

Software Requirements Specification

For



I3 Integrator

Version 1.0

In partial fulfilment of the requirements in CMSC 198 (Practicum)

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1. Introduction

1.1 Purpose

The project that this software requirement specification identify is the Imonggo and 3dCart Integrator or I3 Integrator version 1. I3 Integrator is a software that aims to integrate Imonggo (a free online web-based Point of Sale system) with 3dCart (an eCommerce site). It acts as the middle man between a user's Imonggo store and 3dCart store.

I3 Integrator aims to provide easy and efficient synchronization of the user's products, customers, invoices, and inventory levels between the user's stores (Imonggo store and 3dCart store) over the internet. This is made for the user not to manually enter and/or transfer the mentioned services from one store to another.

1.2 Document Conventions

The front page of this document is written in Cambria of font size 26, 18, and 14, with normal and bold font-weights. Main section titles are in Cambria of font size 18 with a bold face while sub section titles are in Cambria of font size 14 with a bold face too. All other texts are in Cambria of font size 12 with an italic face.

1.3 Intended Audience and Reading Suggestions

This document is intended for:

- **General Users** – *The general users of the system will get a clear idea of the software and hardware requirements to be engaged when using I3 Integrator.*
- **Developers** – *The project developers will have an advantage of quickly understanding the product's methodology.*

It is suggested that the reader go through the requirement section thoroughly before using the software. However, for readers with extensive knowledge of the system, he/she may skip the document's contents as desired.

1.4 Product Scope

The product aims to provide synchronization of the user's Imonggo store and 3dCart store in terms of the following features/services:

- *Products*
- *Customer*
- *Invoices*
- *Inventory Levels*

*The overview of the functionalities of the enumerated features above are described in chapter **2.2 Product Functions** of this document.*

All of the enumerated features take the user's Imonggo store as the general source of truth.

1.5 References

- ***I3 Integrator (Version 1) Source Code*** – this can be viewed and pulled at https://github.com/camaeyeban/imonggo_integration
- ***Materialize CSS Documentation*** – this can be viewed and downloaded at <http://materializecss.com/>
- ***jQuery Documentation*** – this can be viewed and downloaded at <http://jquery.com/>
- ***Imonggo REST API*** – this can be viewed at the link provided below <http://support.imonggo.com/help/kb/api/introduction-to-imonggo-api>
- ***3dCart REST API*** – this can be viewed at <https://apiREST.3dcart.com/Help>

2. Overall Description

2.1 Product Perspective

Imonggo aims to extend its services to retailers worldwide hence its developers proposed to integrate it to different ecommerce sites. 3dCart, providing a massively used shopping cart software, was chosen to be integrated with Imonggo. Thus, I3 Integrator was made.

Basically, I3 Integrator pulls services from the user's Imonggo store then posts those to the user's 3dCart store. Counter data flow (from user's 3dCart store to the user's Imonggo store) is also supported by the software. I3 integrator acts as the middle man between Imonggo and 3dCart data transfer. A simple illustration of the process' data flow is shown below.



Figure 1. Product Services' Data Flow

2.2 Product Functions

I3 Integrator functionalities could be divided into four groups which are based on the features/services that it would provide. These functions are as follow:

a. Update products

- *It allows the user to update his/her 3dCart store products based on his/her Imonggo store products.*

b. Update customers

- *It allows the user to update his/her Imonggo store customers based on his/her 3dCart store customers.*

c. Update invoices

- *It allows the user to update his/her Imonggo store invoices based on his/her 3dCart store invoices.*

d. Update inventory levels

- *It allows the user to update his/her inventory levels through product posting and order shipping.*

2.3 User Classes and Characteristics

There is only one type of user for I3 Integrator. He/she must have his/her own Imonggo and 3dCart stores. He/she is given the opportunity to use all of the software's full potential. He/she is given all rights to utilize all available functionalities of the product.

