Requirements Engineering

Title of System

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Computing with Games Development/Software Development/Multi Media

Date Submitted: dd/mm/yyyy

**Table of Contents**

[1. Introduction/overview 3](#_Toc474162299)

[2. Functional Components 4](#_Toc474162300)

[3. User Requirements 5](#_Toc474162301)

[4. System Requirements 6](#_Toc474162302)

[4.1. System Level Use Case Diagram 6](#_Toc474162303)

[4.2. Module 1 (Use active Verb + Noun) 6](#_Toc474162304)

[4.2.1. Functional Requirement 1 (Use active verb + noun) 6](#_Toc474162305)

[4.2.2. Functional Requirement 2 (Use active verb + noun) 6](#_Toc474162306)

[4.2.3. Functional Requirement 3 (Use active verb + noun) 6](#_Toc474162307)

[4.3. Module 2 (Use active Verb + Noun) 6](#_Toc474162308)

[4.3.1. Functional Requirement 1 (Use active verb + noun) 6](#_Toc474162309)

[4.3.2. Functional Requirement 2 (Use active verb + noun) 6](#_Toc474162310)

[4.4. Module 3 (Use active Verb + Noun) 6](#_Toc474162311)

[4.4.1. Functional Requirement 1 (Use active verb + noun) 6](#_Toc474162312)

[4.4.2. Functional Requirement 2 (Use active verb + noun) 6](#_Toc474162313)

[5. System Model 7](#_Toc474162314)

[5.1. Level-0 DFD 7](#_Toc474162315)

[5.2. Level-1 DFD 7](#_Toc474162316)

[5.3. Level-2 DFD (Process P1: Title) 7](#_Toc474162317)

[5.4. Level-2 DFD (Process P2: Title) 7](#_Toc474162318)

[5.5. Level-2 DFD (Process P3: Title) 7](#_Toc474162319)

[6. Data Model (Class Diagram) 8](#_Toc474162320)

[6.1. Class Diagram 8](#_Toc474162321)

[6.2. Relational Schema 8](#_Toc474162322)

[6.3. Database Schema 8](#_Toc474162323)

[7. Conclusion 9](#_Toc474162324)

[8. Appendices 10](#_Toc474162325)

[8.1. Appendix A – Title 10](#_Toc474162326)

[8.2. Appendix B – Title 10](#_Toc474162327)

# Introduction/overview

**Normal** text here

# Functional Components

Include a ***hierarchy chart*** representing the functional components of your system in this section.

Use the MS Word Insert 🡪 SmartArt 🡪 Hierarchy object

Logical ordering of functional components is significant – the reader of this document should read about the functions in ***logical sequence***

Don’t forget to REMOVE the notes above ……….

# User Requirements

High level **abstract statements** describing the user requirements.

This should be consistent with the hierarchy chart in section 2.

Requirements to be listed in exactly same order as in section 2.

* **3.1** Linen
  + **3.1.1** The system will add new linen to the table of available linen.
  + **3.1.2** The system will update the details of the linen.
  + **3.1.3** The system will delete linen from the table of available linen.
* **3.2** Order
  + **3.2.1** The system will log orders from the customer.
  + **3.2.2** The system will calculate the cost and quantity of an order.
  + **3.2.3** The system will dispatch the linen for a required order
  + **3.2.4** The system will collect the laundry the customer wants cleaned
  + **3.2.5** The system will record the amount owed by the customer and if they have paid.
* **3.3** Customers
  + **3.3.1** The system will add customer details to a table of customers.
  + **3.3.2** The system will update a customer’s information.
  + **3.3.3** The system will remove any obsolete customer.
* **3.4** Admin
  + **3.4.1** The system will calculate the total yearly earnings of the company.
  + **3.4.2** The system will calculate the total earnings per customer.
  + **3.4.3** The system will track the amount of rejects.
  + **3.4.4** The system will track the cost of the rejects in a given time period.

# System Requirements

Include a brief overview of the system requirements.

Your hierarchy chart / User requirements summarise these……..

## System Level Use Case Diagram

A brief introduction of the high-level modules/components of the system…..

System level UC diagram to be included here….

## Manage Linen

### **Add Linen**

This function adds new linen to the system.

