

Inventory management system for construction

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Abstract

The Inventory Management System is an application designed to allow the Construction Junction staff to create, maintain and view the contents and value of its inventory of items in a categorized way. It also facilitates the process of receiving items into the Construction Junction inventory via the drop-off, pick-up and deconstruction donation processes so that items can be traced from donation through sale. It also integrates with the QuickBooks Point of Sale retail management software currently in use by Construction Junction as well as the organization's website.

The purpose of this document is to define the requirements of the Inventory Management System as proposed by the Construction Junction (CJ) staff. The scope of the Inventory Management project and subsequently the requirements defined by

this document is the creation of a categorized Inventory Management System that provides the functionality identified by the Construction Junction team. Requirements defined in this document are prioritized by business and technical sponsors. All implementation will be based on project planning estimates and revisions to these requirements.

Keywords: Inventory Management System, Construction Junction.

Introduction

Inventory Management System (IMS) is generally used by IT Office/Department or Accounting Office of a company or a university. Therefore, searching the basic needs for implementation is the first step of IMS design. Several meetings with IT Office and Accounting Office are arranged. Accounting Office needs detailed reporting tools, detailed categorization and declaration of specifications on each item, purchasing

and billing info. The Information Technologies Office needs another module except the requirements of Accounting Office. The module is about the interior maintenance and exterior product service flow. For interior maintenance flow, there will be a section. This section will be available for all users. Basically, a maintenance request will be created by the users, and the IT Office will respond to these requests. Finally, it is necessary to consider the end user's needs that are also important part of the IMS software design. This led us to use barcode based system.

2.1 STUDY OF THE SYSTEM

To provide flexibility to the users, the interfaces have been developed that are accessible through a browser. The GUI'S at the top level have been categorized as

1. Administrative user interface
2. The operational or generic user interface

The 'administrative user interface' concentrates on the consistent information that is practically, part of the organizational activities and which needs proper

authentication for the data collection. These interfaces help the administrators with all the transactional states like Data insertion, Data deletion and Date updation along with the extensive data search capabilities.

The 'operational or generic user interface' helps the end users of the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information in a customized manner as per the included flexibilities.

2.2 INPUT & OUTPUT REPRESENTATION

Input design is a part of overall system design. The main objective during the input design is as given below:

- To produce a cost-effective method of input.
- To achieve the highest possible level of accuracy.
- To ensure that the input is acceptable and understood by the user.

INPUT STAGES:

The main input stages can be listed as below:

- Data recording
- Data transcription
- Data conversion
- Data verification
- Data control
- Data transmission
- Data validation
- Data correction

INPUT TYPES:

It is necessary to determine the various types of inputs. Inputs can be categorized as follows:

- External inputs, which are prime inputs for the system.
- Internal inputs, which are user communications with the system.
- Operational, which are computer department's communications to the system?

- Interactive, which are inputs entered during a dialogue.

INPUT MEDIA:

At this stage choice has to be made about the input media. To conclude about the input media consideration has to be given to;

- Type of input
- Flexibility of format
- Speed
- Accuracy
- Verification methods
- Rejection rates
- Ease of correction
- Storage and handling requirements
- Security
- Easy to use
- Portability

Keeping in view the above description of the input types and input media, it can be said that most of the inputs are of the form of internal and interactive. As

Input data is to be the directly keyed in by the user, the keyboard can be considered to be the most suitable input device.

OUTPUT DESIGN:

In general are:

- External Outputs whose destination is outside the organization.
- Internal Outputs whose destination is with in organization and they are the User's main interface with the computer. Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of the results for later consultation. The various types of outputs
 - Operational outputs whose use is purely with in the computer department.
 - Interface outputs, which involve the user in communicating directly with the system.

OUTPUT DEFINITION

The outputs should be defined in terms of the following points:

Type of the output

Content of the output

Format of the output

Location of the output

Frequency of the output

Volume of the output

Sequence of the output

It is not always desirable to print or display data as it is held on a computer. It should be decided as which form of the output is the most suitable.

For Example

- Will decimal points need to be inserted
- Should leading zeros be suppressed.

OUTPUT MEDIA:

In the next stage it is to be decided that which medium is the most appropriate for the output. The main considerations when deciding about the output media are:

- The suitability for the device to the particular application.

- The need for a hard copy.
- The response time required.
- The location of the users
- The software and hardware available.

Keeping in view the above description the project is to have outputs mainly coming under the category of internal outputs. The main outputs desired according to the requirement specification are:

The outputs were needed to be generated as a hard copy and as well as queries to be viewed on the screen. Keeping in view these outputs, the format for the output is taken from the outputs, which are currently being obtained after manual processing. The standard printer is to be used as output media for hard copies.

Conclusion:

In this paper we also facilitates the process of receiving items into the Construction Junction inventory via the drop-off, pick-up and deconstruction donation processes so that items can be traced from donation through sale. The scope of the Inventory

Management project and subsequently the requirements defined by this document is the creation of a categorized Inventory Management System that provides the functionality identified by the Construction Junction team

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