

Mama G's General Store

Customer Loyalty Tracker, Release 1.0

Requirements Functional Specification

Revision 1.0

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***Document Revision Chart***

The following chart lists the revisions made to this document tracked by specification version. Use this to describe the changes and additions each time this document is re-published (both draft and final). The description should include as many details of the changes as possible.

|  |  |  |  |
| --- | --- | --- | --- |
| #.# | Section Modified and Revision Description | Date | Author |
| 1.0 | Initial Draft | 9/29/2015 | cfreas |
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**Customer Loyalty Tracker, Release 1.0**

# Business Objective

The primary objective of the Customer Loyalty Tracker application for Mama G’s General Store is to use tracking data obtained from customer purchases to reward customers by providing them coupons for items that other customers frequently buy as a means of driving new sales. Customers who have stopped making purchases for a 90 day period are given coupons to incentivize them to return to Mama G’s.

The secondary business objective is to provide a means of understanding sales trends to more accurately incentivize customer purchases by providing timely, relevant coupons to these customers without overwhelming them with irrelevant marketing or too much marketing.

# Out of Scope/Assumptions

* It is assumed that Mama G’s General Store is a single brick-and-morter store (not a chain)
* It is assumed that the store owner will be the primary user of this application
* It is assumed that the store owner will be the administrative user of this application
* It is assumed that all store employees will have their own login credentials and access privileges
* Obtaining customer data for the loyalty program is out of scope for this document; the store owner must train his/her employees on how to capture this data and enter it into the application
* It is assumed that this application will require periodic maintenance and notification will be provided to the store owner in advance of any such maintenance

# Summary of All Actors

List of the actors for this application or website. Actors are users (humans) or other systems (non-humans) that participate in the actions of any use case. External systems can be actors only if they initiate some action within the system, or if they require some information from the system.

Note to Authors: A database within the system is generally not considered an actor.

| **Actor #** | **Actor** | **Human or System?** | **Description of Actor** |
| --- | --- | --- | --- |
| 1 | Store Admin | H | The store owner. Administrative access granted in order to manage the overall customer loyalty program but has no access to any internal or system components |
| 2 | Store Employee | H | Employees. Limited access granted to create and modify customer information as needed for proper functioning of the loyalty program |
| 3 | Developer | H | Application developers. Full administrative access is granted so updates can be provided and any problems with the system can be investigated. |
| 4 | System | S | System actor. This actor works in the background to take customer information and use it to generate coupons, send emails, and so on. |
|  |  |  |  |
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# Summary of All Use Cases

## Use Case Descriptions – Summary of our use cases!

|  |  |  |
| --- | --- | --- |
| **Requirement #** | **Use Case Description** | **UC Rank (Priority)** |
| <Req. ##.#.1> | <Use Case #1 – describe> | # |
| <Req. ##.#.2> | <Use Case #2 – describe> | # |
| <Req. ##.#.3> | <Use Case #3 – describe> | # |
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## Well-written example

***Delete this section prior to completing your final draft.***

|  |  |  |
| --- | --- | --- |
| **Requirement #** | **Use Case Description** | **UC Rank (Priority)** |
| Req. 1.0.1 | Login to Portal | 1 |
| Req. 1.0.2 | User Landing Page | 2 |
|  |  |  |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## Diagram of All Use Cases

Provide a high-level diagram of how the use cases listed in Section 4.1 are related. I can generate this once I get the final use cases!

## Well-written example

***Delete this section prior to completing your final draft.***



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## Individual Use Cases

### Use Case: Requirement <Release ##.#>.1: <Requirement Name>

#### Use Case Diagram

Do not create an individual use case diagram unless the use case is very complicated and requires a work flow.

#### Use Case Details

Write out use case details for each Requirement in the Business Requirements document.

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristic Information | | | |
| Use Case ID | | * Requirement <Release ##.#>.1: <Requirement Name> | |
| Preconditions | |  | |
| Successful Post Condition | |  | |
| Failed Post Conditions | |  | |
| Primary Actors | |  | |
| Secondary Actors | |  | |
| Related Use Cases | |  | |
| Primary Scenario | | | |
| Step | Scenario Action | | Expected Behavior |
| 1 |  | |  |
| 2 |  | |  |
| 3 |  | |  |
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|  |  | |  |
| # | End use case | |  |
| Related Information | | | |
| Systems Impacted | | * <Describe any systems impacted by scenario> | |
| Error or E-mail Messages | | * <List the error and/or e-mail messages generated by the Use case> | |
| Special Requirements | | * <Describe any special requirements for this scenario.> | |

### Use Case: Requirement <Release ##.#>.2: <Requirement Name>

#### Use Case Diagram

Do not use a use case diagram unless the use case is very complicated and requires a work flow.

