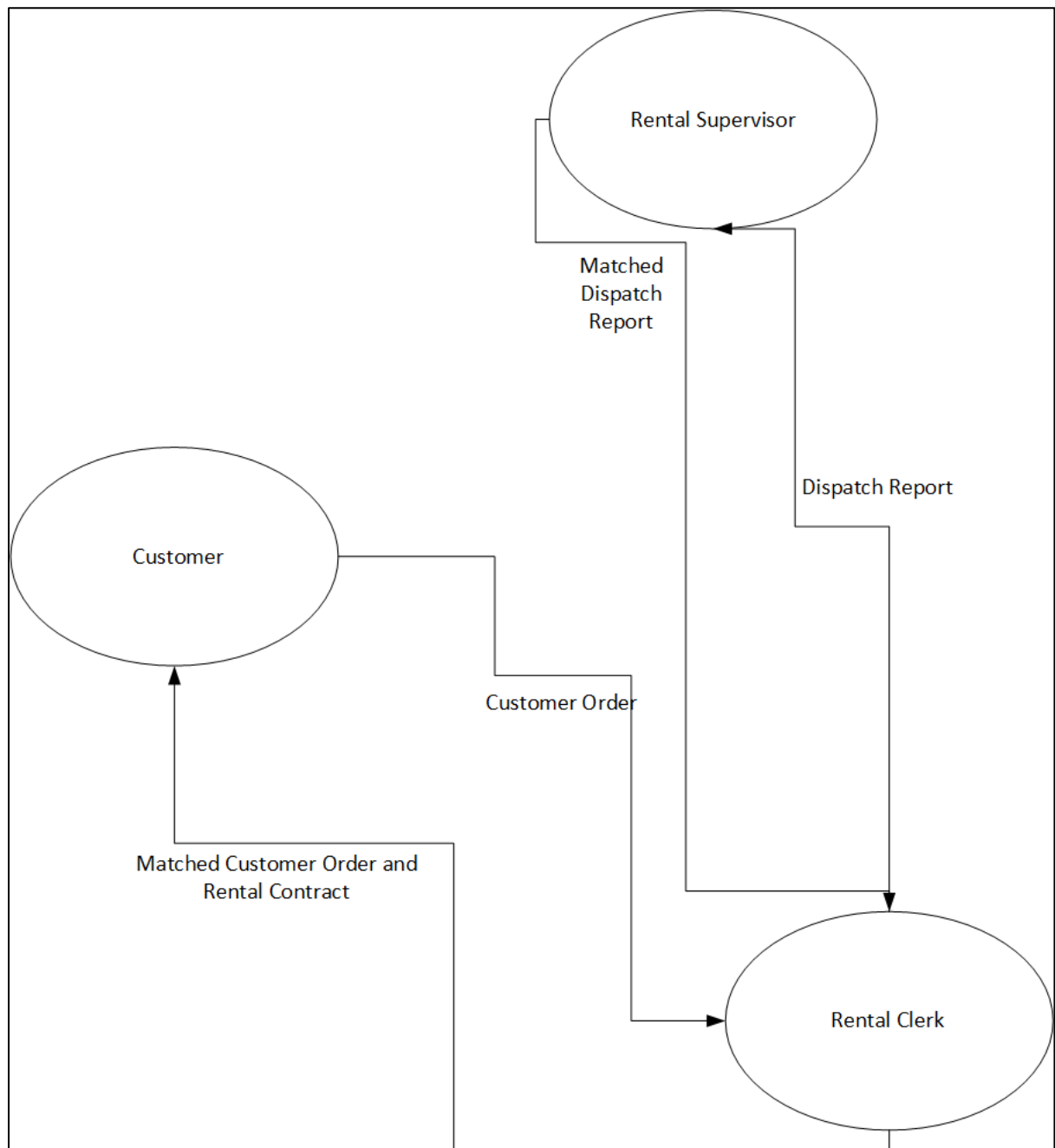