Document No: 1

Date: 11/25/2020

Database Design Description (DBDD)

GSWSA Inventory Project

Version 1.0.1

|  |  |
| --- | --- |
| Program Title: GSWSA | GSWSA Inventory Project |
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|  |  |
|  |  |
| Prepared For: | CSCI 425 |
|  |  |
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Revision History

| **Revision** | **Date** | **Changes** |
| --- | --- | --- |
| 01 | 10/15/2020 | Initial Release |
| 02 | 10/18/2020 | First Draft |
| 03 | 10/21/2020 | Final Revised Draft |
| 04 | 11/25/2020 | Final Draft |

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1. Scope

This section defines the scope for the GSWSA Inventory Project Development effort.

The scope of this project is limited to the creation of the documentation and code for the conversion of an IBM AS/400 db2 mainframe database to MS SQL. This will include the supporting documentation, creation of the database structure, architecture, and corresponding SQL statements. It will be limited to the inventory management part of the system and will support Business Intelligence (BI) analysis.

* 1. Identification

This document defines the Database Design Description (DBDD) for the GSWSA Inventory Project database.

This effort is known as the GSWSA project. For the purposes of this project, there will be no AVs, OVs, etc. However, there will be a set of appropriate documentation (SS/SSS, CONOP’, Test plans, descriptions, cases, and reports) GSWSA can use for references. All documentation created will be identified as a Configuration Item (CI) and tracked accordingly.

(NOTE: For the sake of brevity, “system” can mean the high-level system, the Configuration Items (CI), and the interfaces that comprise the system. When the situation dictates, the document developer(s) shall differentiate within the text (by paragraph headings and numbering) between system, CI, and interface as applicable)

* 1. Database Overview

The GSWSA database being designed herein is for the conversion of the Grand Strand Water and Sewer Authority’s AS/400 db2 database into a SQL environment.

* 1. Document Overview

The DBDD document details the design of the database used throughout GSWSA Inventory Project database. Included, is the background to the decisions concerning the architecture and management of the databases. Section 4 provides information on the physical database design. Within Section 4, the individual databases and tables are graphically represented. The table designs including field names, data type, constraints and descriptors provide the reader with the necessary information to understand the underlying metadata utilized in the GSWSA Inventory Project database computing environment. The methods and the correlating calls to the database including their output are listed. The methodology forms a logical sequence for the reader from the database design to its actual implementation within the code. It forms the basis of the design and provides information needed for software support.

Table 2 provides an overview of each section of the document.

Table 2 Document Overview

| **Section** | **Description** |
| --- | --- |
| **Section 1** | Reviews over the scope of the entire DBDD and the GSWSA Inventory project. Section one further reviews over the identification of the documents involved with the GSWSA Inventory Project. |
| **Section 2** | Reviews over the database architecture used for planning the GSWSA Inventory Project. Section two further explains the database’s software being used for management. |
| **Section 3** | Reviews over the physical database designs with tables and covers over the GSWSA Inventory Project database using standard third normalized form ERD diagrams and third normalized database tables. |
| **Section 4** | Reviews over the SQL queries that access information to be given back to the user interface. Section four additionally reviews over the file names and specified purpose. |
| **Section 5** | Reviews over extra developer notes and commonly used acronyms. |

* 1. Referenced Documents

The following documents provide the additional artifacts that were in effect at the time this document was reviewed and versioned.

|  |  |
| --- | --- |
| **Document** | **Author** |
| **GSWSA Inventory Project SS/SSS document** | Nathan Marshall, Paul Cerkez, Robert Johnson |
| **GSWSA Inventory Project CONOP document** | Paul Cerkez, Robert Johnson |
| **GSWSA Inventory Project HLR document** | Paul Cerkez, Robert Johnson |

1. Database-wide Design Decisions
   1. Data Architecture

This system has been developed to run on SQL Server software on servers chosen by GSWSA. The client side will be web-based and give users the ability to access by popular user web browsers. The system will be grouped into three domains for the GSWSA database Inventory, Warehouse, and Trucks to group incoming inventory, stored current inventory, and total inventory for the GSWSA system. All data fields will be kept as close to the original database fields to ensure the system transfer is as seamless as possible.

* 1. Database Management System

The Database Management System (DBMS) chosen for the GSWSA Inventory Project database is the Microsoft SQL Server Express.

