DCU School of Computing
Assignment Submission

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Programme:	**BSc in Computer Applications**
Project Title:	**SSADM Project**
Module code:	**CA214**
Lecturer:	**Renaat Verbruggen**
Project Due Date:	**10/12/2018**

Declaration

I declare that this material, which I now submit for assessment, is entirely my own work and has not been taken from the work of others, save and to the extent that such work has been cited and acknowledged within the text of my work. I understand that plagiarism, collusion, and copying is a grave and serious offence in the university and accept the penalties that would be imposed should I engage in plagiarism, collusion, or copying. I have read and understood the Assignment Regulations set out in the module documentation. I have identified and included the source of all facts, ideas, opinions, viewpoints of others in the assignment references. Direct quotations from books, journal articles, internet sources, module text, or any other source whatsoever are acknowledged and the source cited are identified in the assignment references.

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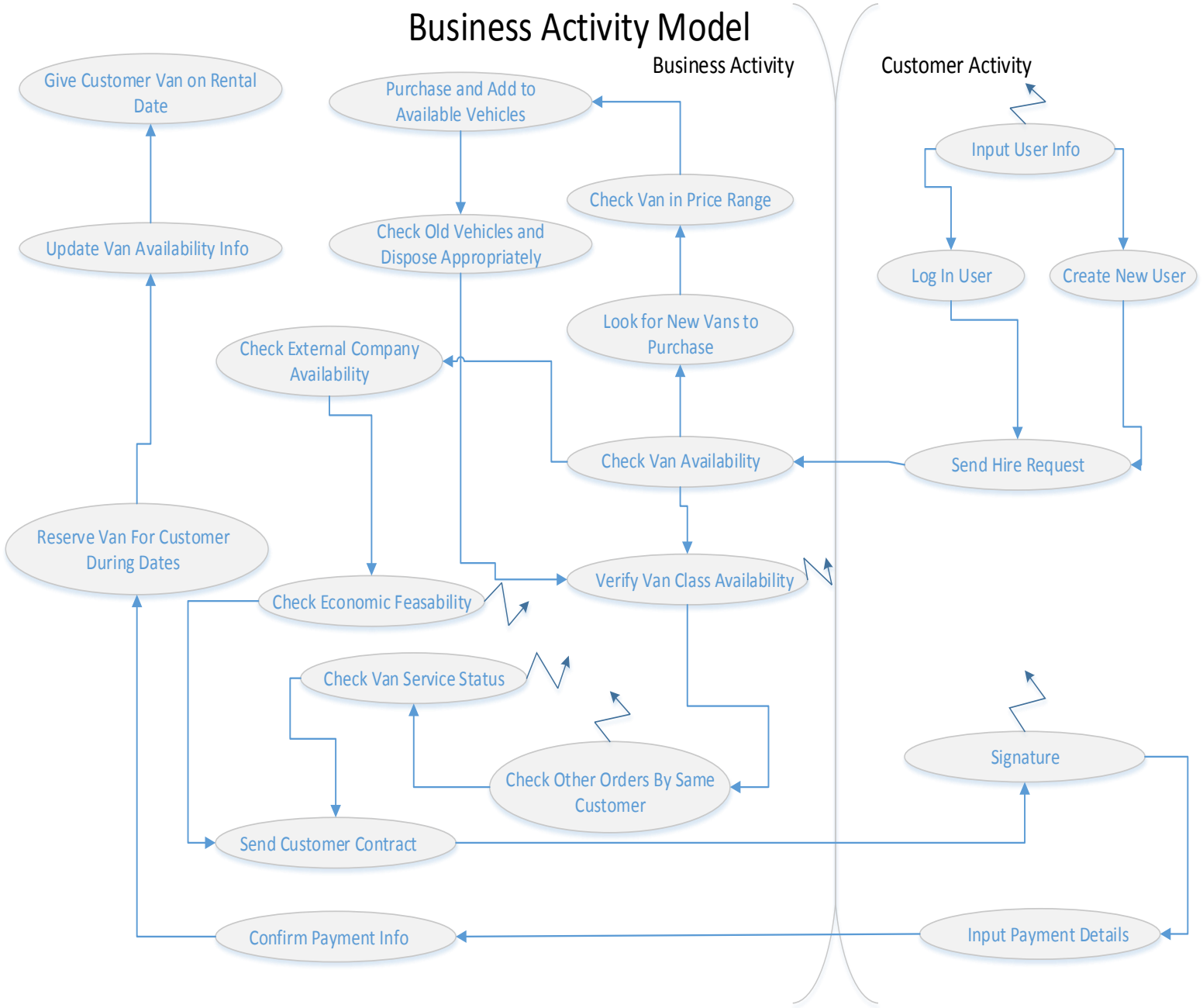
I understand that I may be required to discuss with the module lecturer/s the contents of this submission.

