The Max Inventory System



**Team Awesome**

|  |  |
| --- | --- |
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Client Documents

**Opening Statement**

Milestone 7 of The Max Inventory System has been completed. The development of this system continues to remain on schedule and on budget.

**Executive Summary**

With technology today, bars can make a more efficient use of time and energy by using a system to track inventory. Using an inventory system, a bar can track which items they need to reorder, which items are most popular and which items should be discontinued from their purchases.

We are currently in the process of designing a system around the liquor usage at The Max. This application will allow them to make orders more easily. As inventory increases this system will be a good complement to the already successful bar.

This milestone contains documents to describe The Max Inventory project. The key documents for this milestone include:

* Project Management Chart for Semester: Details individual tasks needing to be completed for this project. These tasks include each document for the milestones and final project. This will also include the tasks for the prototype of the inventory system. These tasks include everything needed to complete the rest of the system. This chart will also track the hours spent working on the system as well as the resources that were involved in each task.
* Commercial Software Component: Details what software will be used in this system, including the operating system that the system will run on. This is like the Actual Architecture document from Milestone 6, but for software instead of hardware. We will be using the top-down approach to design & development. This allows for work on smaller modules and portions of the system without causing interruptions to other parts of the system.
* Members, tasks, & Approach of Software Design Team: Outlines members of the team, and the tasks that they will be completing during design and development of this system. This document also details the design that will be done to ensure that the system is usable for end users. Structured design uses activity model and data models to thoroughly design the system to ensure that the system will work efficiently. The top-down approach breaks the system in smaller subsystems, by doing this each subsystem can be broken down into detail.
* Structure Chart: This document is a visual representation of how each module will interact in the system with other modules, arranged in a top-down fashion to represent how the system modules will interact efficiently. Modules are small pieces of the system such as a form or report, that have a specific function and connects to other modules.
* 4 Run Sheets for Individual Modules: Run Sheets are detailed descriptions of individual modules required functionalities. Run sheets help in the coding process. The run sheet also emphasizes the tables in the data base that the module will interact with.
* CRUD table: A visual representation of how a module from the Structure Chart will interact with the tables from the Relational Database. The CRUD table will allow developers to see if a module will Create, Read Only, Update, or Delete in a table in the database. Some modules will not interact with certain tables. The CRUD table will efficiently communicate to developers what modules will interact with tables for development and maintenance efforts.

**Implications for Client**

There are no implications for client for Milestone 7.

**Items for Approval**

There are no items for approval for Milestone 7.

Project Documents

**Project Management Chart for Semester**

<<See attached MAX.mpp>>

**Commercial Software Component**

The Max Inventory System will use a machine that will be running Windows 10 Home edition for its operating system. On this machine will be Microsoft Access 2016 version 16.0 to run the system. Microsoft Access 2016 will be how the database is run. Along with Access, Symantec Endpoint Protection version 14.0.1.1b will be used for security software on the machine.

Updates to Microsoft Access should be run at a non-critical time, such as before the bar opens or after the bar closes. This will ensure that inventory will be properly tracked during business hours. Critical updates to the operating system should also be done at a non-critical time. Microsoft updates are well supported, so issues with updates are not anticipated. However, if issues from an update arise the update will be backed out to restore the system functionality. If a potential update issue occurs, an IT expert, either within the organization or from Team Awesome can assess the update and determine whether or not the update is safe to apply.

**Proprietary Software Component**

**Members, tasks & approach of software design team**

**Members of the team include:**

Abdulaziz Matar

Collyn Sansoni

Justin Hendricks

Paul Naumann

Tom Jorgensen

**Tasks:**

Design- Tom Jorgensen

Coding- Collyn Sansoni

Testing – Justin Hendricks/Abdulaziz Matar

Documentation- Paul Naumann

**Approach:**

We will be using a top-down approach to development. The team will be using this method because it allows us to design and approach the system from a large, overall view and assess its functionality. From there, we can look at the main tasks that our system will be performing. After we assess what main tasks the system will perform, we can break these tasks down into smaller functions that can be developed and tested individually.

