

Software Requirements Specification

Request Generator

5/2/22

Version 1.1.1

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1. Introduction

1.1 Purpose

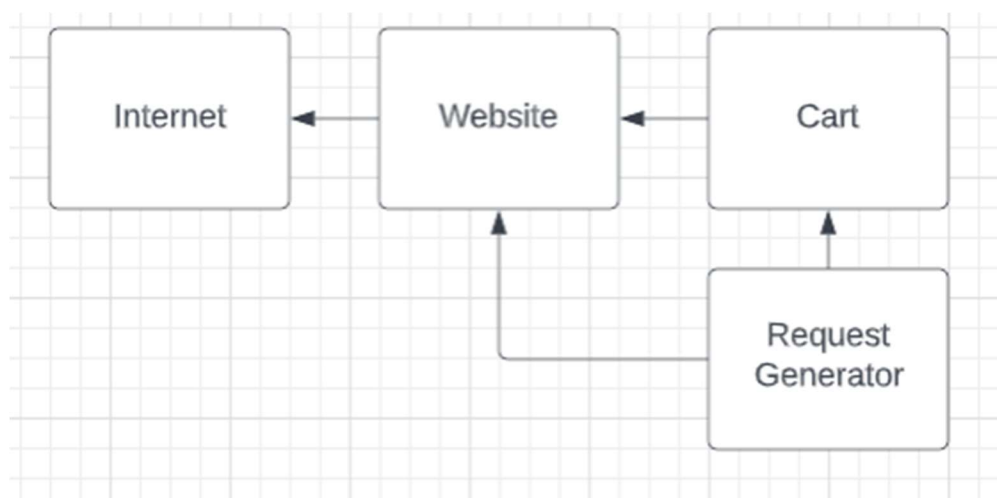
- This product should be developed because it automates a portion of the business managers' daily tasks and will give the users a quicker estimate to the cost of the product they want to produce. This matches the business's goals to reduce the amount of work for the managers while also increasing the total amount of product requests output by clients.

1.2 Scope

- a) Request Generator
- b) This software will interface with website users to automatically fill out request forms that the management team will review, and the system will then send back a quote on the price of the product requested
- c) This software will be a tool placed on the main page of the CatStealers website and will receive input from users to auto generate forms. The product's aim is to reduce the amount of work required by the managers.

1.3 Product Overview

1.3.1 Product Perspective



- This system is a subset of the CatStealers website and interfaces with the cart system that is already implemented within the website
- Requirements of the website that relate to the functionality of the request generator is a that
 - The system shall have a flexible aspect ratio
 - The system shall not be larger than 1920 x 1080
 - All online inquiries shall be sent through the website cart system
 - The system shall disable the tool if a crash occurs
- a) System interfaces
 - The system operates within the website main page.
- b) User interfaces
 - The system cannot interfere with the already made assets that are places on the website, and it cannot take more than one full screen. It must also have a flexible aspect ratio so that it can be displayed correctly with the rest of the website.

- c) Software interfaces
 - The system interfaces with the cart system that is implemented on the website

1.3.2 Product Functions

- The system shall get input from the user using 3 text fields to generate a form.
- The system shall save the form to the website database
- The system shall output a quote for a price of the requested product.
- The tool connects to the website database and that database connects to the manager's email
- The quote for the price is connected to the cart system that is implemented by the website
- This cart system is also connected to the database.

1.3.3 User Characteristics

- The users must have basic understanding of website use
- The users must be able to use a keyboard to enter information to a text box.
- The users will generally be laymen/laywomen that have no technical expertise
- The users must be able to operate a computer with a mouse, this is why the response time must be under 400 ms

1.3.4 Limitations

Key	Summary	Description
<u>C3-22</u>	<u>Cannot allow more than 10 characters per text field</u>	More than 10 characters cannot be entered into the field because it can lead to inefficient requests from the users and lead to long load times
<u>C3-21</u>	<u>Cannot gather pricing info from unauthorized sources</u>	Pricing info cannot be gathered from unauthorized sources because this can result in inaccurate estimates
<u>C3-20</u>	<u>Cannot give an estimate without all of the info fields being completed</u>	This product cannot give an estimate without all of the field being completed because there is change of an inaccurate estimate being given
<u>C3-19</u>	<u>Cannot go on maintenance for longer than 24 hours</u>	This product cannot go on maintenance for longer than 24 hours because it will interfere with the amount of orders the website will receive in that time
<u>C3-18</u>	<u>Must be written using JavaScript</u>	This product must be written in JavaScript because that is the chosen language
<u>C3-17</u>	<u>Must be able to run on mobile devices</u>	This product must be able to run on all mobile devices because it is build into a mobile friendly website
<u>C3-16</u>	<u>Cannot crash the website from a bug</u>	This product cannot have fatal crashes that effect the performance of the website as a whole
<u>C3-15</u>	<u>Cannot interfere with the functionality of the cart system</u>	This product cannot interfere with the function of the cart system because this could potentially prevent people from checking out

<u>C3-14</u>	<u>cannot have longer than a 400 ms response time</u>	This product cannot have more than a 50 ms response time because this would impact the perceived quality of the website
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1.4 Definitions

- Assets
 - Digital images used for formatting and decorating a website
- Text field
 - A web design data field type that accepts only text
- Confirmation
 - A message sent when the interaction has been completed
- Widget
 - A tool that serves some function within a user interface
- Responsive Design
 - A design patterns that allows the interface to respond to a change in window size or aspect ratio
- Semantic Markup
 - Approach to HTML coding where you tag to describe the content of the metadata

