# SYSTEM ANALYSIS FOR A DRESS RENTAL SERVICE

**SYSTEM ANALYSIS AND DESIGN**
**COST 21063**

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# Introduction to the report

As businesses grow and develop, their systems may become outdated or less efficient. Creating complements to an existing system or replacing it as required often helps companies improve their performance.
System analysis and design also typically emphasize how systems act, their relationships to other subsystems, and the ability of both to meet a specific goal. This often involves analyzing a system's performance and the quality of its output.

We chose **Shashi Dress Rental Service** as our selected company for this project.

# Introduction to the current system

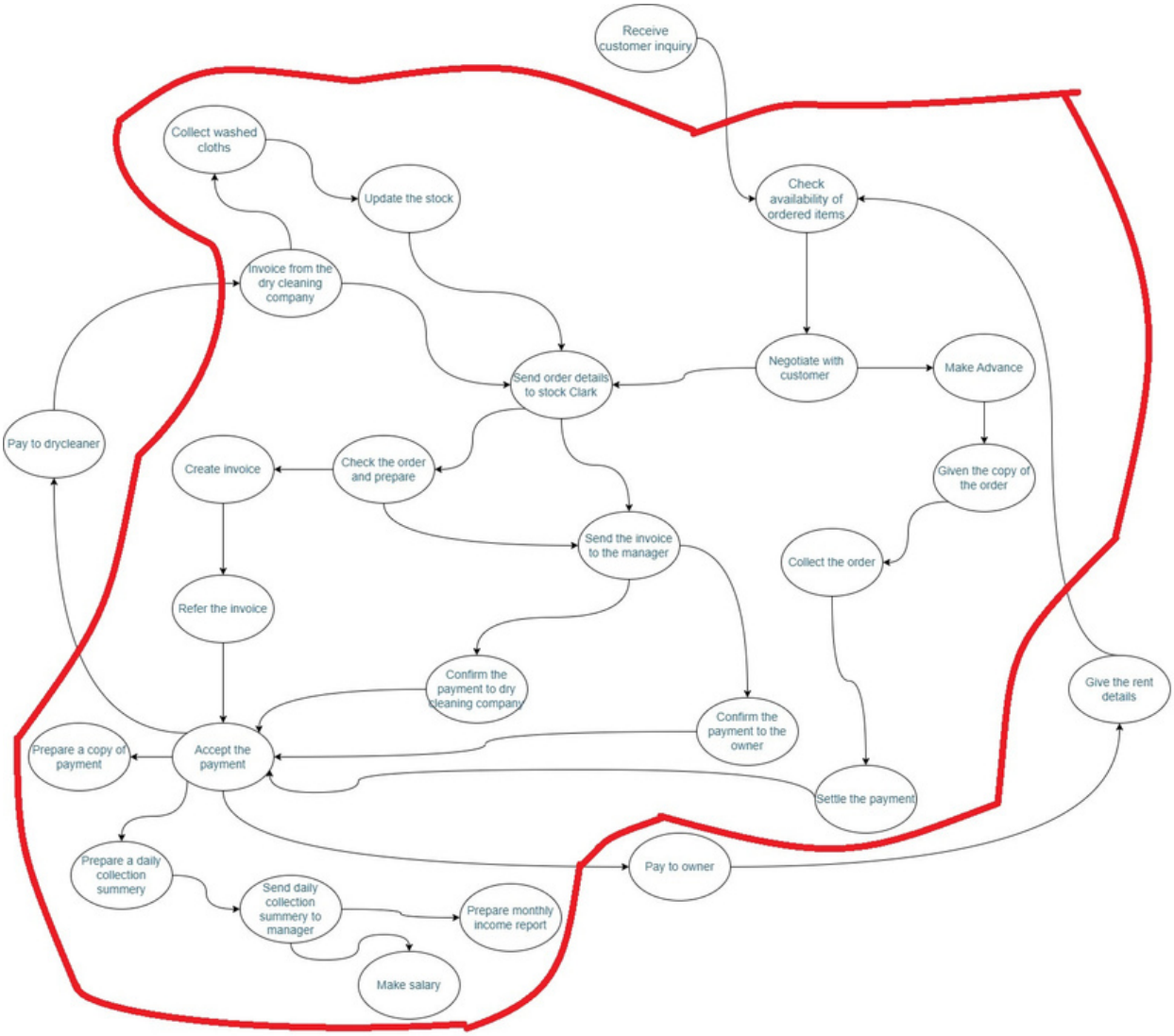
The company rents different kinds of dresses to the general public. They stick to renting only gent wear and wedding dresses for ladies. The company has a collection of coats, shoes, and ties for men and sarees, gowns, and footwear for women. The company itself buys clothes from outside stores and also takes clients' dresses and makes them rent. Their businesses are done physically. Customers come to the shop and after the inquiry, they place orders at the sales desk, and then they are given an invoice after paying the advance at the cashier. The cashier sends a copy of the invoice to the manager. Then the cashier sends an order to the stock clerk. Then the stock clerk checks the order details and prepares the order and sends it to the manager. Then the manager checks the order and the items are sent to the sales desk. Then the sales desk updates the pending orders and keeps them with them.

# Introduction to the current system

Then the customer can come and collect his order after paying the rest of the amount and submitting a copy of his ID. Other than that the stock clerk maintains the dresses by dry cleaning. For that, the stock clerk contacts an outside dry cleaning company. Then the stock clerk received an invoice from the dry cleaning company and send it to the manager. Then the manager confirms the payment and sends it to the cashier. The cashier makes the payments online and sends a copy of the payment details to the manager and the dry cleaning company. Washed dresses are collected by the stock clerk and a copy of the receipt is sent to the manager. When an item owner comes to rent an item he is given a rent detail receipt by the sales desk. Monthly the item owners are paid by the cashier when the manager orders to pay. All the daily activities are checked by the manager and make a report at the end of the day.

# For the current System

# Business Activity Model



# Software Requirement specification

## *Functional Requirements ;*

- Shall facilitate browsing the orders.
- Should facilitate online payments.
- Shall be able to create an account for login.
- Shall facilitate signing in by using google or Facebook.
- Shall facilitate browsing the customer history.
- Shall be able to generate the payment receipt.
- Shall be able to search video information for customers.
- Shall be able to discard the sold items.
- Should facilitate to inform about available dresses.
- Shall facilitate to advertise on the web.

## *Non Functional Requirements ;*

- Shall be able to provide a friendly GUI.
- Shall be able to respond at most 5 seconds.
- Shall easily find the products and have an appealing display on the website.
- Should provide a web interface.
- Shall be able to provide a single step checkout.

# BSOs & Justification

- BSO for Dress Rental System

**BSO1**
A multi-user Web based Management Information System that would satisfies all the essential requirement of the Dress Rental System.

**BSO2**
A multi-user Decision Support System that would satisfy all the essential requirements of the Dress Rental System and provide decision making support.

**BSO3**
A multi-user Management Information System and a multi-user web based MIS that would satisfy all the essential requirements of the Dress Rental System.