**Structure Chart**

<<See attached MAX.vsdx>>

**Proprietary Software Component**

**4 run sheets for individual modules**

**Run Sheet 1**

**Program Name**: Brand Query

**Location**: Development Environment

**Programmer(s):** Collyn Sansoni, Paul Naumann

**Date Completed:** May 1, 2018

**Project Name:** The Max Inventory System

**Client:** The Max

**Program Objectives:**

* Look up Brand Names

**Manual Input:**

* None

**Files Used:**

Brand read only

**Fields Used:**

Brand.brand-id read only

Brand.brand-name read only

**Output:** TheBrand Query will output data to the combo box on a form

**Hardware Requirements:** Desktop with intel i5 or i7 5th generation processors

Ram 8 GB or higher, min 512 GB HDD (SSD Preferred), Windows 10 Operating System (versions previous than windows 8 may not fully support the software)

Support for mac: install a virtual box that is open source to run the windows virtual machine

**Program Messages:**

* None

**Controls:** Not Applicable

**Run Sheet 2**

**Program Name:** Type Form

**Location:** Development Environment

**Programmer(s):** Tom Jorgensen, Paul Naumann

**Date Completed:** May 1, 2018

**Project Name:** The Max Inventory System

**Client:** The Max

**Program Objectives:**

* Look up Type Names
* Add new Type Names

**Manual Input:**

* User enters type name and type ID # will be auto assigned

**Files Used:**

Type read & write

**Fields Used:**

Type.type-id read & write

Type.type-name read & write

**Output:**

The Type table will have a new record created or update an existing record

**Hardware Requirements:**

Desktop with intel i5 or i7 5th generation processors

Ram 8 GB or higher, min 512 GB HDD (SSD Preferred), Windows 10 Operating System (versions previous than windows 8 may not fully support the software)

Support for mac: install a virtual box that is open source to run the windows virtual machine

**Program Messages:**

* None

**Controls:** Input from user must not exceed 50 characters

Run Sheet 3

**Program Name:** Inventory Report

**Location:** Development Environment

**Programmer(s):** Tom Jorgensen, Abdulaziz Matar

**Date Completed:** May 1, 2018

**Project Name:** The Max Inventory System

**Client:** The Max

**Program Objectives:** Allow user to view how much inventory is currently in stock.

**Manual Input:** None

**Files Used:** None

**Fields Used:** None

**Output:** Inventory Report will be generated and displayed on the screen.

**Hardware Requirements:**

Desktop with intel i5 or i7 5th generation processors

Ram 8 GB or higher, min 512 GB HDD (SSD Preferred), Windows 10 Operating System (versions previous than windows 8 may not fully support the software)

Support for mac: install a virtual box that is open source to run the windows virtual machine

**Program Messages:**

* None

**Controls:** Not Applicable

Run Sheet 4

**Program Name:** Invoice Sub-Form

**Location:** Development Environment

**Programmer(s):** Tom Jorgensen, Justin Hendricks

**Date Completed:** May 1, 2018

**Project Name:** The Max Inventory System

**Client:** The Max

**Program Objectives:**  Enter and display invoice lines on an invoice

**Manual Input:** Invoice will select invoice ID from the Forms menu

**Files Used:**

Invoice-Line read & write

**Fields Used:**

Invoice-Line.invoice-id read & write

Invoice-Line.inventory-id read & write

Invoice-Line.quantity-ordered read & write

Invoice-Line.quantity-received read & write

**Output:**

* Invoice details will be displayed in the sub-form and invoice line data will be saved to the table

**Hardware Requirements:**

Desktop with intel i5 or i7 5th generation processors

Ram 8 GB or higher, min 512 GB HDD (SSD Preferred), Windows 10 Operating System (versions previous than windows 8 may not fully support the software)

Support for mac: install a virtual box that is open source to run the windows virtual machine

**Program Messages:**

* None

**Controls:** data entry input must match invoice ID format.

**Proprietary Software Component**

**CRUD Table**

<<See attached MAX.xlsx>>

**Control Documents**

**Roles and Responsibilities**

**Milestone 7**

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Responsibility** |
| Justin | Client Liaison/CRUD Table | * Organizing meetings between customer and Team Awesome * Revision of CRUD Table |
| Paul | CRUD Table/ Structure Chart/ Project Management Chart | * Creation of CRUD Table * Creation of Actual Architecture and client hardware procurement process documents |
| Collyn | Commercial Software Component/ Members, Tasks & Approach of Software Design Team | * Creation of Commercial Software Component * Creation of Members, Tasks & Approach of Software Design Team |
| Tom | Milestone Manager | * Managing documents for group * Assigning deliverables to group members * Revision of client document to reflect Milestone 7 * Revision of meeting communications and control documents to reflect Milestone 7 |
| Abdulaziz | 4 Run Sheets for Individual Modules | * Creation of 4 Run Sheets for Individual Modules |