#### Use Case Details

Write out use case details for each Requirement in the Business Requirements document.

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristic Information | | | |
| Use Case ID | | * Requirement <Release ##.#>.2: <Requirement Name> | |
| Preconditions | |  | |
| Successful Post Condition | |  | |
| Failed Post Conditions | |  | |
| Primary Actors | |  | |
| Secondary Actors | |  | |
| Related Use Cases | |  | |
| Primary Scenario | | | |
| Step | Scenario Action | | Expected Behavior |
| 1 |  | |  |
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| # | End use case | |  |
| Related Information | | | |
| Systems Impacted | | * <Describe any systems impacted by scenario> | |
| Error or E-mail Messages | | * <List the error and/or e-mail messages generated by the Use case> | |
| Special Requirements | | * <Describe any special requirements for this scenario.> | |

## Well-written example

***Delete this section prior to completing your final draft.***

### Use Case: Requirement 1.0.1: Login to Portal

#### Use Case Diagram

Not Applicable.

#### Use Case Details

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristic Information | | | |
| Use Case ID | | * Requirement 1.0.1: Login to Portal | |
| Preconditions | | * User has a browser window open. | |
| Successful Post Condition | | * User enters site; Sample Company Portal Landing Page displays. | |
| Failed Post Conditions | | * User is forwarded to Register page | |
| Primary Actors | | * Internal Portal User * Customer Portal User * Internal Portal Admin User | |
| Secondary Actors | |  | |
| Related Use Cases | |  | |
| Primary Scenario | | | |
| Step | Scenario Action | | Expected Behavior |
| 1 | Go to Portal Login Page  http:/my.Sample Company.biz/ontrack/ | | Portal Login page displays |
| 2 | Enter userid | | Userid displays in userid field |
| 3 | Enter password | | Astericks display in password field |
| 4 | Click Submit | | User is forwarded to Portal Landing page |
| 5 | End use case | |  |
| Secondary Scenario – User enters invalid Userid | | | |
| Step | Scenario Action | | Expected Behavior |
| 1 | Go to Portal Login Page  http:/my.Sample Company.biz/ontrack/ | | Portal Login page displays |
| 2 | Enter userid | | Userid displays in userid field |
| 3 | Enter password | | Astericks display in password field |
| 4 | Click Submit | | User is forwarded to Portal Registration page |
| 5 | End use case | |  |
| Secondary Scenario – User enters invalid Password | | | |
| Step | Scenario Action | | Expected Behavior |
| 1 | Go to Portal Login Page  http:/my.Sample Company.biz/ontrack/ | | Portal Login page displays |
| 2 | Enter userid | | Userid displays in userid field |
| 3 | Enter password | | Astericks display in password field |
| 4 | Click Submit | | User is forwarded to Portal Registration page |
| 5 | End use case | |  |
| Related Information | | | |
| Systems Impacted | | * Sample Company Portal | |
| Error or E-mail Messages | | * “User Name / Password combination not recognized.” | |
| Special Requirements | | * User must have a valid Sample Company Portal user account. | |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# Proposed Site Map

This proposed site map is used for discussion purposes. The final site map will be specified in the User Interface sections of the Technical Design Specification.

## Well-written example

***Delete this section prior to completing your final draft.***

Sample site map:



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# Security

## Security Requirements

### System Security

The Customer Loyalty Tracker application will primarily be a web based application run locally on employee terminals. The backend server hosting the application will be locked in a safe location in the store, away from customers and employees.

### Security Approach

All users of the application will log into the application using an initial username and password and will be required to change their password upon their first login and periodically.

### Third Party Software Security

N/A

### Interface Security

A username and password is required to log into the application.

### Metrics

Metrics consist of logging user logins and activity for the purpose of application improvement and security monitoring.

### User Authentication

A username and password is required to log into the application.

## Encryption Requirements

Complete this section only if encryption is required.

### Full Encryption Areas

N/A

### Application Data

Customer sensitive data such as credit card numbers should be encrypted using standard encryption algorithms.

### Encryption Business Policy

N/A

### Encryption in Transit

N/A

### Encryption in Storage

Customer sensitive data stored on the application server should be encrypted using standard encryption algorithms.