# BSOs & Justification

- BSOs vs Functional Requirements for Dress Rental System

| ID | Requirement | BSO1 | BSO2 | BSO3 |
|---|---|---|---|---|
| 1 | Shall facilitate to browse the orders. | x | | x |
| 2 | Should facilitate for online payments. | x | | x |
| 3 | Should be able to create an account for login. | x | x | x |
| 4 | Shall facilitate to sign in by using Google or Facebook. | x | x | x |
| 5 | Shall facilitate browse the customer history. | x | x | x |
| 6 | Shall be able to generate the payment receipt. | x | x | x |
| 7 | Shall be able to search video information for customers. | x | x | x |
| 8 | Shall be able to discard the sold items. | x | x | x |
| 9 | Should facilitate to inform about available dresses. | x | x | x |
| 10 | Should facilitate to advertise on web. | x | | x |

# BSOs & Justification

- BSOs vs Non-Functional Requirements for Dress Rental System

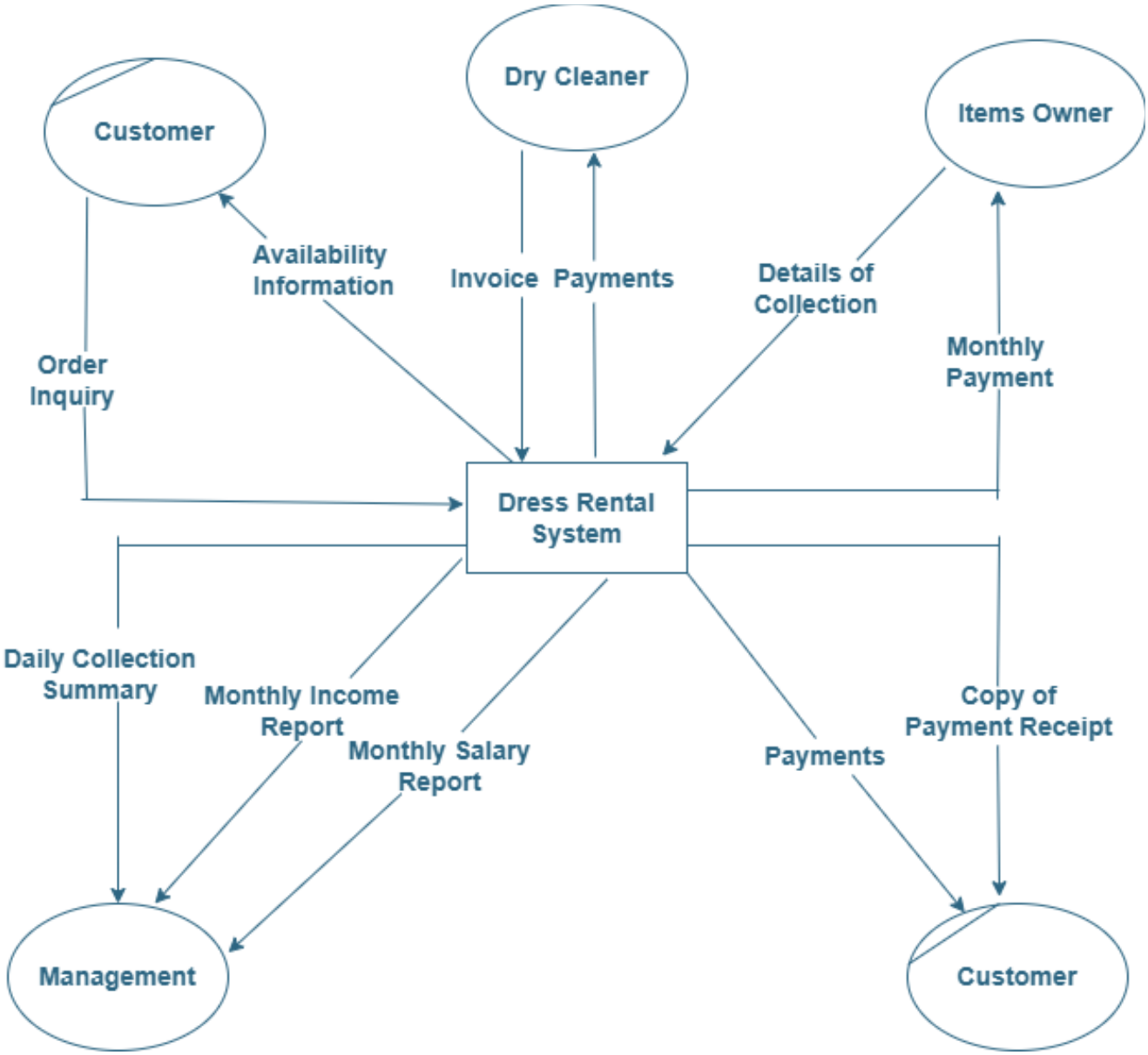
| ID | Requirements | BSO1 | BSO2 | BSO3 |
|---|---|---|---|---|
| 1 | Shall be able to provide a friendly GUI. | x | x | x |
| 2 | Shall be able to response at most 5 seconds. | x | x | x |
| 3 | Shall easily found the products and have an appealing display on the website. | x | x | x |
| 4 | Shall provide a web interface. | x | | x |
| 5 | Shall be able to provide a single step checkout. | x | x | x |
| 6 | Should provide security for online payments. | x | | x |

# BSOs & Justification

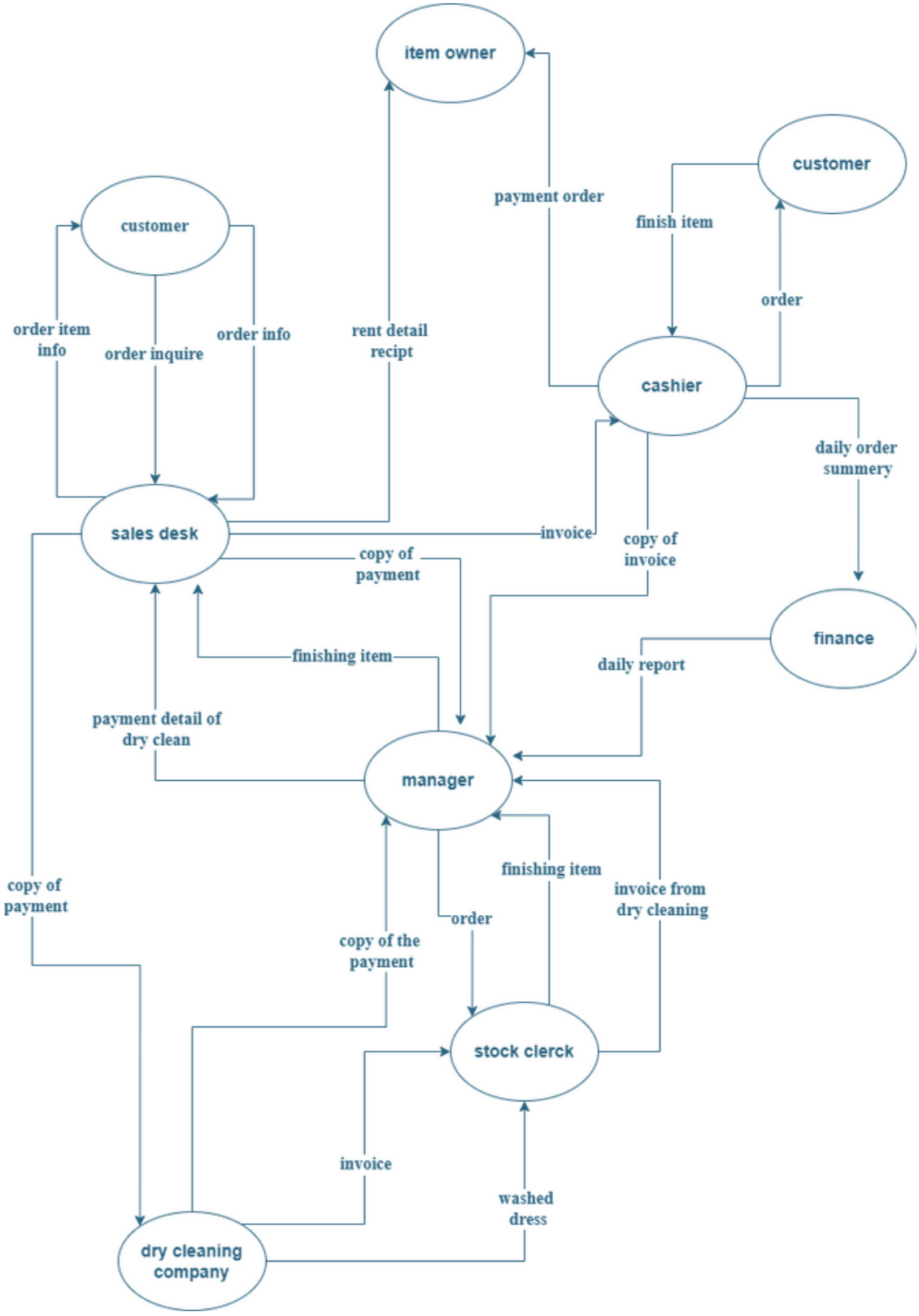
- Selected BSO and Justification

  BSO1 and BSO3 both satisfied all the functional and non-functional requirements. But BSO3 is not economically feasible because when we use both multi-user MIS and multi-user web based MIS we have to allocate extra outlays. However BSO1 is technically, operationally and economically feasible. Therefore, BSO1 was selected as a best and feasible solution.