1. Detailed Database Design

This section illustrates the detailed design of the GSWSA Inventory Project database. The section primarily focuses on physical design identifying all tables in the GSWSA Inventory Project data architecture, fields within an associated data table, primary keys within an associated table, as well as relationships to other data tables.

* 1. Physical Database Design Overview

The following table identifies the database that GSWSA Inventory Project utilizes associated with a GSWSA Inventory Project domain.

Table 6 Physical Database Design Section

| **Section** | **Domain** | **Database Filename** |
| --- | --- | --- |
| **3** | **Inventory** | **GSWSA\_Inventory\_Database** |
| **3** | **Warehouse** | **GSWSA\_Inventory\_Database** |
| **3** | **Truck** | **GSWSA\_Inventory\_Datebase** |

* + 1. Entity Relationship (ER) Diagrams

The following figures are the Entity Relationship (ER) Diagrams that represent the relationships between tables (entities) in GSWSA Inventory Project.

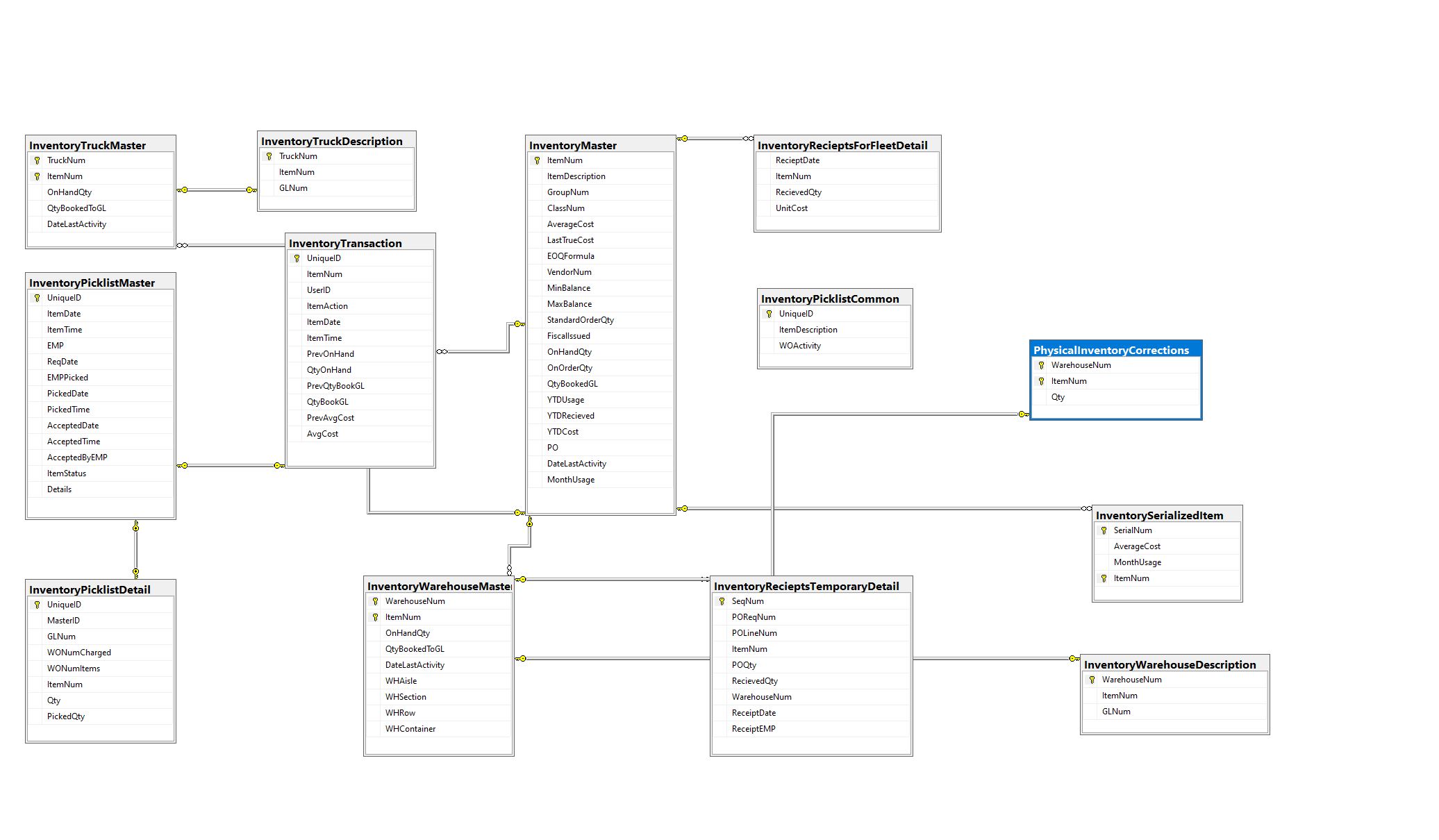
The following table provides descriptions for items contained in ER Diagrams and table details.