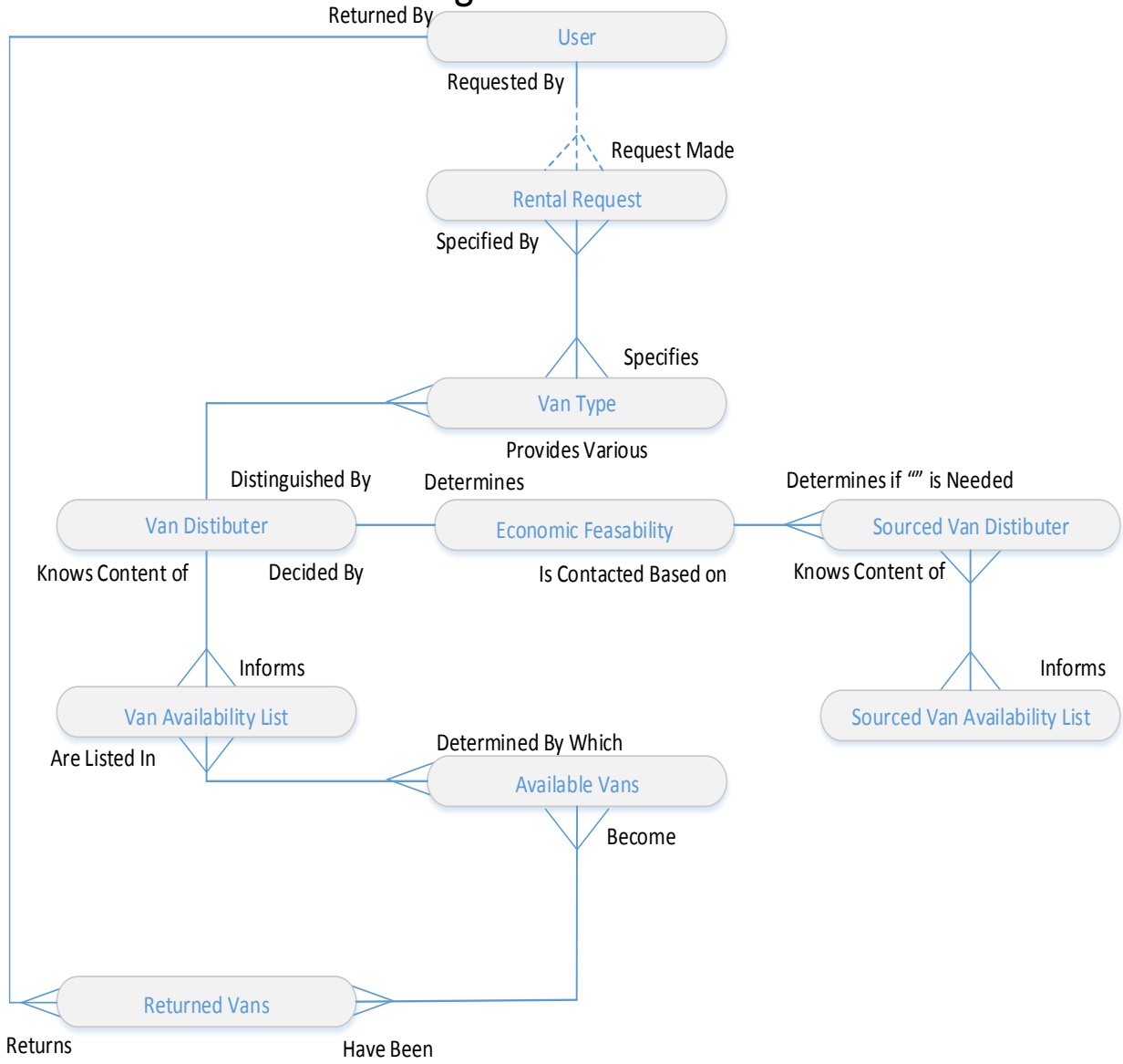
I/me/my incorporates we/us/our in the case of group work, which is signed by all of us.