### Other Encryption Info

N/A

## 

## Access Control

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UC #** | **UC Name** | **Store Admin** | **Store Employee** | **Developer** | **System** |
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## Well-written example

***Delete this section prior to completing your final draft.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| UC # | UC Name | Internal Portal User | Customer Portal User | Internal Portal Admin User |
| Req 1.0.1 | Login to Portal | X | X | X |
| Req 1.0.2 | User Landing Page | X | X | X |
|  |  |  |  |  |

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# System Metrics

## Performance and Availability

### Performance Metric

The Customer Loyalty application should provide information to users in less than five seconds in any query screen. Any data entered should be accepted by the system (assuming it passes any input validation and error checking) in less than five seconds.

### Availability Metric

The application should be available during normal business hours (considered to be 7 a.m. to 8 p.m. Monday through Saturday) and should be available for maintenance work (maintenance hours are midnight Saturday through 6 a.m. Sunday morning).

### Other Metrics

N/A

### Volume of Users

The system should support at minimum the store owner and employees, or at most 10 users.

### User Growth

User growth isn’t expected to be a factor since the store owner has no plans at the current time to expand to additional stores.

### Most Traffic- Functionality

All use cases involving multiple employees accessing the system concurrently will account for the maximum traffic experienced by the application.

### Most Traffic- Time Periods

Peak traffic is expected to occur weekday afternoons starting at 3 p.m. until closing and all day Saturday.

### Error Logging

All errors encountered capturing customer information, updating customer information, and generating coupons should be captured in an error log.

### Connection Types

Each user will log into the application from their terminal using a web browser over the local network in the store.

### User Locations

All users will be located in the store.

# Platform Requirements

| Platform Requirements | | |
| --- | --- | --- |
| Supported Platforms | Description of Platform | Platform Support Required |
| Internet Explorer | Internet Explorer Browser | Application must run on Internet Explorer, version 9.0 or higher. |
| Chrome | Chrome Browser | All versions of Chrome supported |
| Safari | Safari Browser | All versions of Safari supported |
| Firefox | Firefox Browser | All versions of Firefox supported |
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# Risks

Describe the risks that have been identified for this project (resource issues, data integrity issues, and so on). The risks are tied to individual use cases if appropriate.

Note to Authors: If a risk is not tied to an individual use case, then just put “N/A” in the UC # and UC Name columns

| **UC#** | **UC Name** | **Type of Risk** | **Risk Description** |
| --- | --- | --- | --- |
|  |  | <resource, data integrity, technology , etc> |  |
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# Sign-off

| **Signature** | **Name & Title** | **Date** | **Comments** |
| --- | --- | --- | --- |
|  | Business Initiative Leader | dd-mm-yyyy |  |
|  | Business Project Leader | dd-mm-yyyy |  |
|  | IT Project Manager | dd-mm-yyyy |  |
|  | IT Executive Sponsor | dd-mm-yyyy |  |
|  | Business Executive Sponsor | dd-mm-yyyy |  |
|  | Other Stakeholder [As Necessary] | dd-mm-yyyy |  |
|  | Other Stakeholder [As Necessary] | dd-mm-yyyy |  |
|  | Other Stakeholder [As Necessary] | dd-mm-yyyy |  |

# Glossary

## Definitions of terms used in this document

* <Clearly list all terms and/or acronyms in alphabetical order that were used in this document which may be ambiguous, context- or industry-specific. Provide a definition for each term and/or acronym listed. >

# Appendices

## Supplementary Attachments or Samples

# Functional Specifications Checklist

***Delete this section prior to completing your final draft.***

The goal is to ensure a quality design process and eliminate defects in this project phase by having well-defined and well-documented functional specifications based on the business requirements with the correct use of requirements standards. The objectives are to eliminate potential risks associated with poorly-collected or poorly-defined specifications and requirements. To this end, below are listed the key quality categories: each requirement should be Unambiguous, Complete, Verifiable, Consistent, Modifiable, Traceable and Correct.

#### Unambiguous

* Is it easy to read (formatted properly, appropriate functional and requirements hierarchy, spelling, grammar, index, table of contents)?
* Is it easily understood (is it too technical)?
* Does it use a uniform glossary (all key terms and acronyms defined)?

#### Complete

* Are strategic business objectives identified?
* Have all critical assumptions been identified?
* Have constraints and dependencies been identifed?
* Have out of scope items been identified?
* Have in scope items been identified?
* Has the current situation been documented?
* Have new enhancements or requirements been clearly identified?
* Have new practices or procedures been clearly identified?
* Has language support and personalization been addressed?
* Has security been addressed?
* Have performance measurements been identified?
* Have key success factors been identified?

#### Verifiable

* Are assertions backed up by quantifiable data?
* Proper sequencing of information (logical flow of Functional Groupings and Requirements)?
* Is it easily understood (is it too technical)?