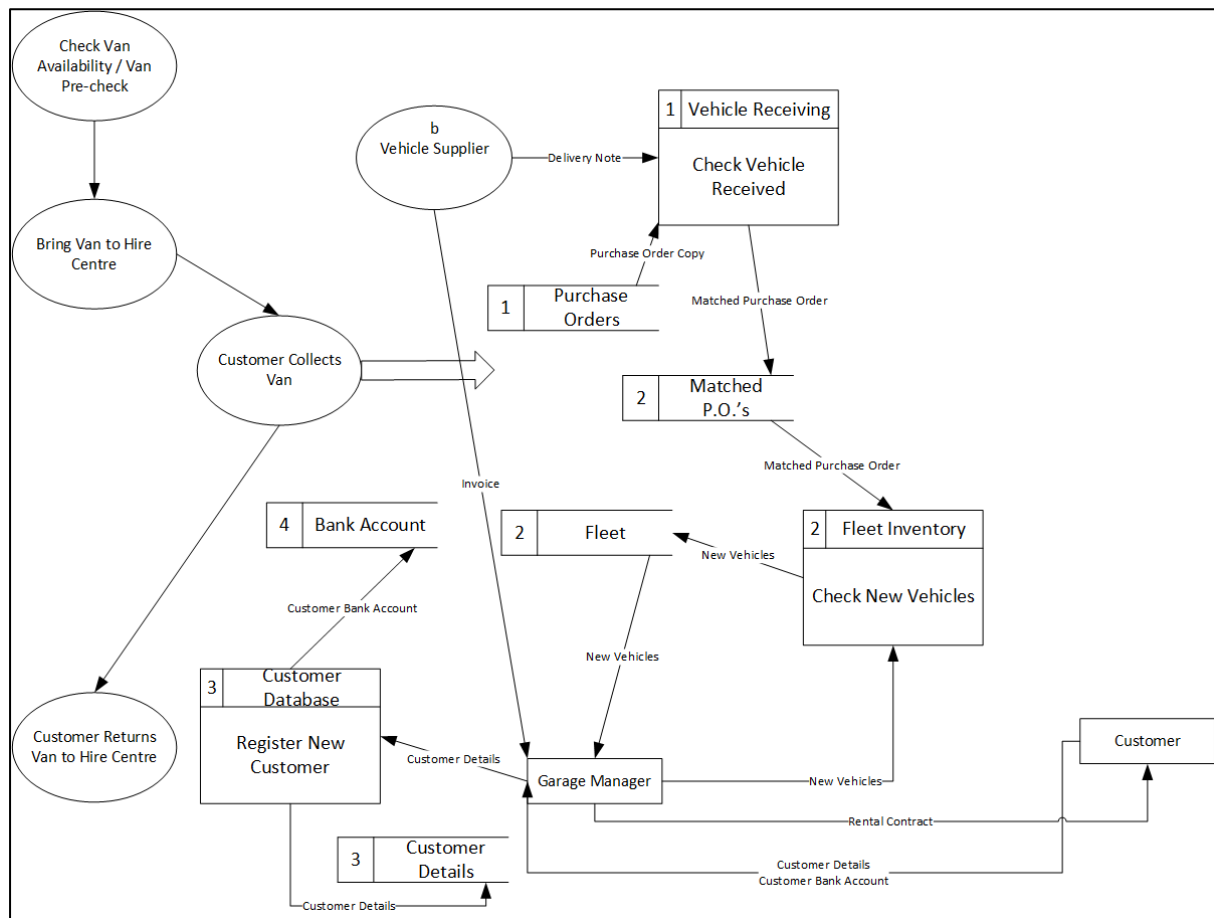
Customer Collects Van from Hire Centre