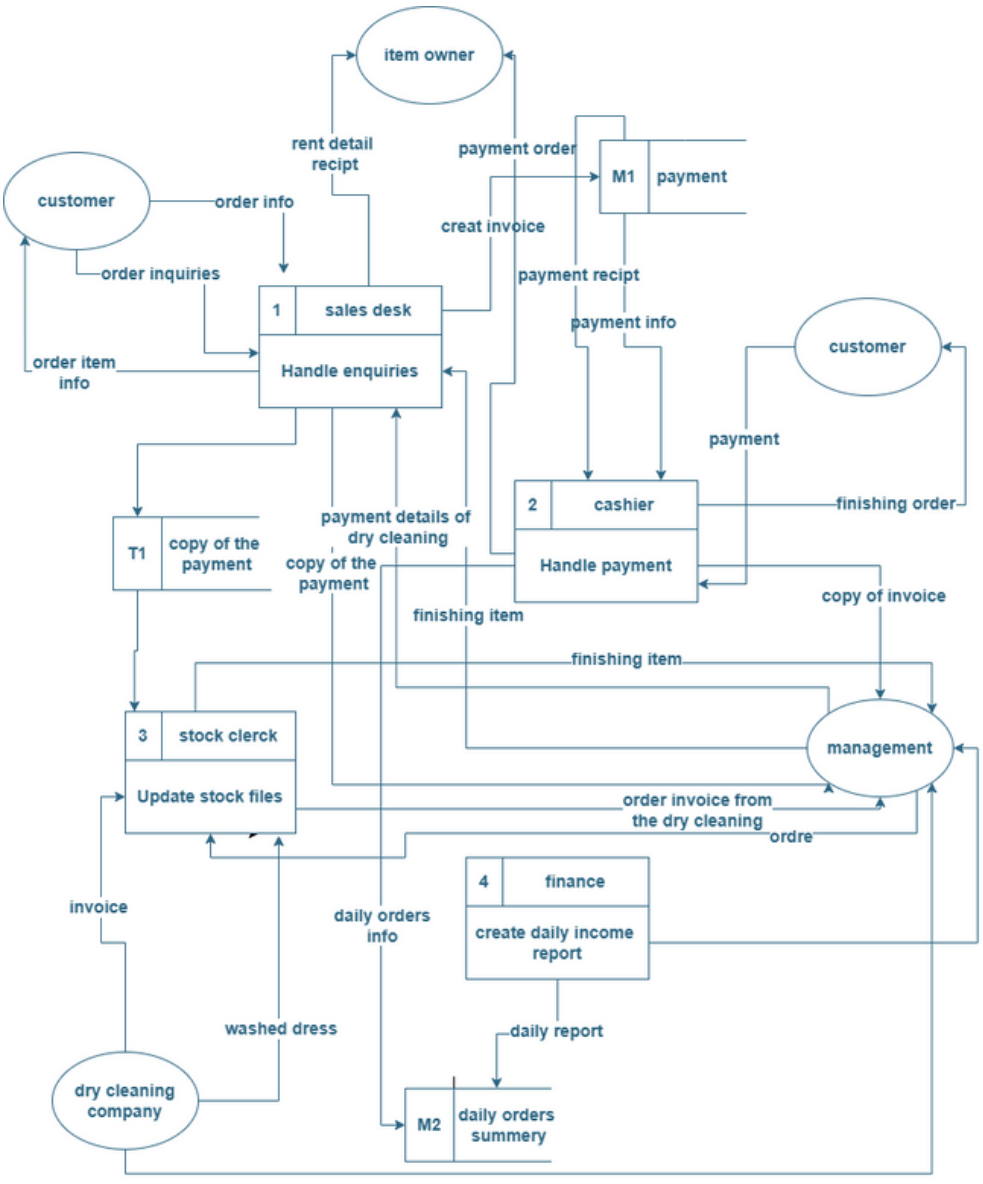
# Context Diagram



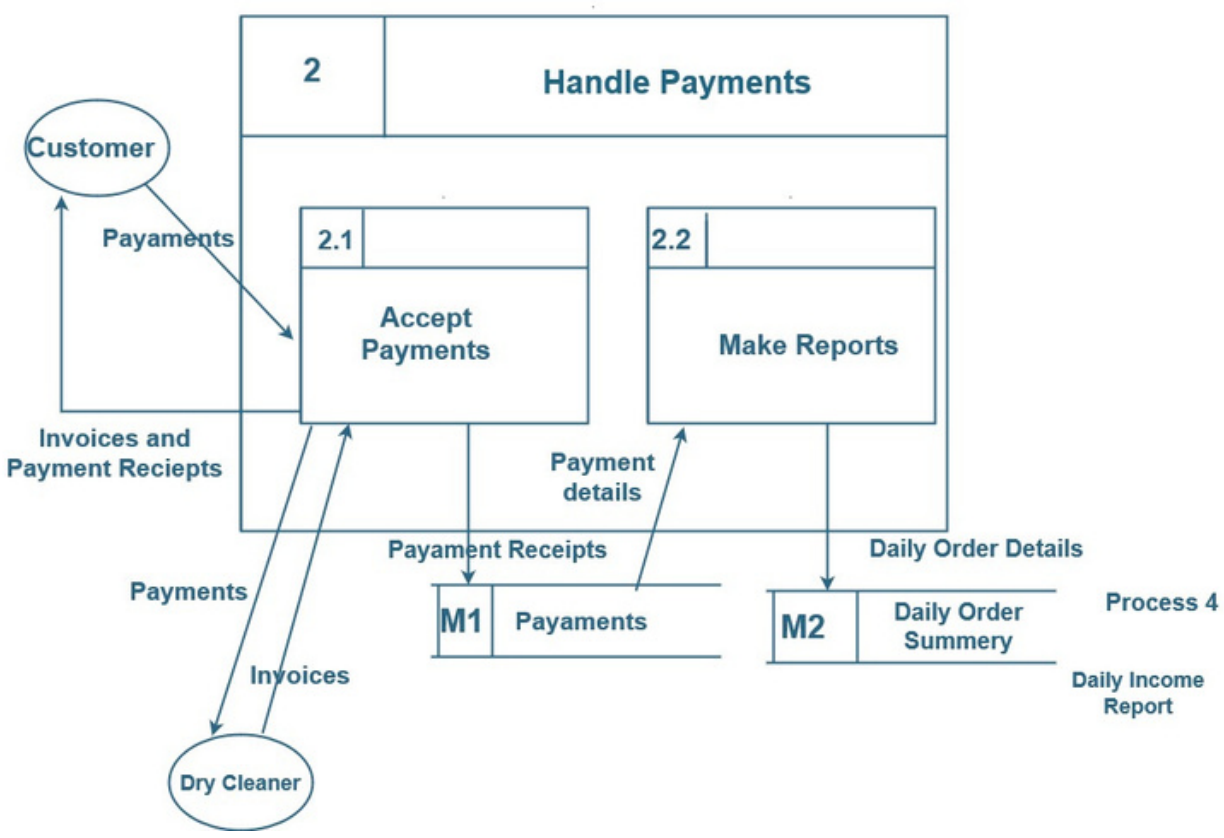
# Document Flow Diagram



# Level 1 Data Flow Diagram



# Lower Level DFD



# Elementary Process Descriptions

| Elementary Process diagram |
| --- |
| Process ID: 1.0 |
| Process Name: Handle Inquiries |
| Description:<br>*Get order inquiries customer*<br>*Get order information from customer*<br>*Get stock information from stock file data store*<br>*Get finishing item from manager*<br>*Get payments details of dry clean from manager*<br>*Send rent detail receipt to item owner*<br>*Send copy of the payment to manager* |