Table 7 ER Legend

| **Item** | **Description** |
| --- | --- |
| non-identifying relationship | Zero or more Non-Identifying Relationship. |
| **PK** | Primary Key |
| *FK* | Foreign Key |
| PF | Primary Key, Foreign Key |

* + - 1. GSWSA Inventory Database ERD Diagram

Enlarged Picture Here:



* + 1. Data Table Information

This section contains the metadata associated with each database in the GSWSA Inventory Project data architecture. Included are all relevant table and field descriptions, data types, default values, indexes, primary and foreign keys. Table constraints (such as Parent/Child associations) and field constraints (such as Not Null and Check) are also provided. Blank cells within the data table information tables are considered ‘not applicable’.

Table 8 Data Table Information Section

| **Database Name** | **Database Filename** |
| --- | --- |
| **GSWSA Inventory Database** | **GSWSA\_Inventory\_Project** |

The table below illustrates the constants associated with applicable data types in the GSWSA Inventory Project architecture.

Table 9 Data Type Definition

| **Data Type** | **Description** | **Decimal Precision** | **Storage Size** |
| --- | --- | --- | --- |
| Text | Text or combination of texts and numbers, as well as numbers that do not require calculations, such as phone numbers. | N/A | Up to 255 characters or the length set by the Field Size property, whichever is less. Microsoft Access does not reserve space for unused portions of a text field. |
| Memo | Lengthy text or combinations of text and numbers and symbols. | N/A | Up to 65,535 characters. (If the Memo field is manipulated through DAO and only text and numbers [not binary data] will be stored in it, then the size of the Memo field is limited by the size of the database.) |
| Number | Numeric data used in mathematical calculations. For more information on how to set the specific Number types. The following are different types of number: | N/A | 1, 2, 4, or 8 bytes (16 bytes if the Field Size property is set to Replication ID). |
| Integer: Stores numbers from –32,768 to 32,767 (no fractions). | None | 2 bytes |
| Long: (Default) Stores numbers from –2,147,483,648 to 2,147,483,647 (no fractions). | None | 4 bytes |
| Single: Stores numbers from –3.402823E38 to –1.401298E–45  for negative values and from 1.401298E–45 to 3.402823E38 for positive values. | 7 | 4 bytes |
| Double: Stores numbers from –1.79769313486231E308 to –4.94065645841247E–324  for negative values and from  4.94065645841247E–324 to  1.79769313486231E308 for positive values. | 15 | 8 bytes |
| Currency: Currency values and numeric data used in mathematical calculations involving data with one to four decimal places. Accurate to 15 digits on the left side of the decimal separator and to 4 digits on the right side. | N/A | 8 bytes |
| Byte: Stores numbers from 0 to 255 (no fractions). | None | 1 bytes |
| Decimal: Stores numbers from –10^28–1 through 10^28–1. | 28 | 12 bytes |
| Date / Time | Date and time values for the years 100 through 9999. | N/A | 8 bytes |
| Boolean | Yes and No values and fields that contain only one of two values (Yes/No, True/False, or On/Off). | N/A | 1 bit |
| Char | An integer from 0 through 255. CHAR returns a NULL value for integer expressions outside this range, or when then integer expresses only the first byte of a double-byte character. | N/A | Up to 255 characters or the length set by the Field Size property, whichever is less. Microsoft Access does not reserve space for unused portions of a text field. |
| Integer | Integer: Stores numbers from –32,768 to 32,767 (no fractions). | None | 2 Bytes |
| Decimal | Double: Stores numbers from –1.79769313486231E308 to –4.94065645841247E–324  for negative values and from  4.94065645841247E–324 to  1.79769313486231E308 for positive values. | 15 | 8 Bytes |

