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| HCC2, HCCE2, BSHC2, BSHCE2, BSHBIS2, BSHBISE2 |
| Requirements Specification (RS) |
| SmartShop-Group B |

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# Introduction

## Purpose

The purpose of this document is to set out the requirements for the development of a Database KPI Dashboard. The Dashboard will be designed and populated to represent the Key Points of interest from the business.

The intended users is management from different departments.

## Project Scope

The Scope of this project is to design and launch a web dashboard that will show key information on the business. It will be able to do this by taking accumulated information from the database warehouse that has been aggregated to show performance in particular areas.

1. The requirements specification document will required to be written in detail including functional requirements, non-functional requirements, user requirements and outline how the dashboard system can evolve in the system evolution section.

2. A wireframe will be included to show how the initial design looked against the final product, this will help the team keep on track towards a final goal.

The time frame of this project is 2 weeks, the project is fully developed using free software, such as MySQL.

## Definitions, Acronyms, and Abbreviations

ERD – Entity Relationship Diagram.

# User Requirements Definition

## Requirement <Database>

The clients want my team to create and populate a database for their SmartShop online shopping business. The database will be created using MySQL and it will be developed for fast and efficient querying.

## Requirement <Unstructured Data>

My team will build an automated Website that will create unstructured data file format. This will help the clients in the near future as the clients have plans to link the website to the database but for now just want to create bought separately.

# Requirements Specification

All requirements should be verifiable. For example, experienced controllers shall be able to use all the system functions after a total of two hours training. After this training, the average number of errors made by experienced users shall not exceed two per day.

## Functional requirements

### Use Case Diagram

N/A

### Requirement 1 <Create Customers>

#### Description & Priority

This requirement is to create customers in the database. This is the main function as the database needs customers to progress.

#### Use Case

**Scope**

The scope of this use case is to get the customers details added to the database. The system will to able to create customers such as add their names, customer ID's and additional information that will be helpful in creating the system. We will input the required fields for the customers to put their details in.

**Flow Description**

**Precondition**

The Customer accesses the database.

**Activation**

The Customer enters their details in.

**Main flow**

1. The system allows the actor in
2. The Customer enters their details
3. The system creates the customer
4. The Customer is logged in

**Post condition**

The system tells the customer they have been successfully added to the database.

### Requirement 2 <Modify Customers>

#### Description & Priority

This requirement is for the system to be able to add, update or delete a customer’s record.

#### Use Case

**Scope**

The system will be able to modify the customers table such as add customers, update customers and delete customers from the table.

**Flow Description**

**Precondition**

The user accesses the customers table

**Activation**

The user adds updates or deletes a record

**Main flow**

* 1. The user enters the customer table
  2. The user modifies a record
  3. The system accepts the modification
  4. The users leaves the customer table

**Post condition**

The customer table is modified.

### Requirement 3 <Place Order>

#### Description & Priority

This requirement is for the customer to be able to place an order.

#### Use Case

**Scope**

The system will allow the customer to place an order. The customers details such as the customer ID will be put into the orders table so the database knows what customer is making which order.

**Flow Description**

**Precondition**

The customer is logged in

**Activation**

The customer places an order

**Main flow**

1. The system ensures the customer is logged in
2. The customer places an order
3. The system accepts the order
4. The customer continues

**Post condition**

The order is placed

### Requirement 4: Payment

#### Description & Priority

Payment has a very high importance, the order can’t be created without payment first. Payment takes the Card details from a customer, processes the details before placing a delivery order.

#### Use Case

Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.

The <Actor> logs in, places an order, enters payment details, system checks details.

**Flow Description**

**Precondition**

The process begins when the <Actor> logs in.

**Activation**

The process begins when the <Actor> proceeds to checkout.

**Main flow**

1. The database identifies the <Actor> log in credentials.
2. The <Actor> picks items.
3. The <Actor> proceeds to checkout.
4. The <Actor> enters credit card details.
5. The System processes the <Actor> details.
6. The system notifies customer of successful payment.

**Post condition**

The system continues to the delivery page

### Requirement 5: Delivery and Status

Requirements 1: Delivery and Status

#### Description & Priority

Delivery and status is a vital requirement after a customer has logged in and places an order, the order is then sent to the delivery department to process the order and deliver the items to the customer. It will also create a unique delivery number assigned to each order for the customer to track from loading bay to delivery to the destination.

#### Use Case

The Customer logs in, places an order, the order is then sent to the Delivery department

**Flow Description**

**Precondition**

The process begins when the <Actor> logs in.

**Activation**

This use case starts when an <Actor> places an order

**Main flow**

1. The database identifies the <Actor> log in credentials.
2. The <Actor> picks items.
3. The <Actor> proceeds to checkout.
4. The <Actor> enters credit card details.
5. The System processes the <Actor> details.
6. The system sends delivery request

**Post condition**

The system notifies the <Actor> their order was placed successfully.

## Non-Functional Requirements

### Performance/Response time requirement

The performance requirement of the database of SmartShop is that *95% of the transactions will be processed in less than 1 second.* The only way in which our database will meet its performance targets is for it to be specified clearly and unambiguously, this is in order to keep performance high, as loose or incorrectly defined performance specifications could lead to disputes between our clients and suppliers.

### Recover requirement

The recovery requirement of the SmartShop database is that a full recovery can take place without the loss of data or customer transactions in case of accidental deletion, corruption etc. Our database will make use of a data backup as a form of disaster recovery and will be part of our disaster recovery plan.

### Security requirement

The Security Requirements of our database will include the following security protection:

* Physical database integrity – Protect from power failures etc.
* Logical database integrity - the structure is to be preserved.
* Element integrity - data must be accurate.
* Access control.
* User authentication.
* Confidentiality - protection of sensitive data.

### Reliability requirement

The Reliability Requirement for the SmartShop database will be for the database to have no more than 1 failure a month, whether the failure was due to an employee of SmartShop or another reason.

### Maintainability requirement

The database should be easy for the users who execute the system day to day, for the developers who wish to editor develop further and for the personnel who is in charge of the maintenance.

### Portability requirement

The system should support new versions of the related browsers. The administrative and server technologies should be standard and supported by most platforms.

### Extendibility requirement

The extendibility requirement of our database will require us to allow quick and easy access to the database. This will allow us to have a quick turnaround time in our maintenance of the database.

### Usability requirement

The usability requirement of our SmartShop database will ensure that we use easy to use software to allow authorized personnel to access and edit data; we will achieve this by using MySQL.

### Resource utilization requirement

The resource utilization requirement will require us to use all the resources we have to their maximum ability. These resources will include MySQL.

# GUI

N/A

# System Architecture

N/A

# System Evolution

N/A