| Elementary Process diagram |
| --- |
| Process ID: 2.0 |
| Process Name: Handle payments |
| Description:<br>*Get payment from customer*<br>*Get order from customer*<br>*Get payment information from payment data store*<br>*Get payment receipt from payment data store*<br>*Send payment order to item owner*<br>*Send copy of invoice to manager*<br>*Send daily order information to daily order information data store* |

# Elementary Process Descriptions

| Elementary Process diagram |
| --- |
| Process ID: 3.0 |
| Process Name: Update stock file |
| Description:<br>*Get copy of the payment from copy of the payment data store*<br>*Get order from manager*<br>*Get wash dresses from dry clean company*<br>*Get invoice from dry clean company*<br>*Send invoice of dry clean to manager* |

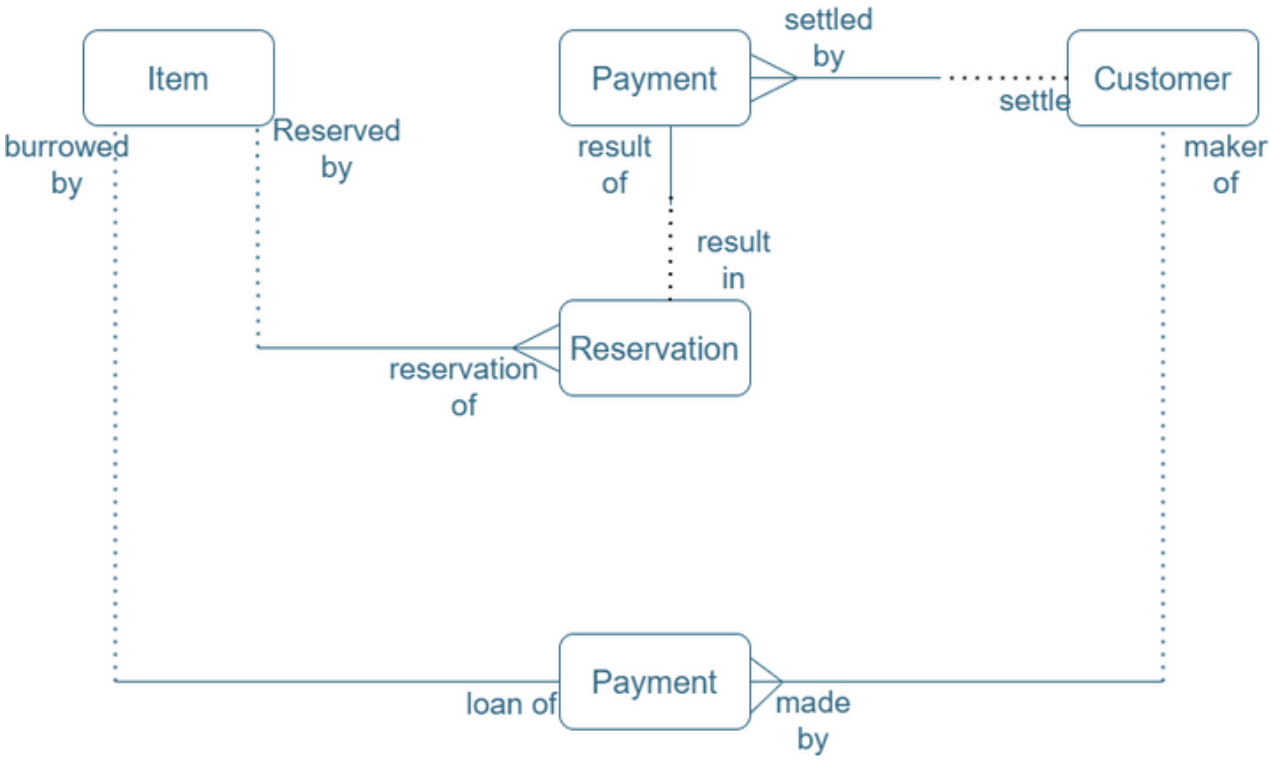
| Elementary Process diagram |
| --- |
| Process ID: 4.0 |
| Process Name: Create daily income report |
| Description:<br>*Get daily order report from daily order information data store*<br>*Send daily income report to manager* |

# Elementary Process Descriptions

| Elementary Process diagram |
| --- |
| Process ID: 2.1 |
| Process Name: Accept payments |
| Description:<br>Accepting payments from customers<br>If payments accepted, then<br>*Send invoices and receipt to customer*<br>*Send payment receipt to payment data store*<br>*Send payment to dry cleaner*<br>End if |

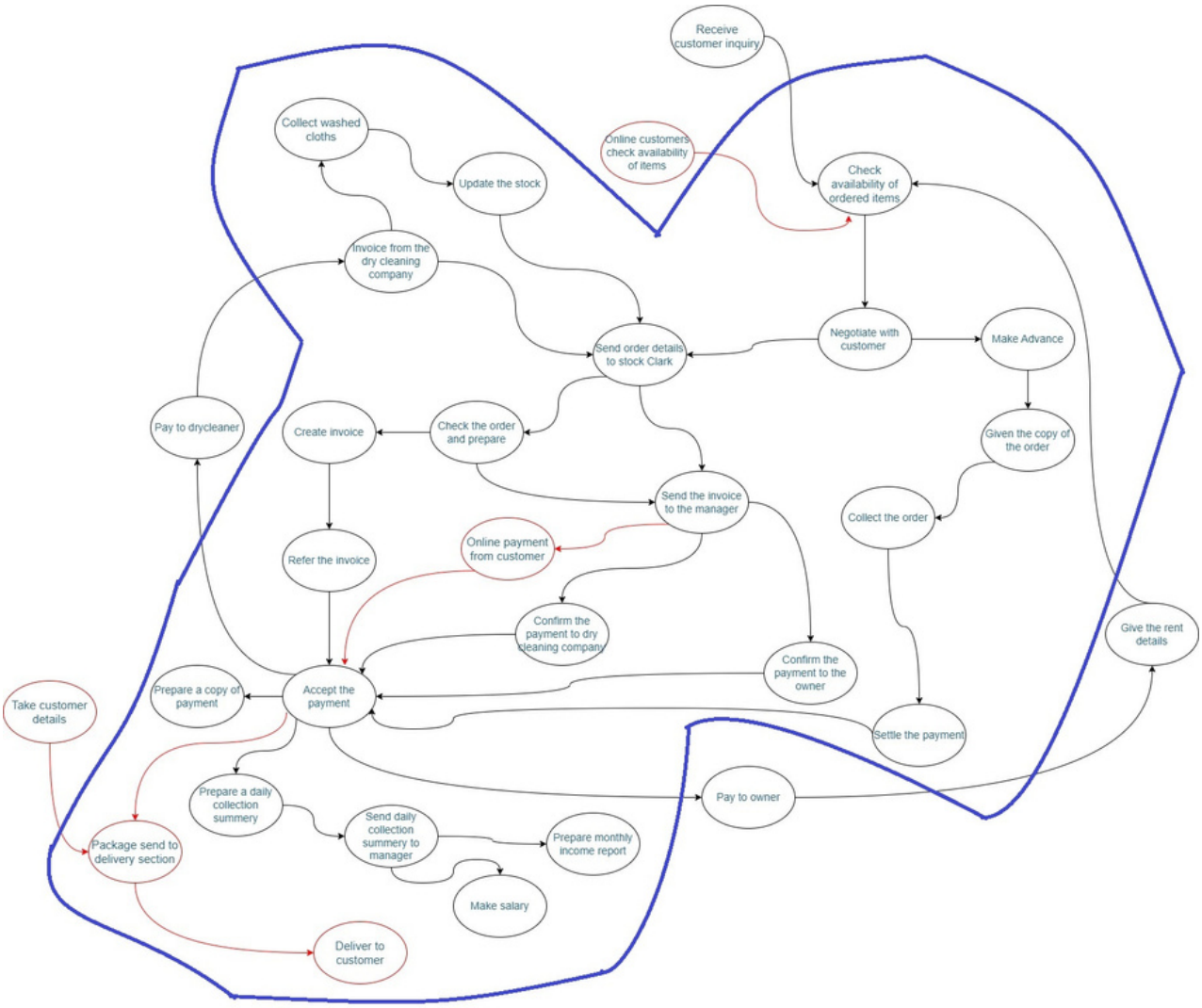
| Elementary Process diagram |
| --- |
| Process ID: 2.2 |
| Process Name: Make reports |
| Description:<br>*Get payment information from payment data store*<br>*Get invoices from Dry cleaner*<br>*Send daily orders details to daily order summery data store* |