* + - 1. Database TABLES
         1. GSWSA Inventory Database Tables

Table 1: InventoryPicklistDetail

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK/FK\_UniqueID | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK/FK | UniqueID | | | | Unique list ID | | | INTEGER | | | No |  | 0 |
|  | MasterID | | | | Master list ID | | | INTEGER | | | No |  | 0 |
|  | ItemNum | | | | Item number | | | CHAR | | | No |  | 0 |
|  | Qty | | | | Amount of items | | | INTEGER | | | No |  | 0 |
|  | GLNum | | | | General ledger number | | | CHAR | | | No |  | 0 |
|  | WONumCharged | | | | Work ordered charged | | | INTEGER | | | No |  | 0 |
|  | WONumItems | | | | Work ordered number of items | | | INTEGER | | | No |  | 0 |
|  | PickedQty | | | | A picked quantity of items | | | INTEGER | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 2: InventoryPicklistCommon

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK\_UnqiueID | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK | UniqueID | | | | Unique list ID | | | INTEGER | | | No |  | 0 |
|  | ItemDescription | | | | Item description | | | CHAR | | | No |  | 0 |
|  | WOActivity | | | | Work order activity | | | INTEGER | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 3: InventoryMaster

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK\_ItemNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK | ItemNum | | | | Items part number | | | CHAR | | | No |  | 0 |
|  | Description | | | | Items description | | | CHAR | | | No |  | 0 |
|  | GroupNum | | | | Inventory group code | | | INTEGER | | | No |  | 0 |
|  | ClassNum | | | | Inventory class number | | | INTEGER | | | No |  | 0 |
|  | AverageCost | | | | Average cost of item part | | | DECIMAL | | | No |  | 0 |
|  | LastTrueCost | | | | Total true part amount | | | DECIMAL | | | No |  | 0 |
|  | EQQFormula | | | | EQQ formula | | | INTEGER | | | No |  | 0 |
|  | VendorNum | | | | Vendor number | | | INTEGER | | | No |  | 0 |
|  | MinBalance | | | | Inventory minimum balance | | | DECIMAL | | | No |  | 0 |
|  | MaxBalance | | | | Inventory maximum balance | | | DECIMAL | | | No |  | 0 |
|  | StandardOrderQty | | | | Regular order amount | | | DECIMAL | | | No |  | 0 |
|  | FiscalIssued | | | | The fiscal issued amount | | | DECIMAL | | | No |  | 0 |
|  | OnHandQty | | | | On facility amount | | | DECIMAL | | | No |  | 0 |
|  | OnOrderQty | | | | On order amount | | | DECIMAL | | | No |  | 0 |
|  | BookedGLQty | | | | Booked general ledger amount | | | DECIIMAL | | | No |  | 0 |
|  | YTDUsage | | | | Year to date usage | | | DECIMAL | | | No |  | 0 |
|  | YTDRecieved | | | | Year to date received | | | DECIMAL | | | No |  | 0 |
|  | YTDCost | | | | Year to date cost | | | DECIMAL | | | No |  | 0 |
|  | PONum | | | | PO number | | | DECIMAL | | | No |  | 0 |
|  | DateLastActivity | | | | The date last logged | | | DATE | | | No |  | 0 |
|  | MonthUsage | | | | Time used over month | | | DECIMAL | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 4: InventoryPicklistDetail

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK/FK\_UniqueID | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK/FK | UniqueID | | | | Unique list ID | | | INTEGER | | | No |  | 0 |
|  | MasterID | | | | Master list ID | | | INTEGER | | | No |  | 0 |
|  | GLNum | | | | General ledger number | | | CHAR | | | No |  | 0 |
|  | WONumCharged | | | | Work order number charged | | | INTEGER | | | No |  | 0 |
|  | WOItems | | | | Work order items | | | INTEGER | | | No |  | 0 |
|  | ItemNum | | | | Item number | | | CHAR | | | No |  | 0 |
|  | Qty | | | | Amount of items | | | INTEGER | | | No |  | 0 |
|  | PickedQty | | | | Picklist amount added | | | INTEGER | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 5: InventoryPicklistMaster

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK\_UniqueID | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK | UniqueID | | | | Unique list ID | | | INTEGER | | | No |  | 0 |
|  | ItemDate | | | | Date created | | | DATE | | | No |  | 0 |
|  | ItemTime | | | | Time created | | | DATE | | | No |  | 0 |
|  | EMP | | | | EMP | | | INTEGER | | | No |  | 0 |
|  | ReqDate | | | | Required date | | | DATE | | | No |  | 0 |
|  | EMPPicked | | | | EMP picked | | | INTEGER | | | No |  | 0 |
|  | PickedDate | | | | Picked date | | | DATE | | | No |  | 0 |
|  | PickedTime | | | | Picked time | | | DATE | | | No |  | 0 |
|  | AcceptedDate | | | | Accepted date | | | DATE | | | No |  | 0 |
|  | AcceptedTime | | | | Accepted time | | | DATE | | | No |  | 0 |
|  | AcceptedByEMP | | | | Accepted by EMP | | | INTEGER | | | No |  | 0 |
|  | Status | | | | Status of picklist | | | CHAR | | | No |  | 0 |
|  | Details | | | | Details of picklist | | | CHAR | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 6: InventoryTransaction