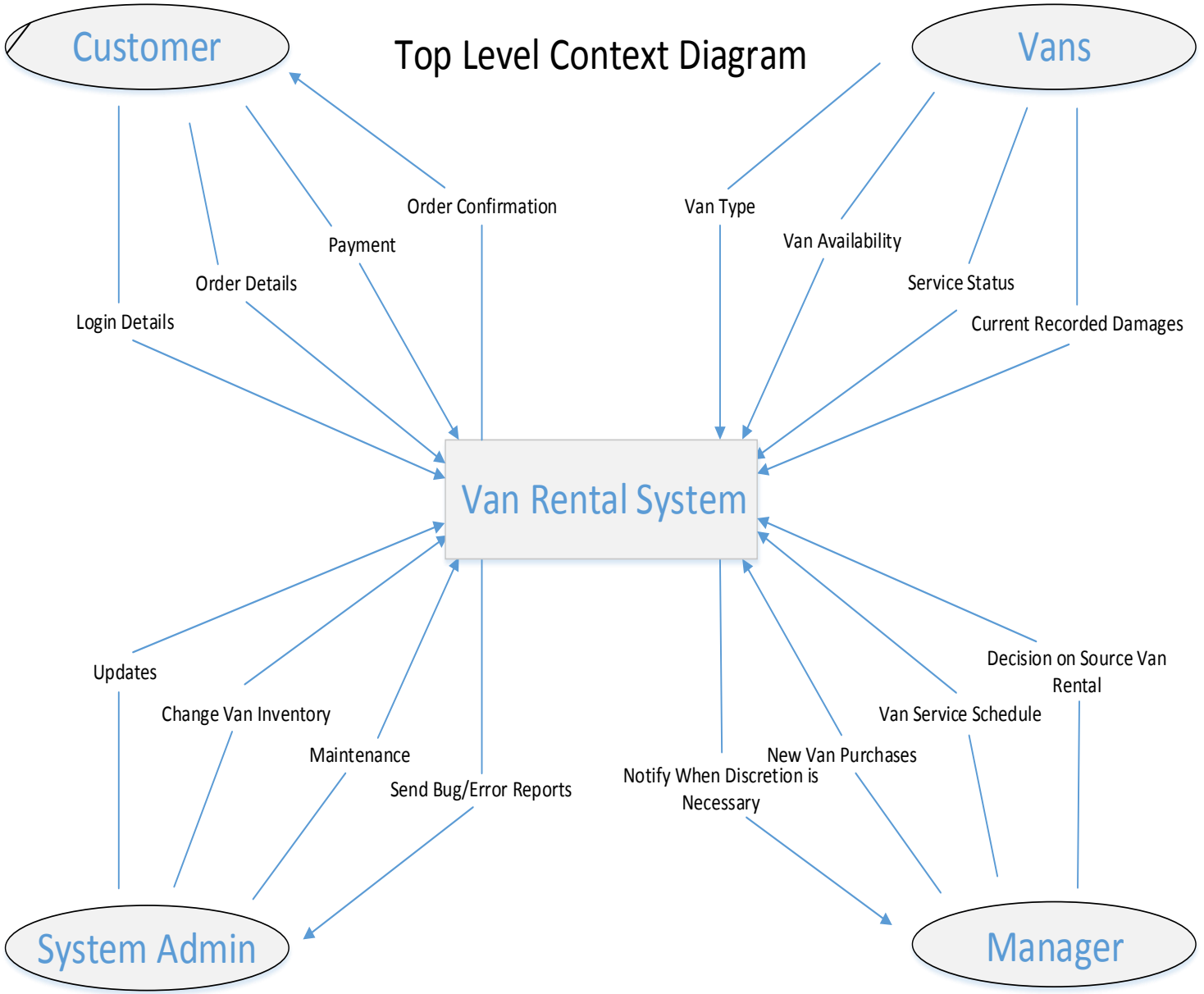
Signed: Cormac Duggan

Business Activity Model

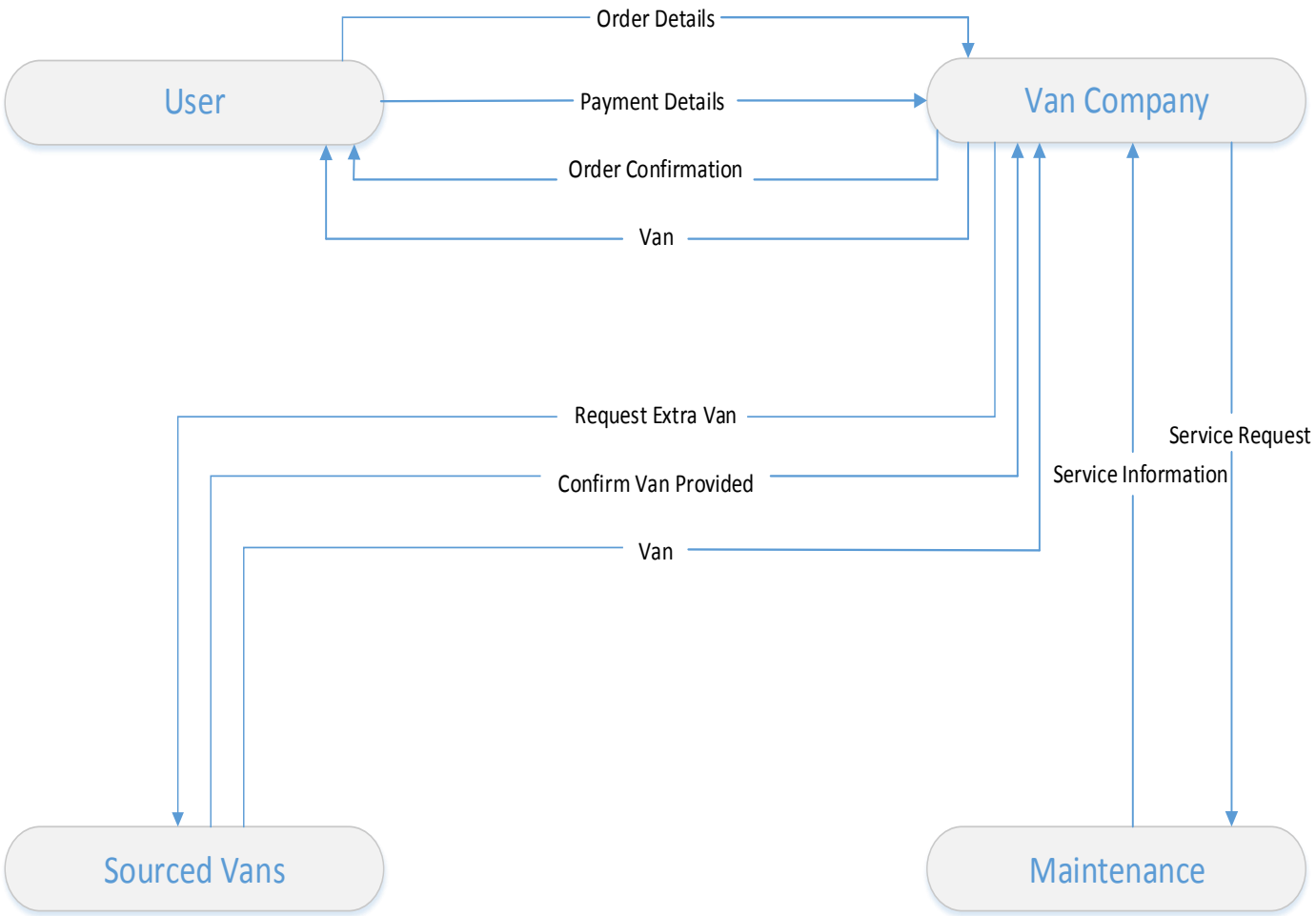


Logical Data Model

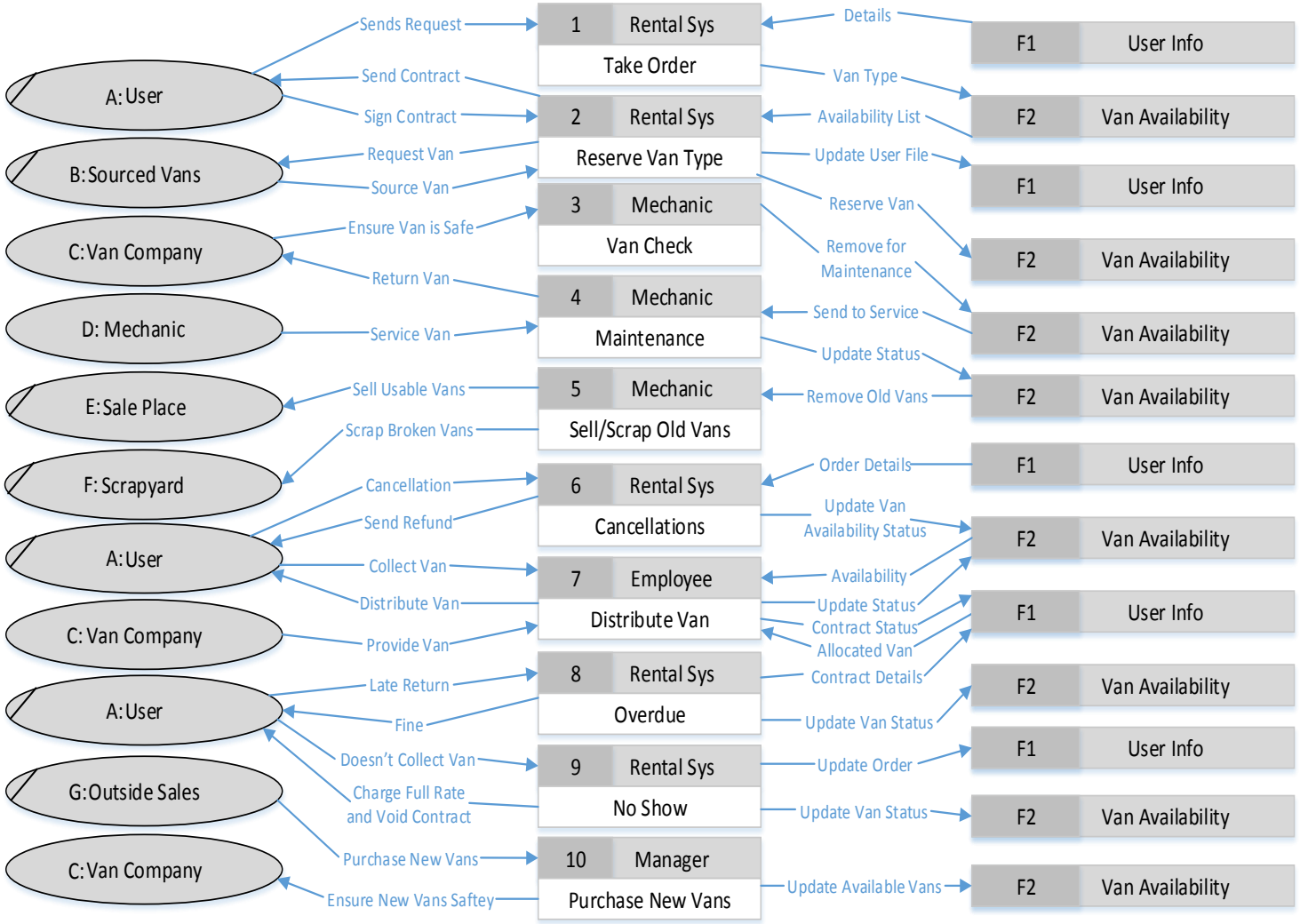



Top Level Context Diagram
Customer
Vans
Van Rental System
System Admin
Manager
Order Confirmation
Payment
Order Details
Login Details
Van Type
Van Availability
Service Status
Current Recorded Damages
Updates
Change Van Inventory
Maintenance
Send Bug/Error Reports
Notify When Discretion is Necessary
New Van Purchases
Van Service Schedule
Decision on Source Van Rental