# Logical Data Structure

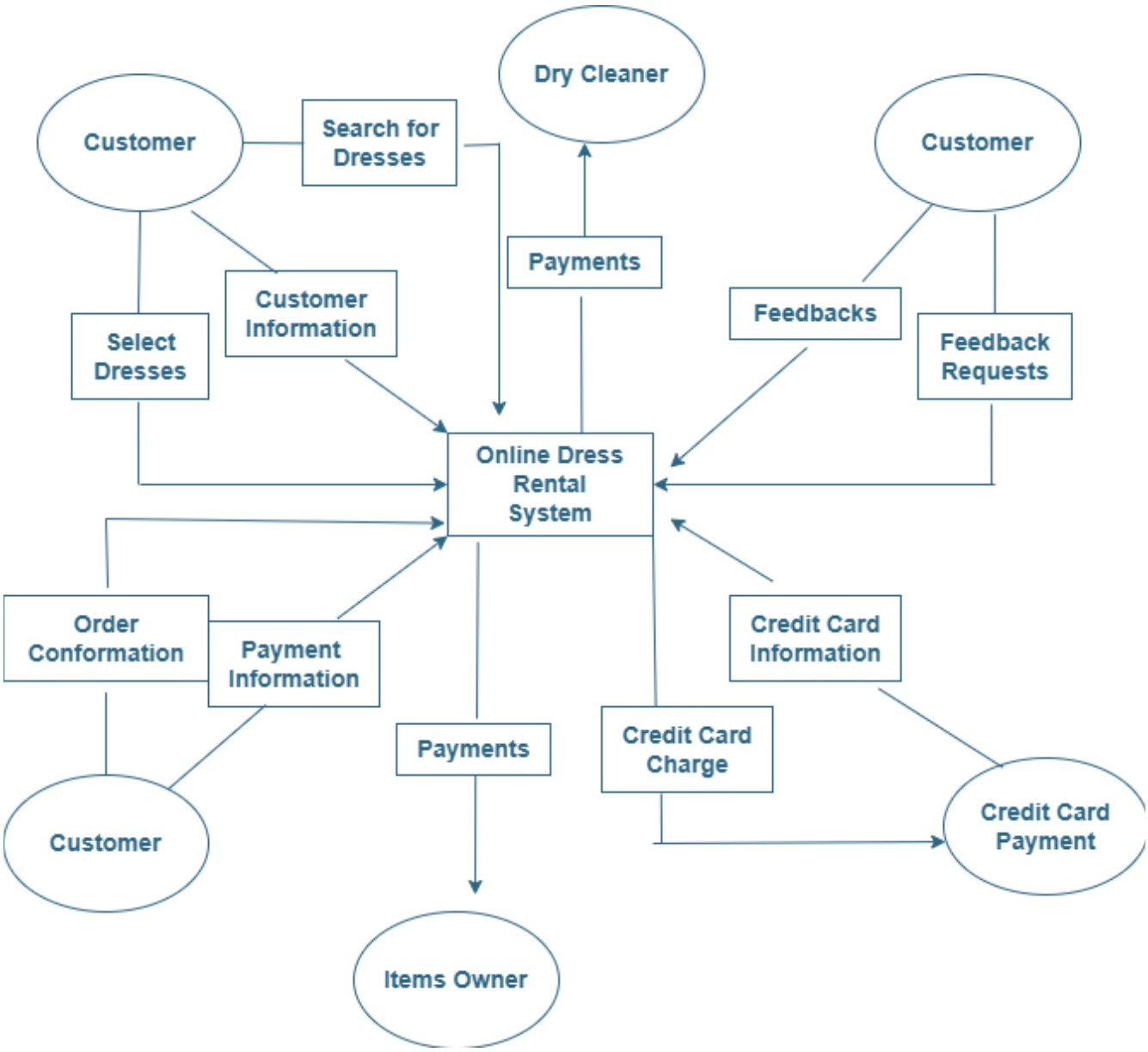


# For A New System

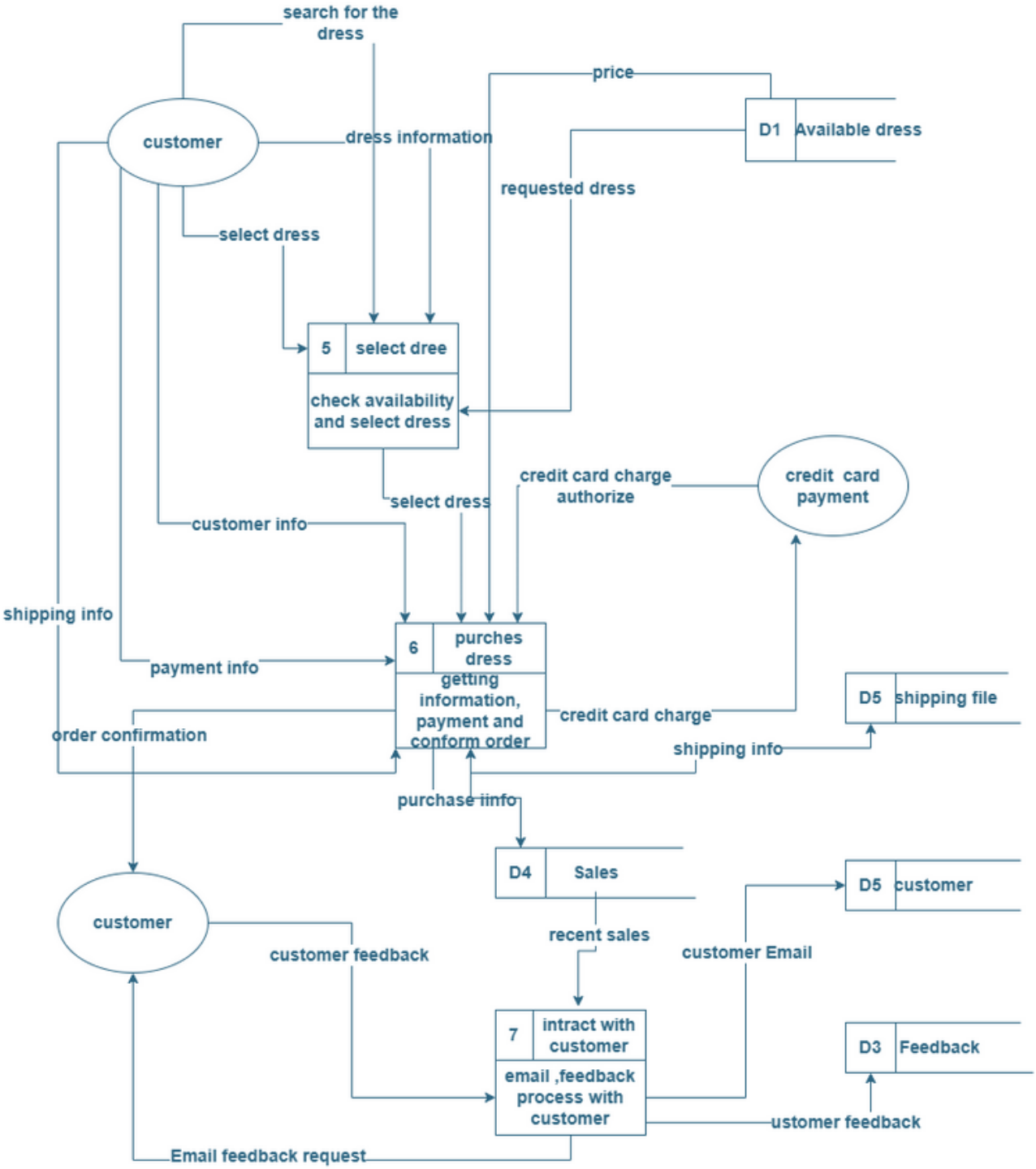
# Business Activity Model



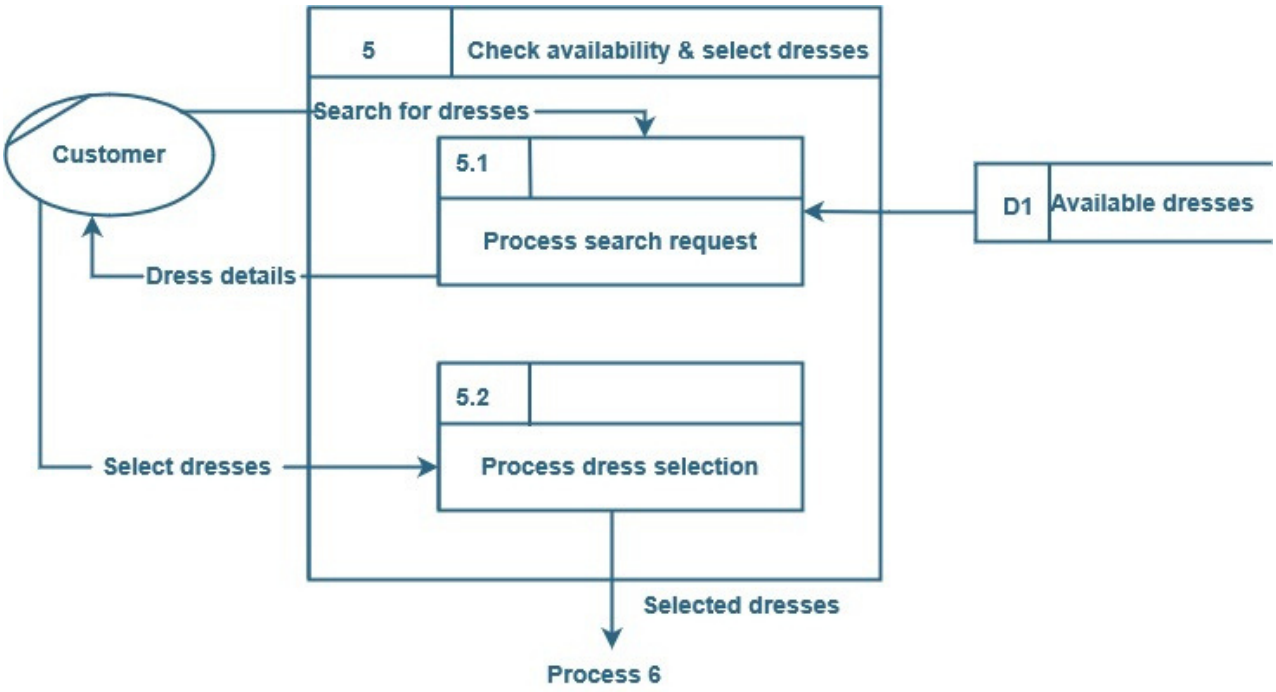
# Context Diagram

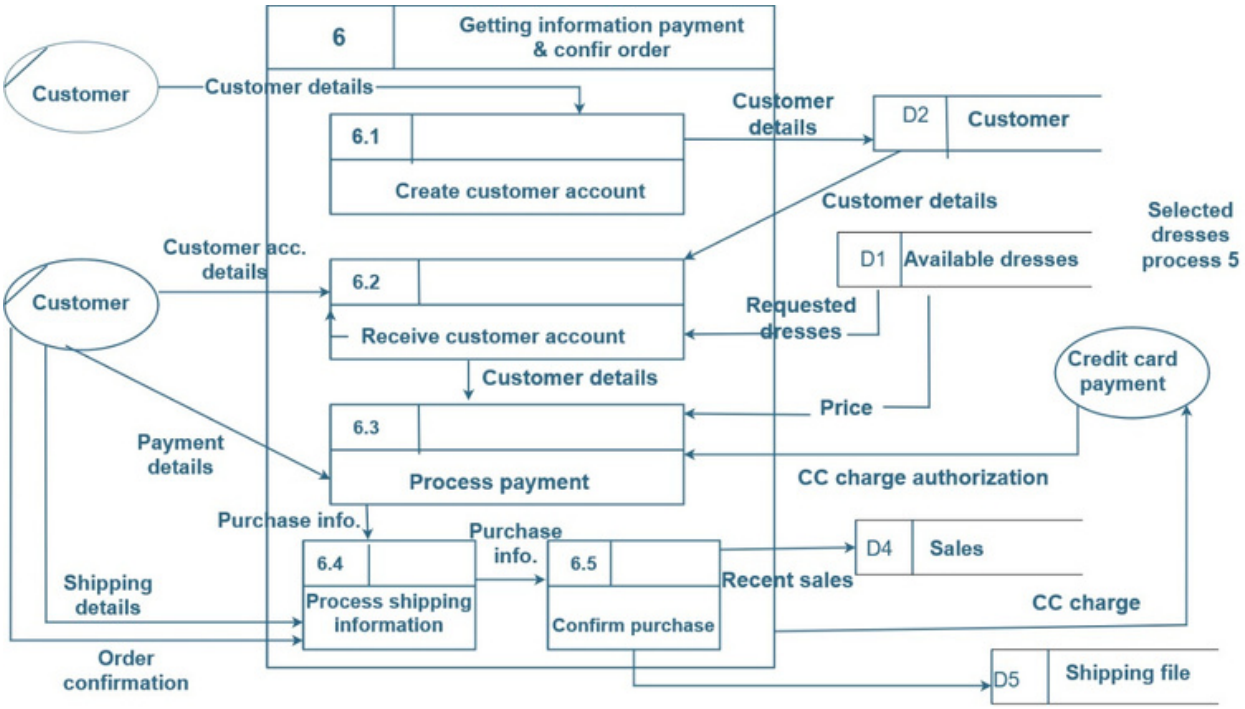


# Level 1 Data Flow Diagram

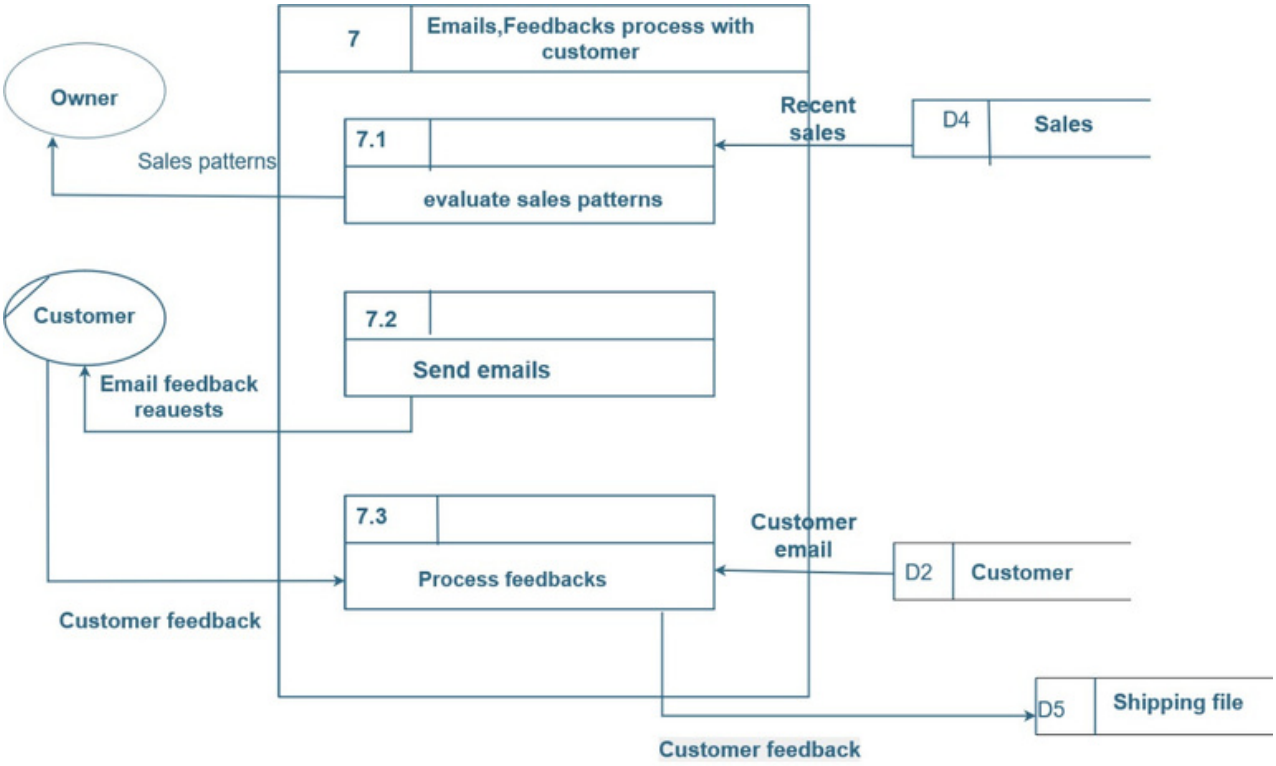


# Lower Level DFD



# Lower Level DFD



# Elementary Process Descriptions

| Elementary Process diagram |
| --- |
| Process ID: 5.0 |
| Process Name: check  availability and select dress |
| Description:<br>*Get selection of dress from customer*<br>*Get search for dress to customer*<br>*Get request of dress from available dress data store*<br>*Send dress information to customer*<br>*Send selection of dress to getting information payment and conform order process 6.0* |

| Elementary Process diagram |
| --- |
| Process ID: 6.0 |
| Process Name: getting information payment and confirm order |
| Description:<br>*Get customer information from customer*<br>*Get payment information from customer*<br>*Get shipping information from customer*<br>*Get shipping information from shipping file data store*<br>*Get price from available dress data store*<br>*Get credit card charge authorization from credit card payment*<br>*Send credit card charge to credit card charge payment*<br>*Send purchase information to sales data store*<br>*Send order information to customer* |