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK/FK\_UniqueID | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK/FK | UniqueID | | | | Unique list ID | | | INTEGER | | | No |  | 0 |
| FK | ItemNum | | | | Items number | | | CHAR | | | No |  | 0 |
|  | UserID | | | | User ID number | | | CHAR | | | No |  | 0 |
|  | ItemAction | | | | User action | | | CHAR | | | No |  | 0 |
|  | ItemDate | | | | Transaction date | | | DATE | | | No |  | 0 |
|  | ItemTime | | | | Transaction time | | | DATE | | | No |  | 0 |
|  | PrevOnHand | | | | Before transaction amount | | | INTEGER | | | No |  | 0 |
|  | QtyOnHand | | | | New amount on hand | | | INTEGER | | | No |  | 0 |
|  | PrevQtyBookGL | | | | Previous on hand general ledger amount | | | INTEGER | | | No |  | 0 |
|  | QtyBookGL | | | | General ledger book amount | | | INTEGER | | | No |  | 0 |
|  | PrevAvgCost | | | | Before transaction average cost | | | DECIMAL | | | No |  | 0 |
|  | AvgCost | | | | Average cost | | | DECIMAL | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 7: PhysicalInventoryCorrections

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK/FK\_WarehouseNum, PK/FK\_ItemNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK/FK | WarehouseNum | | | | Warehouse number | | | INTEGER | | | No |  | 0 |
| PK/FK | ItemNum | | | | Item number | | | CHAR | | | No |  | 0 |
|  | Qty | | | | Amount of item(s) | | | INTEGER | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 8: InventoryWarehouseDescription

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK/FK\_WarehouseNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK/FK | WarehouseNum | | | | Warehouse number | | | INTEGER | | | No |  | 0 |
| FK | ItemNum | | | | Item registered number | | | CHAR | | | No |  | 0 |
|  | WarehouseDescription | | | | Warehouse description | | | CHAR | | | No |  | 0 |
|  | GLNum | | | | General ledger number | | | INTEGER | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 9: InventoryWarehouseMaster

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK\_WarehouseNum, PK/FK\_ItemNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK | WarehouseNum | | | | Warehouse number | | | INTEGER | | | No |  | 0 |
| PK/FK | ItemNum | | | | Item part number | | | CHAR | | | No |  | 0 |
|  | OnHandQty | | | | In warehouse amount | | | DECIMAL | | | No |  | 0 |
|  | QtyBookedToGL | | | | Booked to general ledger amount | | | DECIMAL | | | No |  | 0 |
|  | DateLastActivity | | | | Date last active | | | DATE | | | No |  | 0 |
|  | WHAisle | | | | Warehouse aisle | | | CHAR | | | No |  | 0 |
|  | WHSection | | | | Warehouse section | | | CHAR | | | No |  | 0 |
|  | WHRow | | | | Warehouse row | | | CHAR | | | No |  | 0 |
|  | WHContainer | | | | Warehouse container | | | CHAR | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 10: InventoryReceiptsTemporaryDetail

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK\_SeqNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK | SeqNum | | | | Sequence number | | | INTEGER | | | No |  | 0 |
|  | ReqNum | | | | Requirement number | | | INTEGER | | | No |  | 0 |
|  | WONum | | | | Work order number | | | INTEGER | | | No |  | 0 |
|  | ExtCost | | | | Extended cost number | | | DECIMAL | | | No |  | 0 |
|  | PORecNum | | | | PO record number | | | INTEGER | | | No |  | 0 |
|  | POLineNum | | | | PO line number | | | INTEGER | | | No |  | 0 |
| FK | ItemNum | | | | Item number | | | CHAR | | | No |  | 0 |
|  | POQty | | | | PO amount | | | DECIMAL | | | No |  | 0 |
|  | ReceivedQty | | | | Received amount | | | DECIMAL | | | No |  | 0 |
| FK | WarehouseNum | | | | Warehouse number | | | INTEGER | | | No |  | 0 |
|  | RecieptDate | | | | Receipt date | | | DATE | | | No |  | 0 |
|  | ReceiverEMPNum | | | | Receipt EMP number | | | INTEGER | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 11: InventoryRecieptsForFleetDetail

