The Max Inventory System



**Team Awesome**

|  |  |
| --- | --- |
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**Milestone Manager:** Abdulaziz Matar/Justin Hendricks

**Project Manager:** Dr. Paul Van Vliet

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Client Documents

**Opening Statement**

Milestone 8 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.
* Software Testing Plan: Details the testing procedures for this system. Testing will take place in four stages; Module Testing, Integration Testing, System Testing, and Acceptance Testing. Module testing will include testing each individual module for functionality. Integration testing will include integrating all modules and testing them collectively. System testing will be a multipart testing procedure, which will include: Performance Testing, Storage Testing, and Procedure Testing. Last, Acceptance Testing, will be the process of the client trying out the system and given final approval.
* Implementation Plan: Details the plan for final implementation of the system in the environment that it was designed for. The implementation plan also includes a tentative list of dates and events associated with implementing the system.
* Maintenance Plan: Details the plan for future maintenance of the system. Maintenance will occur in four categories: Corrective Maintenance, Adaptive Maintenance, Perfective Maintenance, and Preventative Maintenance. Corrective Maintenance is the process of fixing any errors that may not have been caught in the testing phase. Adaptive maintenance is maintenance associated with adjusting the system to the environment that the system will operate in. Perfective maintenance would be any enhancement to the original version of the system. Preventative maintenance is safe guards to prevent the system catastrophic failure.

**Implications for Client**

There are no implications for client for Milestone 8.

**Items for Approval**

There are no items for approval for Milestone 8.

Project Documents

**Project Management Chart for Semester**

<<See attached MAX.mpp>>

**Software Testing Plan**

Testing of the system is important to ensure functionality. Team Awesome will be testing the Max Inventory System to ensure functionality and customer satisfaction with the result. The testing will consist of four stages. Testing will be done in sequential order, with each previous stage complete before starting the next.

**Module Testing**

A module is a small part of the system. Each module will be tested individually, this will allow Team Awesome to identify issues with small parts of code. Module testing will work with the Structure Chart and CRUD table. The module will be tested by the person that developed the module. These tests will take place April 2, 2018 through April 9, 2018 and will be done by Paul Naumann.

**Integration Testing**

Upon successful completion of a module testing, the module will be added to the system. When a new module is integrated to the system, the system will be tested with the new module. This testing will ensure that all modules will properly function with each other. These tests will take place April 10, 2018 through April 17, 2018 and will be done by Justin Hendricks.

**System Testing**

When every module has been integrated and tested, System testing will begin. System testing will be used to ensure that the entire system will function together and produce the desired result. These tests will take place April 17,2018 through April 24, 2018 and will be done by Collyn Sansoni.

**Performance Testing**

Performance testing will be used to test the length of time needed to complete large transactions as well as simple transactions. This testing will ensure that transactions can be completed in a reasonable time. Data will be entered into the system in random quantities to make sure performance is acceptable. Load time should be no more than 2 seconds.

**Storage Testing**

The system needs to store data, so storage testing will be used to ensure that the amount of data needing to be stored can be stored in the database. The system will also be tested to make sure a safety margin will be provided for storage to confidently know that the system will not run out of storage. A data amount will be approximated to what the system will need to hold. This data will be input into the system and checked for storage capabilities.

**Procedure Testing**

Procedure testing will be used to ensure the end user documentation. Procedure testing will work with the end user to make sure the documentation is understandable and the processes of the system are well laid out and easy to follow. A proctor will be selected to work with management to note if management was able to follow the procedures of the system.

**Acceptance Testing**

Acceptance testing will ensure that the scope of the project has been met. Acceptance testing will entail a full demonstration of the system and its features. This will Team Awesome to display the system to management at The Max. During this demonstration the client will have the opportunity to identify issues that they have with the system and rank them in severity. These will take place April 24,2018 through May 1, 2018 and will be done by Tom Jorgensen and Abdulaziz Matar.

**Implementation Plan**

System implementation will include putting this new system in the environment it was designed for. Currently there is no information system in place so no retro fitting will need to take place to implement this new system. Since no information systems are currently in place there will be no negative impact to their current inventory system.

|  |  |  |
| --- | --- | --- |
| Task | Date | Estimated Duration |
| Implement System in Microsoft Access | 4/23/18 | 5 hours |
| Enter Inventory Data | 4/23/18 | 2 hours |
| Final System Review with Client | 4/25/18 | 3 hours |
| Backup Database | 4/26/18 | 4 hours |
| Employee Training | 4/27/18 | 3 hours |
| Post System Implementation Feedback/ Evaluation | 5/1/18 | 4 hours |

**Maintenance Plan**

System maintenance Is the upkeep of the system after the system is in operation. This maintenance is ongoing. Maintenance can include changes, enhancements, or improvements to the system. The purpose of the Systems Maintenance Plan is to outline how this system will be maintained.

**Corrective Maintenance** is the process of fixing errors in the system after it was delivered. Errors should first be identified, then steps to isolate the issue and correct the problem will be taken. All errors should be sent to Tom Jorgensen (twjorgensen@unomaha.edu), and will be addressed based on urgency of the issue.

**Adaptive Maintenance** is adjusting the system to the environment that it will be operating in. This could be adjustments to the reporting formats, new products, or many other scenarios that may arise after implementation. New regulations pertaining to this system are not likely, but if they do occur please contact Tom Jorgensen (twjorgensen@unomaha.edu) about modifying the system to fit specific regulations. New products and reporting formats for this system must be discussed with management and further action will be decided by management.

**Perfective Maintenance** is improving the system from the original version. It should be decided if any revisions of the systems will be profitable to do so. The Max Inventory System will be released as version 1.0. After this version, management must decide on further modifications. Management will then contact Team Awesome with:

* Desired changes in system
* Timeline for desired changes

Team Awesome will then give an estimated schedule of completion and cost. Once, all terms are agreed upon Team Awesome will begin work on modification relative to the schedule.

**Preventative Maintenance** is a periodic check to assess if system is still working correctly. Preventative maintenance should be focused on planning ahead instead of fixing troubles. Preventative maintenance should be done at least every 6 months. The system should be checked to make sure everything is working efficiently and all features are working correctly. Vulnerabilities, such as virus protection, should also be checked at this time.

**Control Documents**

**Roles and Responsibilities**

**Milestone 8**

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Responsibility** |
| Justin | Milestone Manager | * Assigning deliverables to group members * Revision of meeting communications and control documents to reflect Milestone 8 * Creation of Maintenance Plan |
| Paul | Software Testing Plan | * Creation of Software Testing Plan |
| Collyn | Project Management Chart | * Organizing meetings between customer and Team Awesome * Updated Project Management Chart |
| Tom | Implementation Plan | * Creation of Implementation Plan |
| Abdulaziz | Milestone Manager | * Managing documents for group * Assigning deliverables to group members * Revision of client document to reflect Milestone 8 * Revision of meeting communications and control documents to reflect Milestone 8 |

**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 |