# Elementary Process Descriptions

| Elementary Process diagram |
| --- |
| Process ID: 7.0 |
| Process Name: Email, Feedback process with customer |
| Description:<br>*Get recent sales from sales data store*<br>*Get customer Feedback from customer*<br>*Send Email Feedback request to customer*<br>*Send customers email to customer data store*<br>*Send customer Feedback to Feedback data store* |

| Elementary Process diagram |
| --- |
| Process ID: 5.1 |
| Process Name: Process Search Request |
| Description:<br>*Get search requests for dresses from customer*<br>*If dress available then*<br>*Get requested dress from available dresses data store*<br>*Send dress details to customer*<br>*End if* |

| Elementary Process diagram |
| --- |
| Process ID: 5.2 |
| Process Name: Process Dress Selection |
| Description:<br>*Get selected dresses from customer*<br>*Send selected dresses to process 6* |

# Elementary Process Descriptions

| Elementary Process diagram |
| --- |
| Process ID: 6.1 |
| Process Name: Create Customer Account |
| Description:<br>*Get customer details from customer*<br>*Send customer details to customer data store*<br>*Send customer details to process 6.2* |

| Elementary Process diagram |
| --- |
| Process ID: 6.2 |
| Process Name: Receive Customer Account |
| Description:<br>*Receive Customer data from customer data store*<br>*Get customer account details from customer*<br>*If customer select dress then*<br>*Get requested Dresses from available dresses data store*<br>*Send customer data to process 6.3* |

| Elementary Process diagram |
| --- |
| Process ID: 6.3 |
| Process Name: Process Payments |
| Description:<br>*If customer select dress then*<br>*Get selected dress from process 5.1*<br>*Get customer payment information from customer*<br>*Get price from available dresses data store*<br>*Get cc charge authorization from credit card payment*<br>*Send purchase information to process 6.4*<br>*End if* |

# Elementary Process Descriptions

| Elementary Process diagram |
| --- |
| Process ID: 6.4 |
| Process Name: Process Shipping Information |
| Description:<br>*If customer settled the payment*<br>*Get purchase information from process 6.3*<br>*Get order conformation from customer*<br>*Get shipping details from customer*<br>*Send book purchase information to process 9.5*<br>*End if* |

| Elementary Process diagram |
| --- |
| Process ID: 6.5 |
| Process Name: confirm Purchase |
| Description:<br>*Get purchase information from process 6.4*<br>*Send shipping information to shipping file data store* |