**Meeting Communications**

**Milestone 7**

**Date:** Week Beginning 3/5/18

**Time:** All Week

**Location:** Group Text/slack.com chat

**Present:** Paul Naumann, Tom Jorgensen, Justin Hendricks, Collyn Sansoni, Abdulaziz Matar

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group text/slack.com chat | Team Awesome | * Assigned Roles & Responsibilities * Assigned Due Dates * Discussed in-person meeting times |

**Handouts:** None

**Discussion:** See Comments

**Date:** 3/8/18

**Time:** 6:30 PM

**Location:** UNO Criss Library 102b

**Present:** Paul Naumann, Tom Jorgensen, Justin Hendricks, Collyn Sansoni

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group meeting | Team Awesome | * Created rough draft of Structure Chart * Created Milestone documents for Milestone 7 |

**Handouts:** None

**Discussion:** See Comments

**Date:** Week Beginning 3/12/18

**Time:** All Week

**Location:** Group Text/slack.com chat

**Present:** Paul Naumann, Tom Jorgensen, Justin Hendricks, Collyn Sansoni, Abdulaziz Matar

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group text/slack.com chat | Team Awesome | * Continued working on Milestone 7 documents * Submitted files for professor feedback |

**Handouts:** None

**Discussion:** See Comments

**Date:** 3/15/18

**Time:** 6:30 PM

**Location:** UNO Criss Library 102b

**Present:** Paul Naumann, Tom Jorgensen, Justin Hendricks, Collyn Sansoni

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group meeting | Team Awesome | * Revised Structure Chart based on professor feedback * Created Milestone documents for Milestone 7 |

**Handouts:** None

**Discussion:** See Comments

**Date:** Week Beginning 3/19/18

**Time:** All Week

**Location:** Group Text/slack.com chat

**Present:** Paul Naumann, Tom Jorgensen, Justin Hendricks, Collyn Sansoni, Abdulaziz Matar

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group text/slack.com chat | Team Awesome | * Spring break, no in-person meetings * Continued working on Structure Chart and submitted for professor feedback |

**Handouts:** None

**Discussion:** See Comments

**Date:** Week Beginning 3/26/18

**Time:** All Week

**Location:** Group Text/slack.com chat

**Present:** Paul Naumann, Tom Jorgensen, Justin Hendricks, Collyn Sansoni, Abdulaziz Matar

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group text/slack.com chat | Team Awesome | * Continued working on Milestone document * Continued working on CRUD Table * Submitted items for professor feedback |

**Handouts:** None

**Discussion:** See Comments

**Date:** 3/26/18

**Time:** 8:30 PM

**Location:** UNO PKI

**Present:** Paul Naumann, Tom Jorgensen, Collyn Sansoni

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group meeting | Team Awesome | * Revised Executive Summary based on professor feedback * Revised CRUD Table based on professor feedback * Revised Run Sheets based on professor feedback |

**Handouts:** None

**Discussion:** See Comments

**Date:** 3/27/18

**Time:** 5:00 PM

**Location:** UNO Mammel Hall

**Present:** Paul Naumann, Tom Jorgensen, Collyn Sansoni, Justin Hendricks

|  |  |  |
| --- | --- | --- |
| **Item** | **Responsible Party** | **Comments** |
| Summary of group meeting | Team Awesome | * Revised Milestone Documents based on professor feedback * Revised CRUD Table based on professor feedback * Revised Run Sheets based on professor feedback |

**Handouts:** None

**Discussion:** See Comments

**Change Log**

**Opening Statement**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 9/6/17 | 1 | Creation of Opening Statement | Created Opening Statement document |
| 10/4/17 | 2 | Revised Opening Statement | Revised Opening Statement to reflect Milestone 2 |
| 10/16/17 | 3 | Revised Opening Statement | Revised Opening Statement to reflect Milestone 3 |
| 12/8/17 | 4 | Revised Opening Statement | Revised Opening Statement to reflect Milestone 4 |
| 1/15/18 | 5 | Revised Opening Statement | Revised Opening Statement to reflect Milestone 5 |
| 2/27/18 | 6 | Revised Opening Statement | Revised Opening Statement to reflect Milestone 6 |
| 2/28/18 | 7 | Revised Opening Statement | Revised Opening Statement based on feedback |
| 3/5/18 | 8 | Revised Opening Statement | Revised Opening Statement to reflect Milestone 7 |