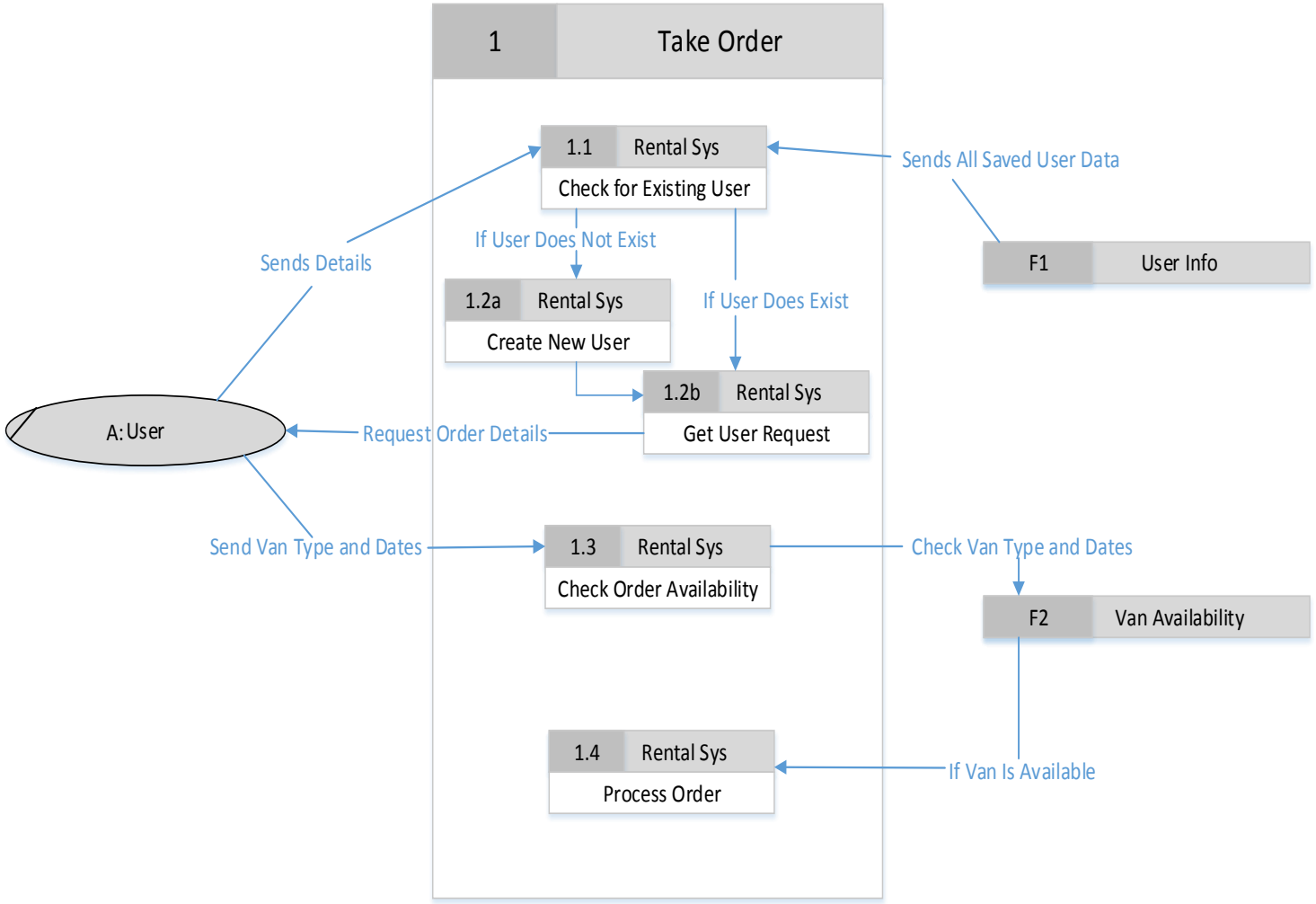
Document Flow Diagram



Physical Level One Data Flow Diagram



Physical Level 2