Manager

|  |  |  |
| --- | --- | --- |
| **Use Case Name** | **Add Linen** | |
| **Use Case Id** | 4.2.1 | |
| **Priority** | High | |
| **Source** | Manager | |
| **Primary Business Actor** | Manager | |
| **Other Participating Actors** | None | |
| **Description** | This function adds new linen to the system. | |
| **Preconditions** | None | |
| **Trigger** | None | |
| **Expected Scenario** | **Manager** | **System** |
|  | **Step 1:** The manager invokes the Add Linen function.  **Step 5:** The manager enters the following details:   * Linen\_Name * Sale\_Price * Cleaning\_Price * Pack\_Size | **Step 2:** The system determines the next Linen\_ID.  **Step 3:** Retrieve Linen details from the Linen File and load on the form.  **Step 4:** The system displays the UI.  **Step 5:** The system validates the data:   * All fields must not be blank. * The Linen Name must only contain letters. * The Sale and Cleaning Prices must be a positive number with up to two decimal places * The Pack Size must be a positive whole number.   **Step 6:** The system sets the Status to Active (“A”).  **Step 7:** The system sets the Item\_Earnings to 0.  **Step 7:** The system saves the following data to the Linen File:   * Linen\_ID * Linen\_Name * Sale\_Price * Cleaning\_Price * Pack\_Size * Status * Item\_Earnings   **Step 8:** The system displays a confirmation message.  **Step 9:** The system clears the UI. |
| **Alternate Scenarios** | **Manager** | **System** |
| **Field Not Entered** |  | **Step 5:** Blank field detected.  **Step 6:** The system displays an error message: “Error, all fields must be entered.  **Step 7:** Place cursor on first blank field and return to Step 4. |
| **Conclusions** | The linen is added to the system | |
| **Post conditions** | Orders can now be made for the new linen. | |
| **Business Rules** | The pack size must be a multiple of 5. | |
| **Implementation Constraints** | None | |

### **Update Linen**

This function updates the linen currently in the system.

Manager

|  |  |  |
| --- | --- | --- |
| **Use Case Name** | **Update Linen** | |
| **Use Case Id** | 4.2.2 | |
| **Priority** | High | |
| **Source** | Manager | |
| **Primary Business Actor** | Manager | |
| **Other Participating Actors** | None | |
| **Description** | This function updates the linen currently in the system | |
| **Preconditions** | The Linen is already in the system. | |
| **Trigger** | No | |
| **Expected Scenario** | **Actor Action** | **System Response** |
|  | **Step 1:** The manager invokes the Update Linen function.  **Step 3:** The manager enters the Linen Name.  **Step 7:** The manager updates any of the following fields:   * Sale Price * Cleaning Price * Pack Size | **Step 2:** The system prompts the user for the Linen Name.  **Step 4:** The system checks the Linen table for the Linen Name matching the entered Linen name.  **Step 5:** The system retrieves the Linen details from the Linen table.  **Step 6:** The system displays the UI.  **Step 8:** |
| **Alternate Scenarios** | **Actor Action** | **System Response** |
|  |  |  |
| **Conclusions** |  | |
| **Post conditions** | Defines a constraint on the system when the use case has terminated. | |
| **Business Rules** | What business rules, if any, must be factored into the software | |
| **Implementation Constraints** | Specify any non-functional requirements that may impact the realisation of the use case | |

### **Remove Linen**

## Manage Orders

### Functional Requirement 1 (Use active verb + noun)

### Functional Requirement 2 (Use active verb + noun)

## Manage Customers

### Functional Requirement 1 (Use active verb + noun)

### Functional Requirement 2 (Use active verb + noun)

# System Model

The following dataflow diagrams have been produced for the system:

## Level-0 DFD

## Level-1 DFD

## Level-2 DFD (Process P1: Title)

## Level-2 DFD (Process P2: Title)

## Level-2 DFD (Process P3: Title)

# Data Model (Class Diagram)

Brief introduction……

## Class Diagram

Object Model – UML Class Diagram

Class diagram shows objects & attributes

## Relational Schema

Relational schema for the data requirements - Using ***bracket notation***

## Database Schema

A definition of the database to be implemented.

This includes primary key, foreign key and other constraints to be implemented.

# Conclusion

# Appendices

## Appendix A – Title

## Appendix B – Title

Might include:

* **Lookup / Reference tables**
* **Sample reports / Listings**