**Executive Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 9/5/17 | 1 | Creation of Executive Summary | Created the Executive Summary document |
| 9/8/17 | 2 | Revised Executive Summary | Revised Executive Summary |
| 10/4/17 | 2 | Revised Executive Summary | Revised Executive Summary to reflect Milestone 2 |
| 10/16/17 | 3 | Revised Executive Summary | Revised Executive Summary to reflect Milestone 3 |
| 12/5/17 | 4 | Revised Executive Summary | Revised Executive Summary to reflect Milestone 4 |
| 1/15/18 | 5 | Revised Executive Summary | Revised Executive Summary to reflect Milestone 5 |
| 2/6/18 | 6 | Revised Executive Summary | Revised Executive Summary to reflect feedback from Professor. |
| 2/8/18 | 7 | Revised Executive Summary | Revised Executive Summary to reflect feedback from Professor. |
| 2/27/18 | 8 | Revised Executive Summary | Revised Executive Summary to reflect Milestone 6 |
| 2/28/18 | 9 | Revised Executive Summary | Revised Executive Summary based on feedback |
| 3/26/18 | 10 | Revised Executive Summary | Revised Executive Summary to reflect Milestone 7 |
| 3/27/18 | 11 | Revised Executive Summary | Revised Executive Summary based on feedback |
| 3/28/18 | 12 | Revised Executive Summary | Revised Executive Summary based on feedback |

**Implications for Client**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 9/5/17 | 1 | Creation of Implications for Client | Created Implications for Client document |
| 10/4/17 | 2 | Revised Implications for Client | Revised Implications for Client based on Professor feedback |
| 10/16/17 | 3 | Revised Implications for Client | Revised Implications for Client for Milestone 3 |
| 12/6/17 | 4 | Revised Implications for Client | Revised Implications for Client for Milestone 4 |
| 1/16/18 | 5 | Revised Implications for Client | Revised Implications for Client for Milestone 5 |
| 2/27/18 | 6 | Revised Implications for Client | Revised Implications for Client for Milestone 6 |
| 2/28/18 | 7 | Revised Implications for Client | Revised Implications for Client based on feedback |
| 3/5/18 | 8 | Revised Implications for Client | Revised Implications for Client for Milestone 7 |

**Items for Approval**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 9/6/17 | 1 | Creation of Items for Approval | Created Items for Approval document |
| 10/5/17 | 2 | Revised Items for Approval | Revised Items for Approval |
| 10/16/17 | 3 | Revised Items for Approval | Revised Items for Approval |
| 11/29/17 | 4 | Revised Items for Approval | Revised Items for Approval based on Milestone 4 |
| 2/4/18 | 5 | Revised Items for Approval | Revised Items for Approval based on Milestone 5 |
| 2/27/18 | 6 | Revised Items for Approval | Revised Items for Approval based on Milestone 6 |
| 2/28/18 | 6 | Revised Items for Approval | Revised Items for Approval based on feedback |
| 3/5/18 | 7 | Revised Items for Approval | Revised Items for Approval based on Milestone 7 |

**Project Management Chart for Semester**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 2/2/18 | 1 | Creation of Project Management Chart for Semester | Created Project Management Chart for Semester |
| 2/4/18 | 2 | Revised Project Management Chart for Semester | Revised Project Management Chart for Semester based on feedback |
| 2/8/18 | 3 | Revised Project Management Chart for Semester | Finalized Project Management Chart for Milestone 5 based on feedback |
| 2/27/18 | 4 | Revised Project Management Chart for Semester | Revised Project Management Chart for current Milestone |
| 3/5/18 | 5 | Revised Project Management Chart for Semester | Revised Project Management Chart for current Milestone |