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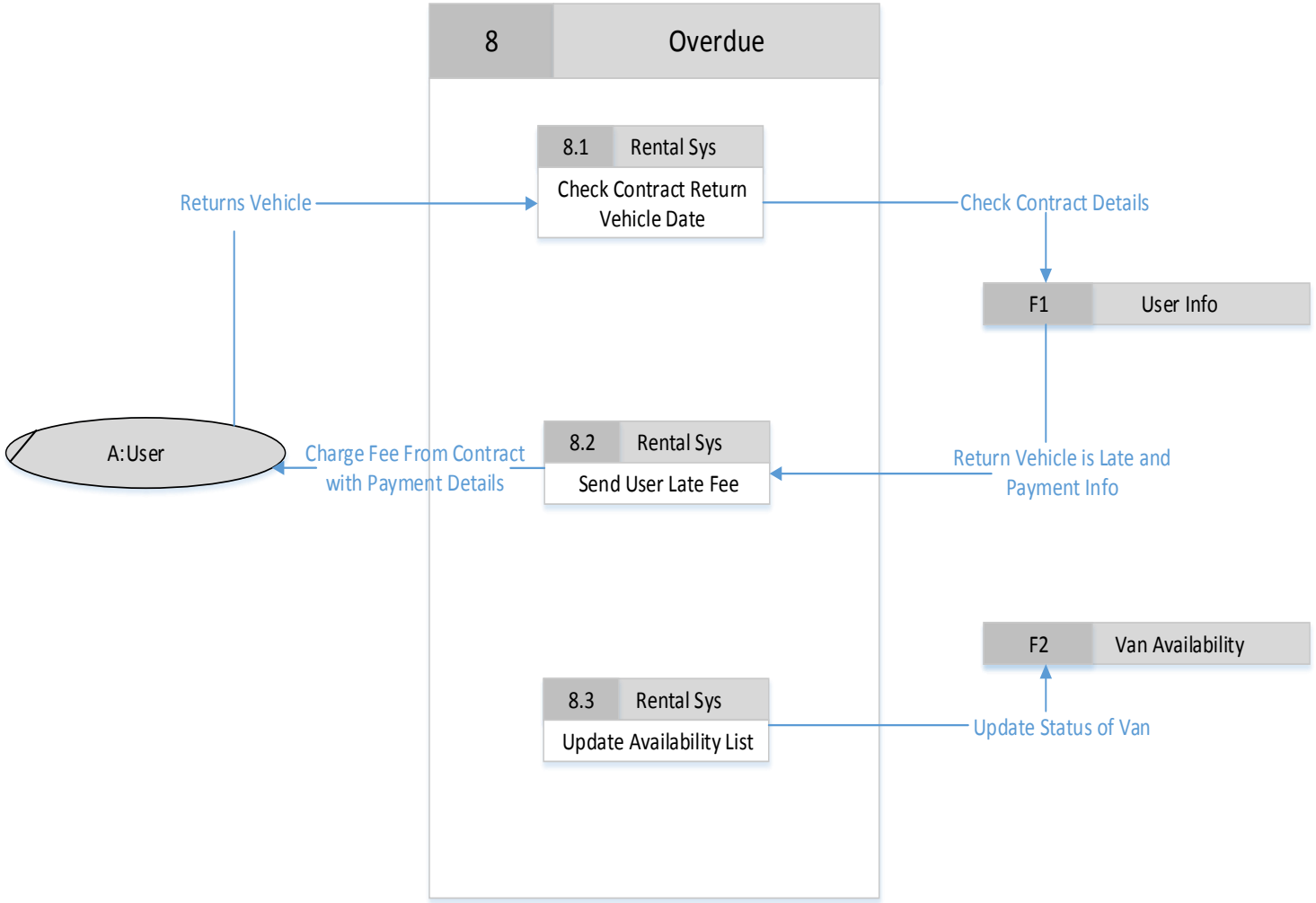
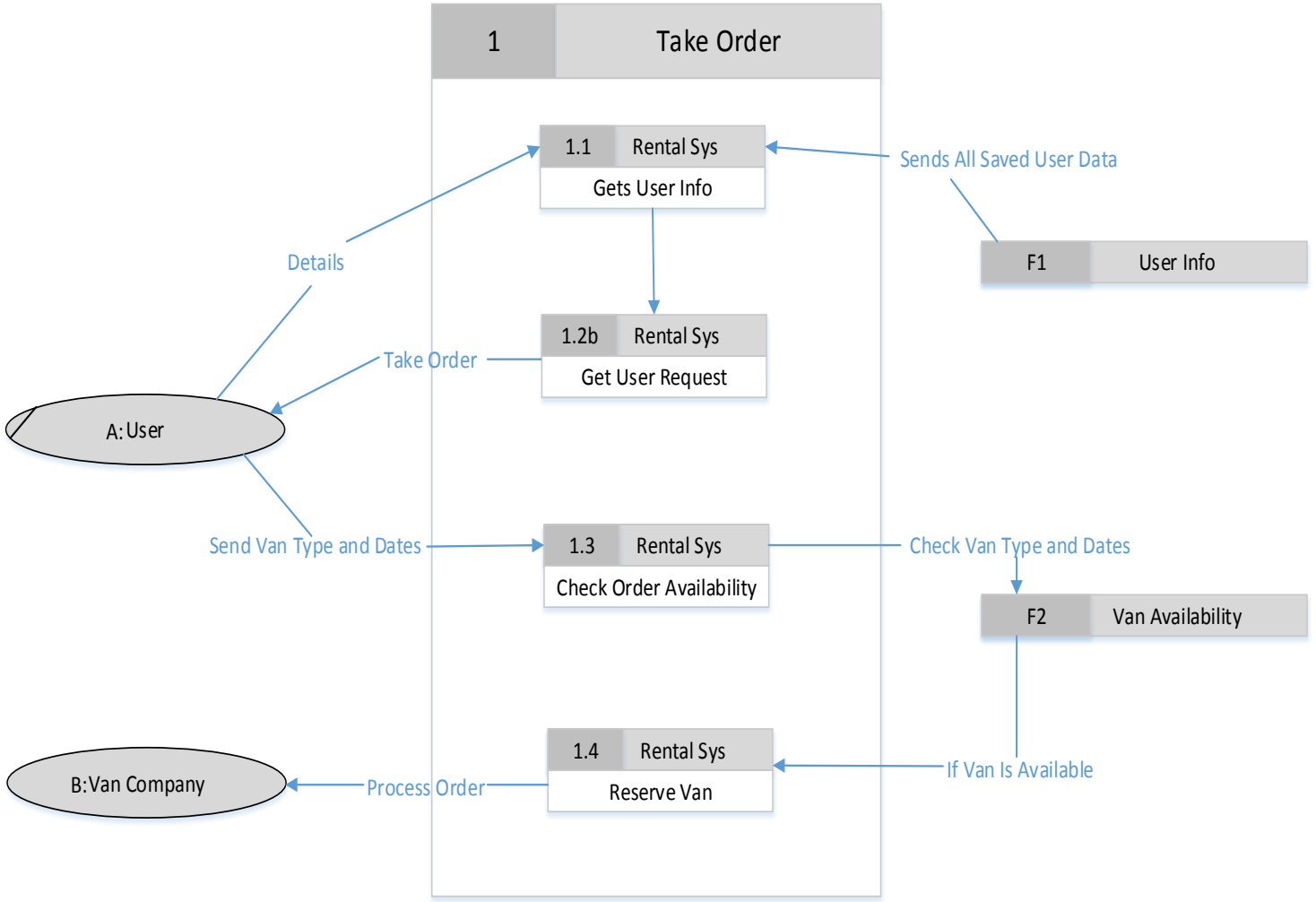