2.4 Operating Environment

The software will run in all Windows version, Linux, and MAC OS, with installed web browsers. Browsers to be used are preferably Google Chrome (any version), Mozilla Firefox (any version), Safari (version 5.1 or higher), Opera (version 30.0 or higher), or Internet Explorer (version 9, 10, and 11).

2.5 Design and Implementation Constraints

Developers might be not be able to access the software if the application administrator sees an unfulfilled requirements or/and credentials. Execution time limitations might also be experienced if too many data shall be transferred from one store to another, especially there is a slow internet connections.

Thorough benchmarking and testing of the implementation designs and constraints must be done to ensure optimal reliability and availability.

The author will not be responsible for system deployment and maintenance.

2.6 User Documentation

There is currently no user manual available for I3 Integrator. This will be provided soon.

2.7 Assumptions and Dependencies

It is assumed and later agreed upon that the system must be web-based. It is also assumed that the server the system will be deployed to can handle file upload, download, and multiple user sessions.

3. External Interface Requirements

3.1 User Interfaces

The user interface of I3 Integrator will be minimalistic. User interface elements will be presented in a simple way for the ease of use of the software's users.

3.2 Hardware Interfaces

The system is currently running in localhost, but will soon be deployed in a server once further studies, reviews, and tests have been made.

The server will be directly connected to the client systems. The client will have access to the database through the server, but will only be 'read only'. The client has no power to modify the database directly.

The interaction between the user and the system will be catered by the front end design of the system while the database operations and queries will be carried by the back end implementation on the server side.

3.3 Software Interfaces

The data management tool used by this software is MySQL. Its back-end is developed using PHP (version 5.6.8) while its front-end used HTML 5, jQuery (version 1.10.2.min), and Materialize CSS (version 0.97.0) elements. No framework will be used in developing the software.

3.4 Communication Interfaces

Email functionalities provided by 3dCart's shopping cart software will be utilized for customer order notification. Standard HTTP protocol will be applied. Basic Authentication will be used when communicating with the user's Imonggo store while OAuth will be used when communicating with the user's 3dCart store.

4. System Features

4.1 Update Products

- *This function is a one-way process. It allows the user to update his/her 3dCart store products based on their Imonggo store products*
- *This function will be executed upon a button click on the software's user interface.*
- *The software will pull the user's Imonggo store products then post the pulled products to the user's 3dCart store.*

4.2 Update Customers

- *This function is a one-way process. It allows the user to update his/her Imonggo store customers based on their 3dCart store customers.*
- *This function will be executed upon a button click on the software's user interface.*
- *This software will pull the user's 3dCart store customers then post the pulled customers to the user's Imonggo store.*

4.3 Update Invoices

- *This function is a one-way process. It allows the user to update his/her Imonggo store invoices based on their 3dCart store invoices.*
- *This function will be executed upon a button click on the software's user interface.*
- *This software will pull the user's 3dCart store invoices then post the pulled customers to the user's Imonggo store.*

4.4 Update Inventory Levels

- *This function is a two-way process. It allows the user to update his/her inventory levels through product posting and order shipping.*
- *This function will be executed automatically. Hence, no button is required.*
- *This software increases products' inventory levels upon product transfer while it decreases products' inventory levels upon processing the customer's orders*

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The system must provide reflective and real data based on either/both Imonggo store or/and 3dCart store.

5.2 Safety Requirements

Having a limited time, hacking and other malicious intents is not ascertained to be prevented.

5.3 Security Requirements

The user will be required to authenticate to his/her Imonggo and 3dCart account. Through successful authentication in both sites, I3 Integrator shall be accessible. There will be no separate authentication for the software, instead it will use both sites' authentication.

5.4 Software Quality Attributes

The system prioritizes availability and correctness over other quality characteristics. However, emphasis on maintainability and reusability shall also be observed. Hence, the source code shall be open and well documented. It will be free for further modifications and improvement.

5.5 Business Rules

Having no user classification, all available functions shall be accessible to all of the software's users.

Appendix A: Glossary

PHP - Hypertext Preprocessor

HTML – Hypertext Markup Language

SQL - Standard Query Language