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | |  | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
|  | ReceiptDate | | | | Receipt date | | | DATE | | | No |  | 0 |
| FK | ItemNum | | | | Item number | | | CHAR | | | No |  | 0 |
|  | RecievedQty | | | | Received item quantity | | | DECIMAL | | | No |  | 0 |
|  | UnitCost | | | | Unite cost amount | | | DECIMAL | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 12: InventoryTruckMaster

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK\_TruckNum, PK/FK\_ItemNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK | TruckNum | | | | Truck number | | | INTEGER | | | No |  | 0 |
| PK/FK | ItemNum | | | | Item number | | | CHAR | | | No |  | 0 |
|  | OnHandQty | | | | Item on truck amount | | | DECIMAL | | | No |  | 0 |
|  | QtyBookedToGL | | | | Quantity booked in the general ledger | | | DECIMAL | | | No |  | 0 |
|  | DateLastActivity | | | | Date of last truck activity | | | DATE | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 13: InventoryTruckDescription

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK/FK\_TruckNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK/FK | TruckNum | | | | Truck number | | | INTEGER | | | No |  | 0 |
| FK | ItemNum | | | | Items registered number | | | CHAR | | | No |  | 0 |
|  | TruckDescription | | | | Truck description | | | CHAR | | | No |  | 0 |
|  | GLNum | | | | General ledger number | | | INTEGER | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |
|  | | |  | | |  | | |  | | | | |

Table 14: InventorySerializedItem

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table Information** | | | | | | | | | | | | | |
| Description | | Defines the. | | | | | | | | | | | |
| Primary key constraint name | | PK\_SerialNum, PK/FK\_ItemNum | | | | | | | | | | | |
| **Field Information** | | | | | | | | | | | | | |
| Key | Field name | | | | Description | | | Data type | | | Not null | Check | Default |
| PK | SerialNum | | | | Serial number | | | INTEGER | | | No |  | 0 |
| PK/FK | ItemNum | | | | Item number | | | CHAR | | | No |  | 0 |
|  | AverageCost | | | | Average cost of items | | | DECIMAL | | | No |  | 0 |
|  | MonthUsage | | | | The month usage | | | DECIMAL | | | No |  | 0 |
| **Index Information** | | | | | | | | | | | | | |
| Index name | | | | Index field | | | Type | | | Sort order | | | |
|  | | | |  | | |  | | |  | | | |
|  | | | |  | | |  | | |  | | | |
| **Constraint Information** | | | | | | | | | | | | | |
| Constraint name | | | Type | | | Level | | | Constraint | | | | |

1. Detailed Design of SQL Queries

| **Query Name** | **SQL** |
| --- | --- |
| **GSWSAInventoryCREATEScripts** | **CREATES DATABASE** |
| **GSWSAInventorySELECTScripts** | **SELECT DATABASE** |
| **GSWSAInventoryINSERTScripts** | **INSERT INTO DATABASE** |

This section illustrates the detailed design of each query interface that accesses the database utilizing Structured Query Language (SQL) to pull the data to the interface. SQL is an industry standard and its use provides the extensibility needed for migration and upgrades of the system’s databases. The following table defines the queries that reside in the DBMS that support interacting with the Database

The input for the description refers to the information required in the SQL.

1. Notes
   1. Acronyms

This section identifies a reference of acronyms used throughout the Database Design Description.

Table 341 Acronym/Abbreviation

| **Acronym** | **Definition** |
| --- | --- |
| DB | Database |
| DBDD | Database Design Description |
| DBMS | Database Management System |
| ER | Entity Relationship |
| FK | Foreign Key |
| GUI | Graphical User Interface |
| HMI | Human Machine Interface |
| HTML | Hypertext Markup Language |
| ID | Identifier Description |
| MS | Microsoft |
| PK | Primary Key |
| RTM | Requirements Traceability Matrix |
| SDD | Software Design Description |
| SQL | Structured Query Language |
| SRS | Software Requirement Specification |
| SSS | Software System Specification |
| TBD | To Be Determined |
| GSWSA | Grand Strand Water and Sewer Authority |
| IT | Information Technology |
| OS | Operating System |