Logical Level 2



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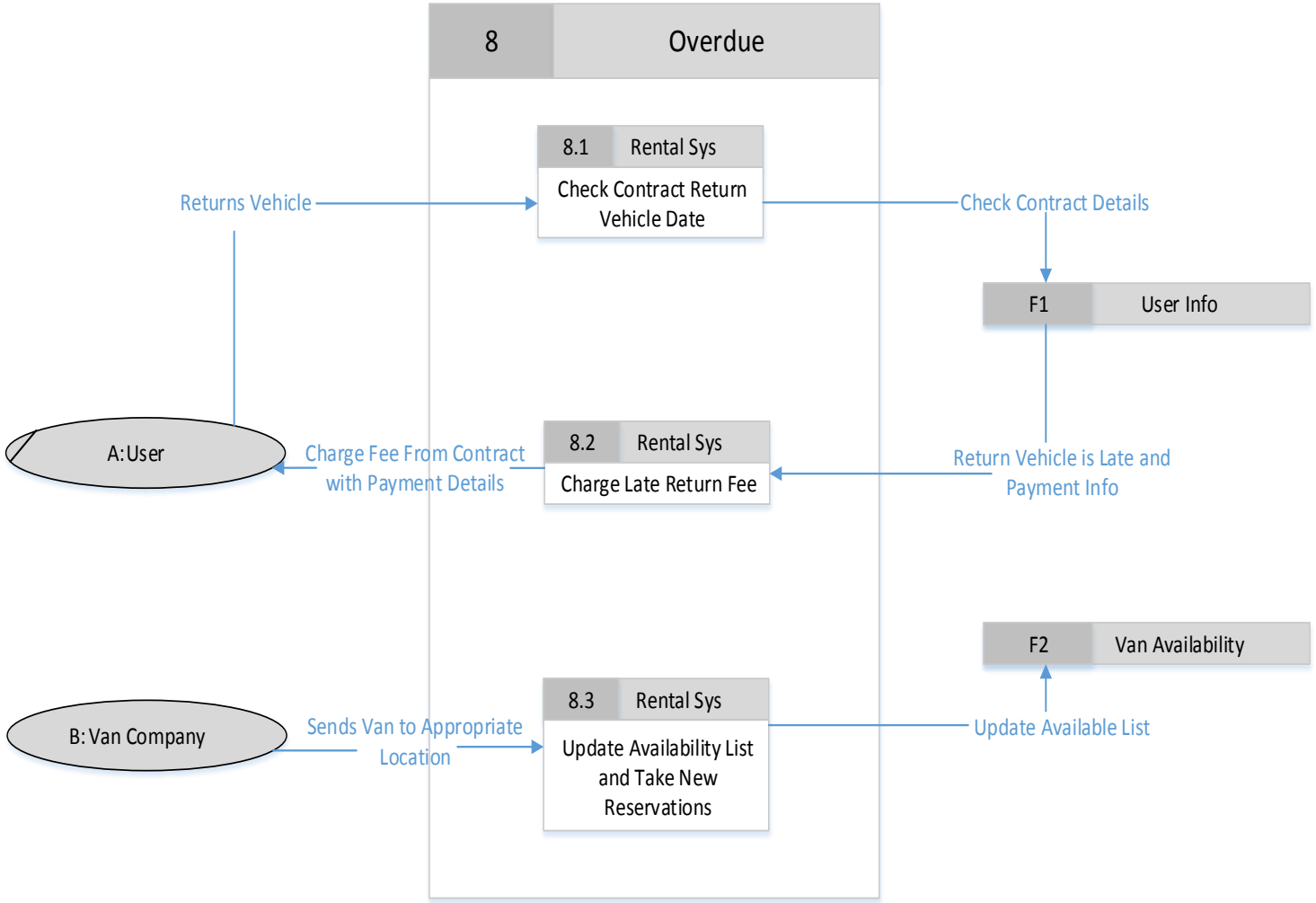
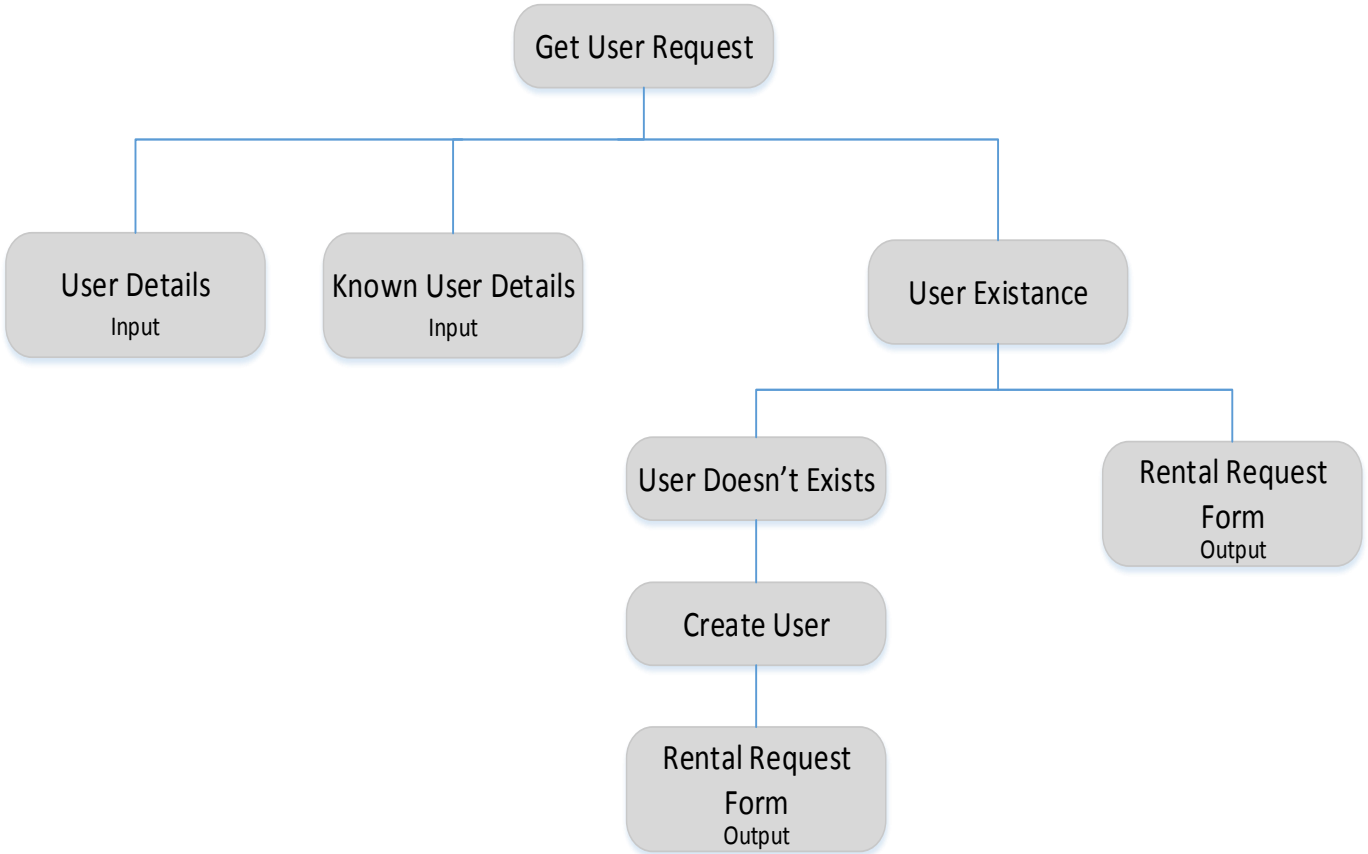