Customer Returns Van

Logical Data Model

Top Level Context Diagram

Vehicle Supplier

Payment

Delivery Details

Invoice

Purchase Order

Delivery Note

Accounting

Matched Invoice

Fleet Garage

Dispatch Notice

Customer

Fleet Report

Matched Customer Order Copy

Purchase Order Quantities

Customer Order

Fleet Manager

Customer Order

Sales

Document Flow Diagram

Rental Supervisor

Matched
Dispatch
Report

Dispatch Report

Customer

Customer Order

Matched Customer Order and
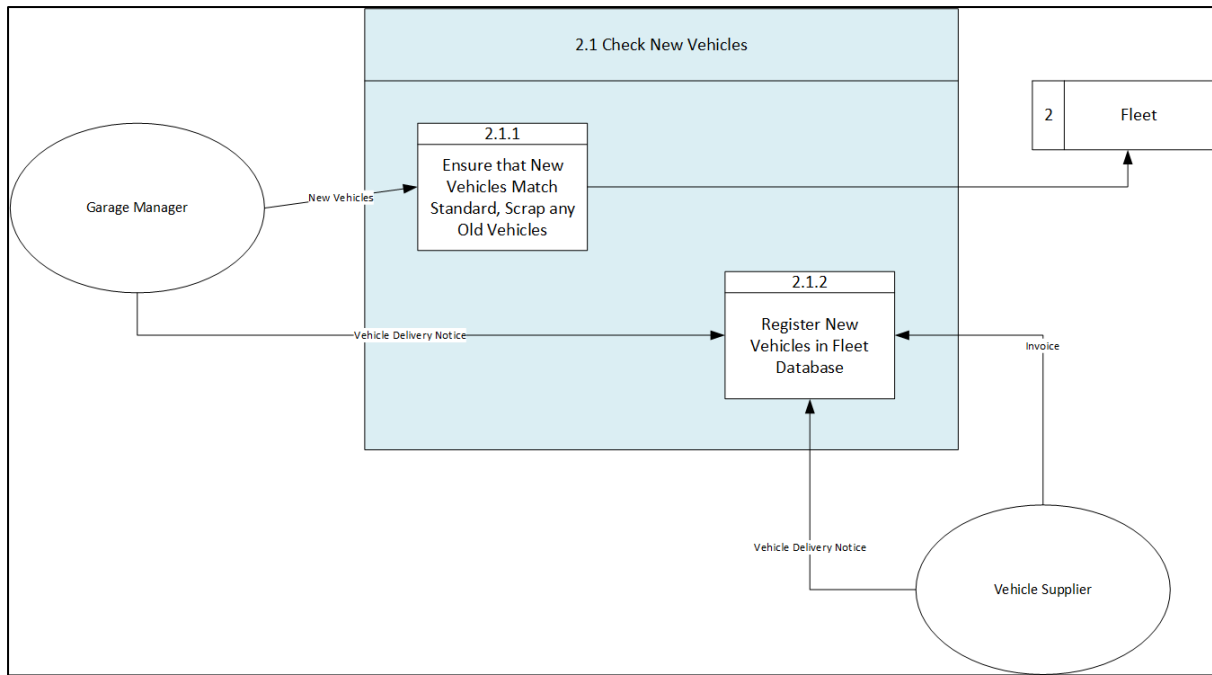Rental Contract