**Commercial Software Component**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 3/8/18 | 1 | Creation of Commercial Software Component | Created Commercial Software Component |
| 3/26/18 | 2 | Revised Commercial Software Component | Revised Commercial Software Component based on professor feedback |
| 3/27/18 | 3 | Revised Commercial Software Component | Revised Commercial Software Component based on professor feedback |

**Proprietary Software Component**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 3/9/18 | 1 | Creation of Structure Chart | Creation of Structure Chart for Milestone 7 |
| 3/13/18 | 2 | Revision of Structure Chart | Revision of Structure Chart based on professor feedback |
| 3/14/18 | 3 | Revision of Structure Chart | Revision of Structure Chart based on professor feedback |
| 3/15/18 | 4 | Revision of Structure Chart | Revision of Structure Chart based on professor feedback |
| 3/16/18 | 5 | Revision of Structure Chart | Revision of Structure Chart based on professor feedback |
| 3/19/18 | 6 | Revision of Structure Chart | Revision of Structure Chart based on professor feedback |
| 3/20/18 | 7 | Revision of Structure Chart | Revision of Structure Chart based on professor feedback |
| 3/25/18 | 8 | Revision of Structure Chart | Revision of Structure Chart based on professor feedback |
| 3/26/18 | 1 | Creation Proprietary Software Component | Created CRUD Table and Run Sheets for Milestone 7 document |
| 3/26/18 | 2 | Revised Proprietary Software Component | Revised Proprietary Software Component based on professor feedback |
| 3/27/18 | 3 | Revised Proprietary Software Component | Revised Proprietary Software Component based on professor feedback |

**Roles and Responsibilities**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 8/30/17 | 1 | Creation of Roles and Responsibilities Document | Creation of Roles and Responsibilities Document for Milestone 1. |
| 9/16/17 | 2 | Revised Roles and Responsibilities for Milestone 2 | Revised Roles and Responsibilities for Milestone 2 |
| 11/2/17 | 3 | Revised Roles and Responsibilities for Milestone 3 | Revised Roles and Responsibilities for Milestone 3 |
| 11/9/17 | 4 | Revised Roles and Responsibilities for Milestone 4 | Revised Roles and Responsibilities for Milestone 4 |
| 1/16/18 | 5 | Revised Roles and Responsibilities for Milestone 5 | Revised Roles and Responsibilities for Milestone 5 |
| 2/27/18 | 6 | Revised Roles and Responsibilities for Milestone 6 | Revised Roles and Responsibilities for Milestone 6 |
| 3/5/18 | 7 | Revised Roles and Responsibilities for Milestone 7 | Revised Roles and Responsibilities for Milestone 7 |

**Meeting Communications**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 9/6/17 | 1 | Creation of Meeting Communications | Created Meeting Communications document |
| 9/13/17 | 2 | Revised Meeting Communications | Revised Meeting Communications to show new meetings |
| 10/9/17 | 3 | Revised Meeting Communications | Revised Meeting Communications to show meetings since last revision |
| 10/26/17 | 4 | Revised Meeting Communications | Revised Meeting Communications to show meetings since last revision |
| 11/2/17 | 5 | Revised Meeting Communications | Revised Meeting Communications to show meetings since last revision |
| 11/30/17 | 6 | Revised Meeting Communications | Revised Meeting Communications to show meetings since last revision |
| 12/4/17 | 7 | Revised Meeting Communications | Revised Meeting Communications to show meetings since last revision |
| 12/7/17 | 8 | Revised Meeting Communications | Updated Meeting Communications to reflect separation by Milestone. |
| 2/5/18 | 9 | Revised Meeting Communications | Updated Meeting Communications to reflect new meetings |
| 2/27/18 | 10 | Revised Meeting Communications | Updated Meeting Communications to reflect new meetings |
| 3/27/2018 | 11 | Revised Meeting Communications | Updated Meeting Communications to reflect new meetings |

**Miscellaneous**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version Name** | **Change** | **Comments** |
| 8/30/17 | 1 | Creation of GitHub Repository | Created the GitHub Repository and added members of group |
| 9/6/17 | 1 | Creation of Title Page | Created Title Page document |
| 9/10/17 | 2 | Revised Title Page | Added logo to Title Page |
| 9/11/17 | 2 | Revised Milestone 1 document | Addressed changes suggested by Professor Germonprez |
| 11/23/17 | 1 | Creation of presentation slides | Creation of presentation slides |