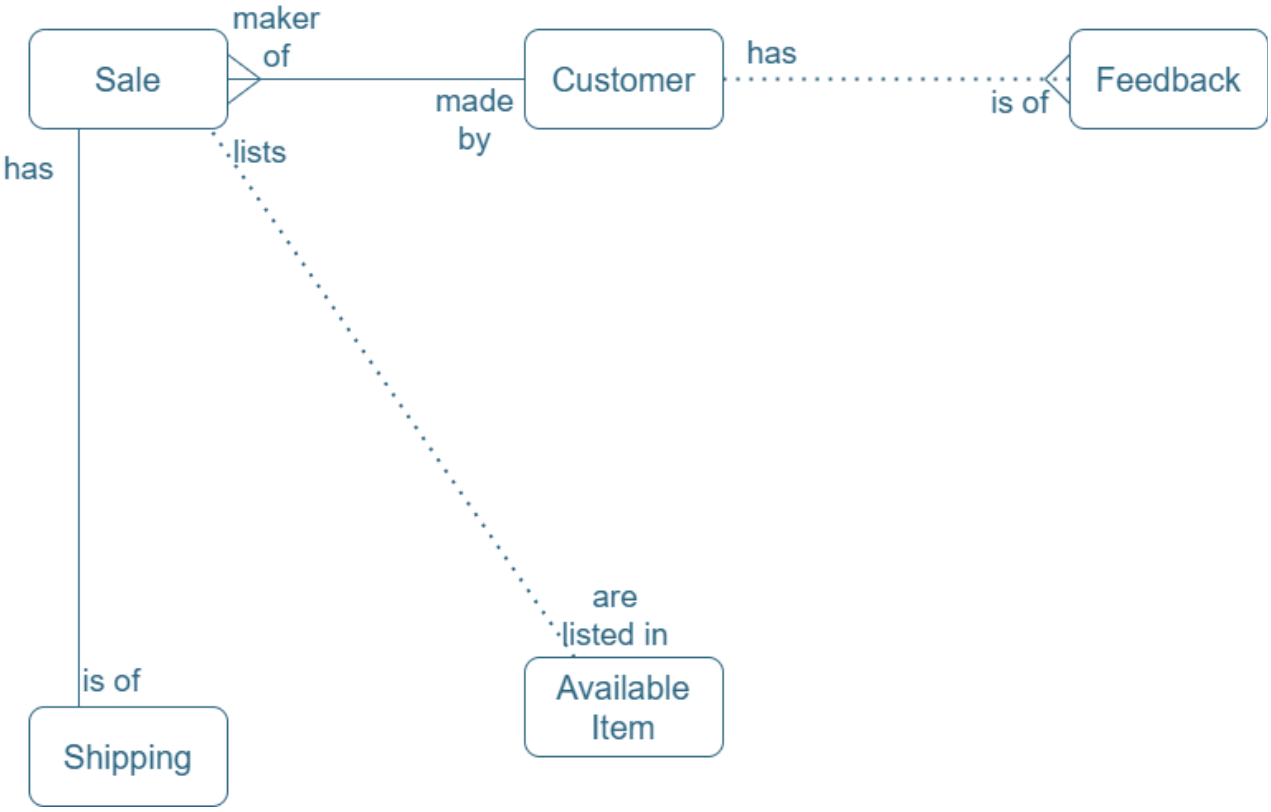
| Elementary Process diagram |
| --- |
| Process ID: 7.0 |
| Process Name: Evaluate the patterns |
| Description:<br>If owner sends new sale pattern, then<br>*Evaluate the sales pattern and update sales patterns*<br>End if<br>*Get recent sales from sales data store*<br>*Send sales pattern to owner* |

# Elementary Process Descriptions

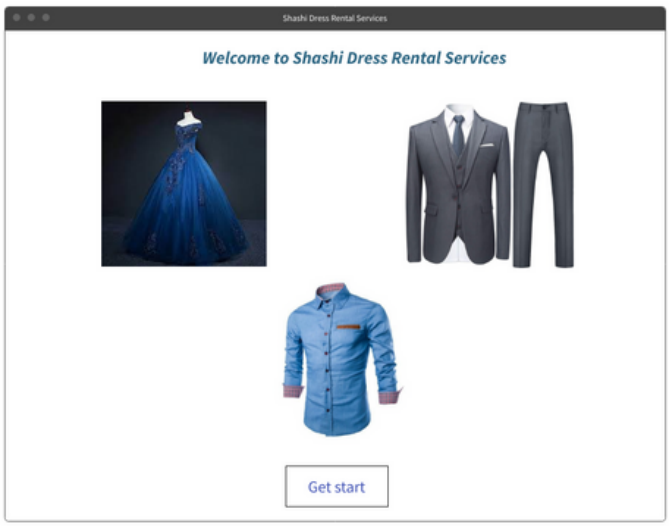
| Elementary Process diagram |
| --- |
| Process ID: 7.2 |
| Process Name: Send Emails |
| Description:<br>If new promotion available, then<br>*Send Email Feedback requests to customer*<br>End if |

| Elementary Process diagram |
| --- |
| Process ID: 7.3 |
| Process Name: Process Feedbacks |
| Description:<br>*Get customer Feedback from customer*<br>*Get customer Email from customer*<br>*Send customer Feedback to shipping file* |

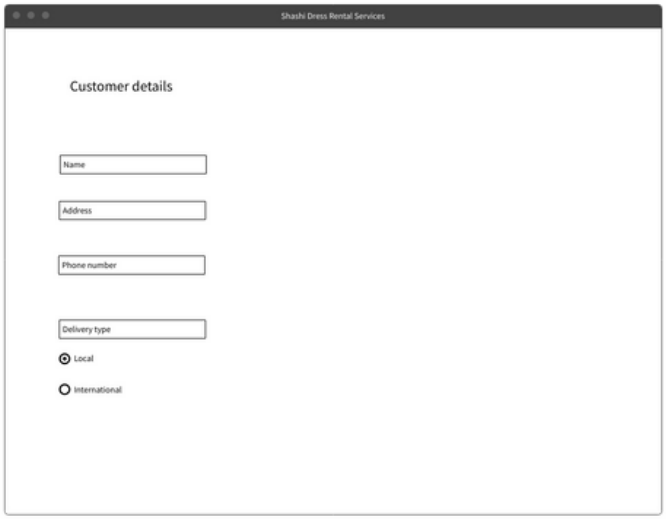
# Logical Data Structure

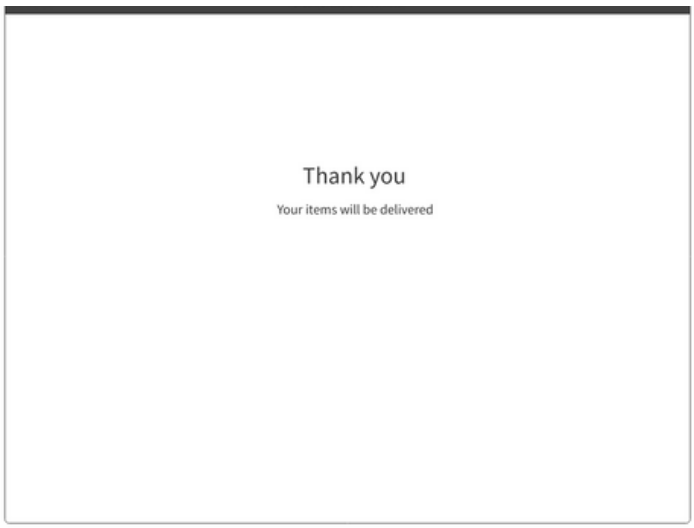


# Wireframes for the proposed system







# Discussion and Conclusion

The research was done to implement a new system for a dress rental service to ease their work. Although most companies have less interest in new technology, Shashi Dress Rental service was really happy to implement a new system as they've understood that it is more convenient and more profitable for their businesses.

They are having a manual system and we introduced an online-based system to rent their items. In the current system the customers should come to the location and find a matching dress or other item, but using the new system they can browse the items online and check for availability. So that the process is really easy for the customers. And the payments also can balance very accurately as the calculations are done using the system.

As it is platform-independent the admins of the system or the authorized workers of the company can see all the activities and accounts online from any location.

In conclusion, the system development life cycle is a user-friendly and very systematic procedure for a business to ease their work and increase their sales. By doing this project we became to know how important the SDLC is for a business and also normal life.

# Acknowledgements

We would like to thank Ms.Yehemini Jayathissa, our lecturer-in-charge for the support and guidance in completing our project on the system analysis and design. It was a great learning experience.

We would like to take this opportunity to express our gratitude to Lakshan Fancy House and its employees for the support given. The project would not have been successful without their cooperation and input.

# Thank You!

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