Function Definition

Name: Check for Existing User
Process ID: 1.1
Description: Checks the known list of user details to see if the details submitted by the current user match and of the known users.
Parent Process: Take Order
Data Flow: Current User Info, Known User Info
Processed By: Automated Rental System

Name: Get User Request
Process ID: 1.2
Description: If the current user already exists 1.2a is ignored and the user is asked what type of van they would like and when. If the user does not exist the same is done, however, the user is first added to the user database and creates an account.
Parent Process: Take Order
Data Flow: Current User Info, Known User Info, Rental Request File/Document
Processed By: Automated Rental System

Input/Output



Process Description

Process 1: Van Return

Description: Requires renter to return Van at designated date. Makes sure that the van has been returned on time and does not require a late fee as well as having no damages. It also checks the service schedule and decides if the van can be added back onto the available vans list. If so the van is returned to the available vans list. Assuming no damages are present the customer need not be charged any further.

Process 2: Order Request

Description: This is a request from the user for permission to place an order for a van rental. The request must contain a type of van specification as well as the length of the rental. The system checks the availability of all the vans of the given type during the rental period and should one be available a contract will be presented for signing by the user as well as a request for payment details to finalize the rental confirmation.

Data Flow

Data Flow: User Details
Consists of: Name, Date of Birth, Proof of Legal ability to drive, Payment info, Current Rentals, Requested Van type, Date of rental
Processed By: Van Rental and Allocation System

Entity Description

Entity Name: User			
Description: Potential customer ordering a van rental via the rental system			
Attribute	Primary Key	Foreign Key	Mandatory/Optional
Name	Yes		Mandatory
Drivers Licence Provided			Optional
Payment Info		Yes	Optional
Contract Signature			Optional
Van Type Specification		Yes	Mandatory
Must/May	Link Phase	One/One or More	Entity Name
May	Place	One or More	Order Request
Must	Specify	One	Van Type

Data Store

Data Store: Van Availability List
Description: Stores information for the current available and unavailable vans.