Rental Clerk
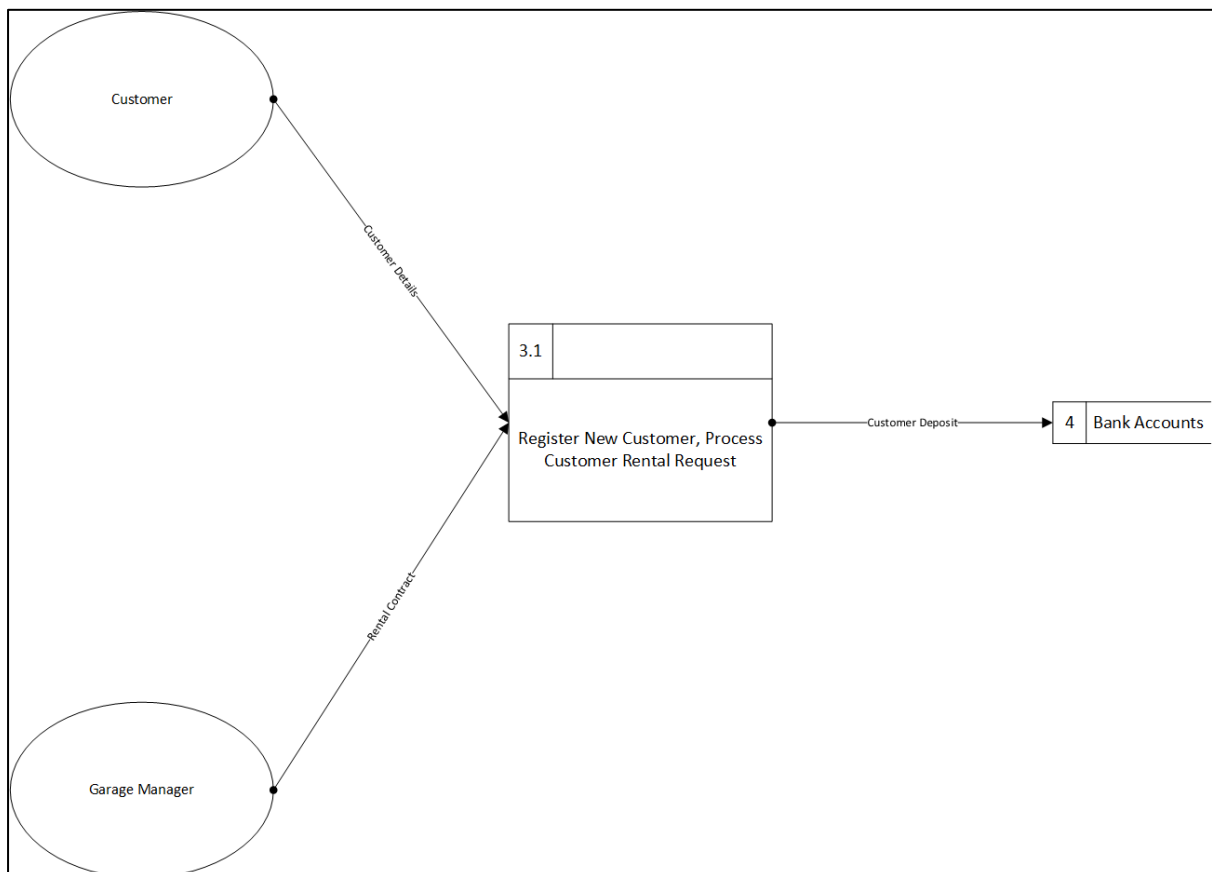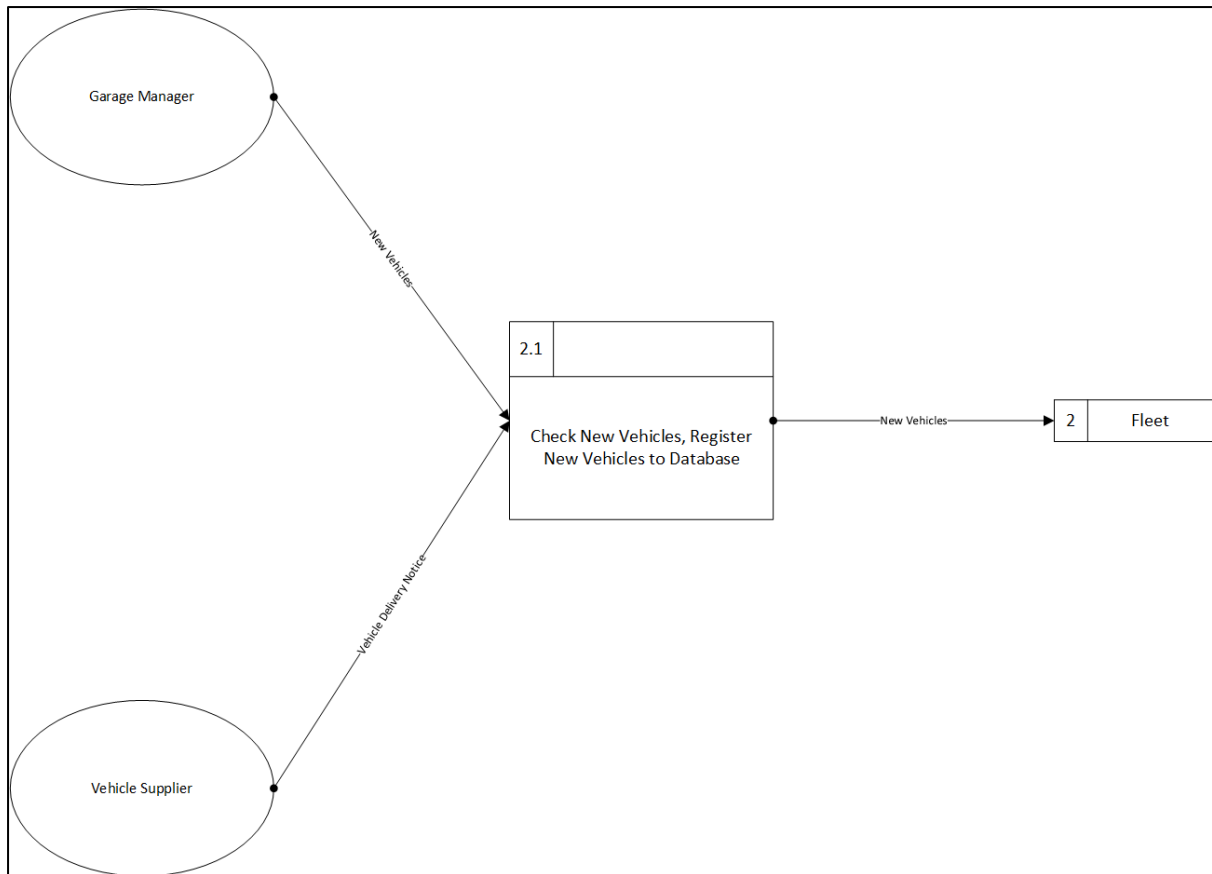
Data Flow Diagram – Level 1