#### Consistent

* Does the document identify the same elements (terms, requirement naming format, etc.) uniformly across all sections?
* Validity checks for inputs/outputs?
* The business requirement has a single and coherent business framework / domain?

#### Modifiable

* Does it have a review section and signoff section?
* Are appropriate team members reviewing?
* Have all changes been reflected in documents (tracking numbers)?
* Validity checks for inputs/outputs?

#### Traceable

* Is information transferred correctly from the parent documents to children documents?
* Are the parent documents listed in the Glossary Section?
* Are requirement names formatted to be traceable as project elements?

#### Correct

* Does it correctly describe the stakeholders/systems intent?
* Has the document been approved?
* Is there measurements set-up to verify business success?

# Functional Requirements Frequently Asked Questions (and Answers)

***Delete this section prior to completing your final draft.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **What is the purpose of this document and who “owns” its content?** | | | | |
| **Purpose of Document** | | The functional specification provides the detail necessary to design, implement, and test the resulting system. | | |
| **Document Owner** | | The Business Initiative or Project Leader | | |
| **Time-Saving Tip** | | Copy and paste the Problem Statement, Business Case, and Mission Statement from the Business Requirements Document into the table. | | |
| **Who is the Audience of this Document?** | | | | |
| **Audience** | | **Usage** | | |
| *Initiative Leader* | | Review and approve that the specification accurately describes what is desired. | | |
| *Business Project Manager* | | Review and approve that the specification accurately describes what is desired. | | |
| *IT Project Manager* | | Review and approve, confirming that the system can be built to this specification | | |
| *Quality Assurance* | | Review and use as primary input, along with the Bus Reqs, to the System Test Plan | | |
| *Business Process Owners* | | Review to understand impacts of the new system on business processes. | | |
| *Software Architects* | | Review as input to the Architecture and Technical Design specifications to ensure completeness, accuracy and consistency between all three specs. | | |
| *Technical Lead / DBA* | | Review as input to the Technical Design Specification. | | |
| *Infrastructure* | | Review to become familiar with the system. | | |
| *Technical Writers and Usability Analysts* | | To design the user assistance and information plan and begin developing information deliverables (user, technical, training). | | |
| **Frequently Asked Questions about Completing this Document** | | | | |
| # | Question | | Answer | |
| 1 | How do I attach another doc as an object in this doc? | | (In this Word Doc) click Insert🡪 Object🡪 Create From File tab🡪Check-off “Display as Icon” 🡪 Browse for file🡪 click “ok”. File should now be on the document, but may not be fully visible. If not fully visible: click on the object🡪 one right click🡪 “Format Object” 🡪 click layout tab🡪 select “Tight”🡪 hit “ok”. | |
| 2 | How do I provide a hyperlink in this doc to another doc? | | (In this Word Doc)🡪 Insert🡪Hyperlink🡪Enter hyperlink | |
| 3 | How do I update the Table of Contents? | | Go to the Table of Contents page 🡪Position cursor to the left of the table (not over the table) 🡪Left click mouse button. The entire table should be hi-lited 🡪Click the F9 key on keyboard. | |
| **Definitions for Use Case Tables** | | | | | |
| **Use Case ID** | | | | | ID for the use case. Should be the same as in Section 4.1 |
| **Preconditions** | | | | | The conditions or prerequisites that must be true before a use case can begin. This may be issues such as the user has logged in, the user has already established an Internet connection, some other transactions have already occurred, and so on. |
| **Successful Post Condition** | | | | | The conditions or statuses that will be true when a use case finishes successfully. |
| **Failed Post Conditions** | | | | | The conditions or statuses that will be true when a use case finishes in an error state. |
| **Primary Actors** | | | | | Primary Actors for the Use Case |
| **Secondary Actors** | | | | | Secondary Actors for the Use Case |
| **Related Use Cases** | | | | | All the other use cases that are related to the given use case (either coming before, coming after, or used within this use case). |
| **Systems Impacted** | | | | | Indicate any legacy systems that may be impacted or interaction with other systems, such as security. |
| **Error or E-mail Messages** | | | | | Error or Email Messages generated by the activities in the Use Case |
| **Special Requirements** | | | | | Special Requirements are often used for complex algorithms, common business rules across scenarios or use cases, and should be referenced within the scenarios. It can be a useful place to put larger sets of information that won’t fit in the scenario form but they should always be referenced within the scenario item that needs them. Business rules can be included. These should be rare, because most business rules can and should be documented in the scenario. |
| **Primary Scenario** | | | | | Standard Use Case description (20 word or less description of the Use Case functionality) |
| **Secondary Scenario** | | | | | Exceptions from the primary scenario, including additional functionality for certain actors and error conditions/messages |