Data Flow Diagram – Level 2
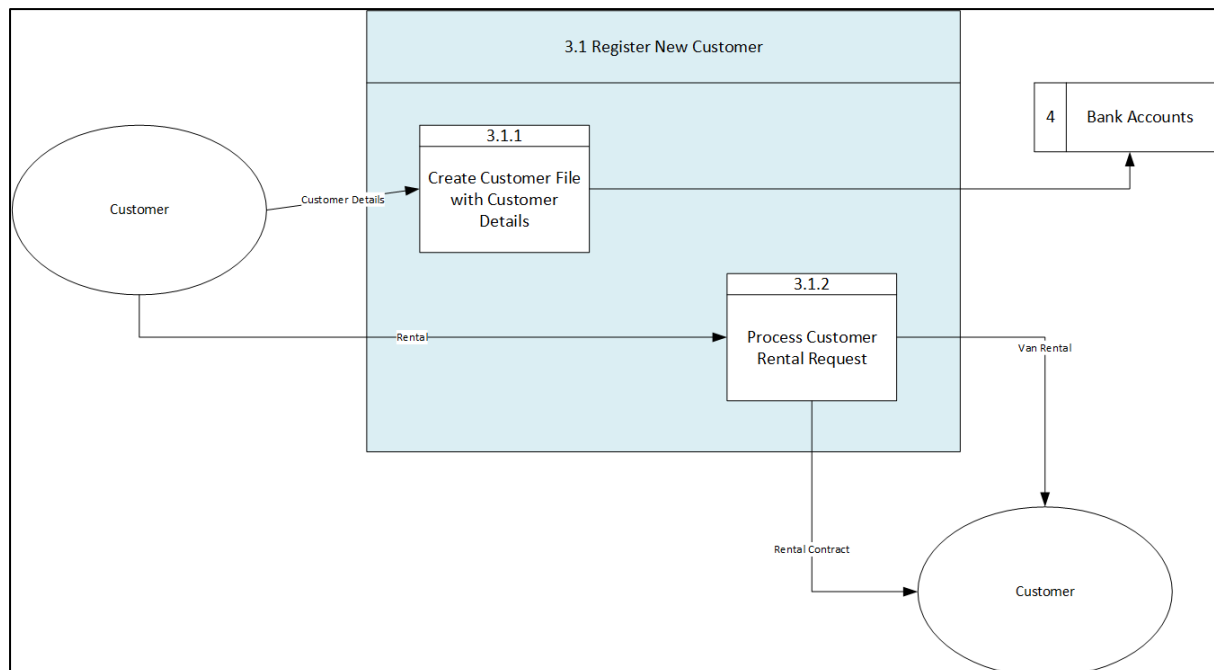
Logical Data Flow Diagrams

Function Definition

1. Register New Customer – DFD Level 1

This function is used to get customer details and store them in a database. This database will allow the business to more easily reference customer details if need be. The database will contain entries for name, address, contact details and rental history. This database will also enable repeat customers to more easily make bookings as the business will be able to reference this customer's entry in the database rather than having to make a new entry.

2. Check Van Availability/Van Pre-Check – DFD Level 1

This function is used to ensure that the vans that are being hired out to customers are available and in good condition. This will ensure that customers are not receiving faulty vans, and that customers' needs will be satisfied with the appropriate van for their requirements. This will also allow the business the opportunity to update their fleet with newer models if they find any vans that do not satisfy their standards.

I/O Diagram
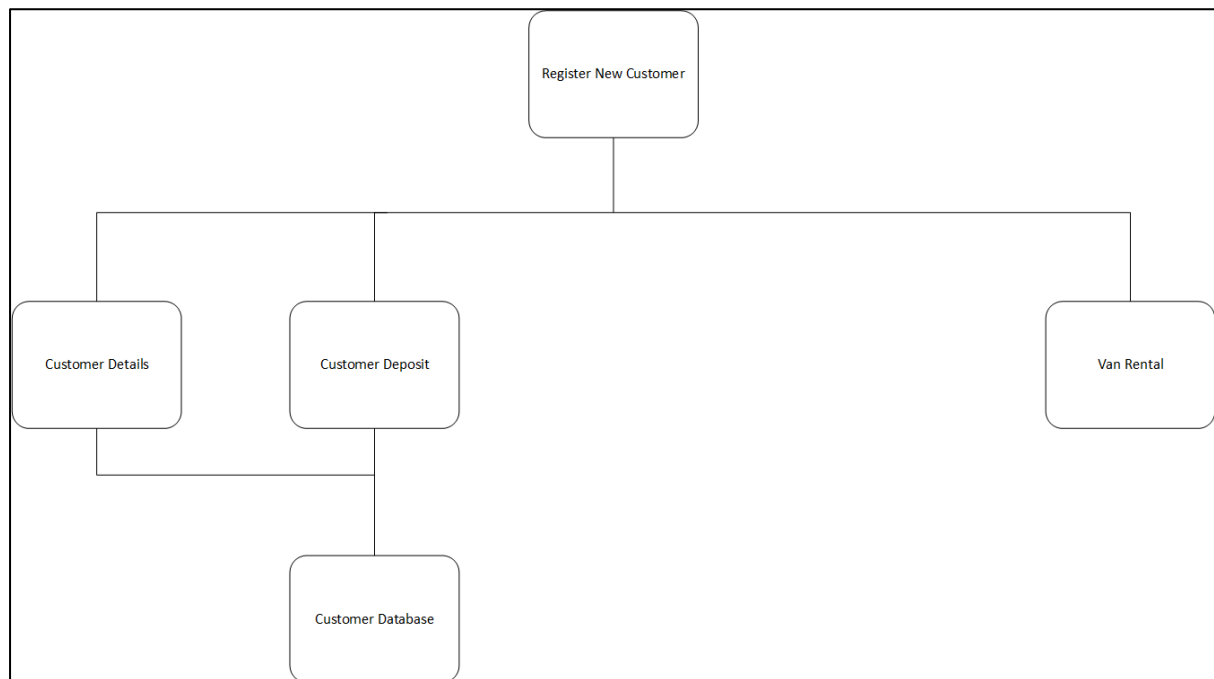
Process Descriptions

1. Prepare Van for Customer Collection

Check the customer's deposit and what type of van they are looking for.

Carry out van pre-check.

If the van is valid

    Deliver it to the hire centre.

    Issue booking contract to customer.

Else

    If there is no van available to the customer's specifications

        Offer them a different kind of van.

    If the customer has not paid their advanced booking deposit

        Remind them to pay the deposit.

    If the van is not in serviceable condition

        Scrap the van/Replace it with another van.

Alert customer that the van is ready for collection from hire centre.

2. Take Customer Booking

Process customer's deposit.

Create customer's file.

Send deposit to company bank account.

If customer deposit is valid

      Issue booking contract.

Else

      Retry deposit charge.

Prepare van for customer collection.

Data Flow

Data Flow Title	Origin	Destination	Data Content	Comments
Vehicle Receiving	b (Vehicle Supplier)	2 (Matched P.O's)	Make Model Registration Insurance No.	Vehicle Received should be added to Vehicle Database
Customer Database	Garage Manager	4 (Bank Account)	Name Address Contact Details Bank Account Details Rental History	Customer Details to be registered into Customer Database

External Entity Description

ID	Name	Description
b	Vehicle Supplier	The trader from which the garage purchases their vans for the rental service.

Entity Description

Entity Name: Customer			
Description: These are the details for the user in the database			

Attribute	Primary Key	Foreign Key	Mandatory/Optional
Customer ID	X		M
Address		X	M
Contact Details		X	M
Deposit Paid	X		M
Rental History			O

Must/May Be	Either/Or	Link Phrase	One & Only One/One or More	Entity Name
Must Be		Placed With	One or More	Customer
Must		Result In	Only One	Deposit

User:		Access:	
Customer		Read	
Van Hire Business		Read, Write, Delete	

Data Store

Data Store
Data Store ID: 3.1
Data Store Name: Customer Database
Description: - Customer Details are received   - Details are split into name, address, contact details, deposit paid and rental history   - Details are stored in Database   - Once all details are stored in the database, the business processes the deposit   - Once deposit has been processed, rental contract is dispatched to customer and van is prepared