2. References

- Example SRS from CSE.MSU.EDU
- <https://sites.google.com/site/profvanselow/swebok/software-requirements-ch-1/5-specification/srs> from CEN 3073 course materials
- BRS from personal confluence. This can be accessed by requesting access to my project at <https://amhood6127.atlassian.net/wiki/spaces/C3/BRS>

3. Requirements

<u>C3-50</u>	<u>The max characters per text field is 10 characters</u>	Functional, Non-Functional
<u>C3-48</u>	<u>The system shall disable the tool if a crash occurs</u>	Functional
<u>C3-47</u>	<u>All online inquiries shall be sent through</u>	Online inquiries shall all be processed through the existing cart system on the website Functional

	<u>the website cart system</u>		
<u>C3-46</u>	<u>The system shall cost less than 2000 dollars</u>	The system shall cost less than 2000 dollar so that the product remains under budget	Non-Functional
<u>C3-45</u>	<u>The data interchange format and user stories shall be made using XML</u>	The data interchange format shall be only XML so there is no confusion from other formats like JSON	Non-Functional
<u>C3-44</u>	<u>The tool shall not be larger than 1920 x 1080</u>	The tool shall be no larger than 1920 x 1080 so it does not overlap with the main landing page of the website	Interface, Non-Functional
<u>C3-43</u>	<u>The system shall be built using Windows</u>	The system shall be built using windows so there is no conflict in file types and cpu architecture	Non-Functional
<u>C3-42</u>	<u>The system shall use github as the repository</u>	The system shall be stored in a Github repository to avoid using a physical central repository	Database, Non-Functional
<u>C3-41</u>	<u>The system shall import graphics from photoshop</u>	The system shall only import graphics from Photoshop to avoid conflicts of file types and sizes	Non-Functional
<u>C3-40</u>	<u>The system shall have flexible aspect ratio</u>	The system shall have a flexible aspect ratio so the tool is displayed correctly on all screen sizes	Interface, Non-Functional
<u>C3-39</u>	<u>The system shall be created using Visual Studio Code</u>	The system will be created using visual studio code for continuity between developers and to avoid conflicts of libraries	Non-Functional
<u>C3-38</u>	<u>The system shall have less than a 400 ms response time</u>	The system shall have less than a 400 ms response time in order to improve the user experience and make the tool feel responsive.	Functional, Performance, Usability
<u>C3-32</u>	<u>The product shall be integrated into the main website page by August,2022</u>		Non-Functional
<u>C3-31</u>	<u>The system shall give prices within 5 percent of the real price</u>		Non-Functional

<u>C3-30</u>	<u>The product shall have less than 2 maintenance periods per month</u>	Non-Functional
<u>C3-29</u>	<u>The system shall be delivered within 3 months</u>	Non-Functional
<u>C3-28</u>	<u>The system shall increase site revenue by 5 percent within 6 months</u>	Non-Functional
<u>C3-27</u>	<u>The client shall submit a quote request on mobile devices</u>	Functional
<u>C3-26</u>	<u>The system shall encrypt user info when a request is submitted</u>	Functional
<u>C3-25</u>	<u>The system shall increase the amount of art sold by 5 percent</u>	Non-Functional
<u>C3-24</u>	<u>When the submit button is pressed, the system shall process the user request and return a quote for their product in 4 seconds</u>	Non-Functional
<u>C3-23</u>	<u>When the submit button is pressed, the system shall submit a request to the database within 2 seconds</u>	https://amhood6127.atlassian.net/browse/C3-6 This requirement is meant to quicken the process of getting the client a quote and increase the speed of delivery to them

3.1 Functions

- This product shall calculate a general price for the user
- This product shall accept some user input
- this product shall have a button to submit a request

- This product shall output a message in red if all of the field required are not completed
- This product shall quickly output a price without details on how the price was calculated
- This product shall have a flexible aspect ratio so it can resize with the website

3.2 Performance Requirements

<u>C3-38</u>	<u>The system shall have less than a 400 ms response time</u>	The system shall have less than a 400 ms response time in order to improve the user experience and make the tool feel responsive.	Functional, Performance, Usability
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3.3 Usability Requirements

<u>C3-38</u>	<u>The system shall have less than a 400 ms response time</u>	The system shall have less than a 400 ms response time in order to improve the user experience and make the tool feel responsive.	Functional, Performance, Usability
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3.4 Interface Requirements

<u>C3-40</u>	<u>The system shall have flexible aspect ratio</u>	The system shall have a flexible aspect ratio so the tool is displayed correctly on all screen sizes	Interface, Non-Functional
<u>C3-44</u>	<u>The tool shall not be larger than 1920 x 1080</u>	The tool shall be no larger than 1920 x 1080 so it does not overlap with the main landing page of the website	Interface, Non-Functional

3.5 Logical Database Requirements

<u>C3-42</u>	<u>The system shall use github as the repository</u>	The system shall be stored in a Github repository to avoid using a physical central repository	Database, Non-Functional
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3.6 Design Constraints

Key	Summary	Status
<u>C3-37</u>	<u>Cannot be in maintenance for longer than 24 hours</u>	To Do
<u>C3-36</u>	<u>Submit button can not be hit unless all text field are filled</u>	To Do
<u>C3-35</u>	<u>Can only be written in JavaScript</u>	To Do
<u>C3-34</u>	<u>Only allow data to be taken from sources authorized in the database</u>	To Do
<u>C3-33</u>	<u>Only 10 characters allowed per text field</u>	To Do

3.7 Software System Attributes

a.) Reliability

The system shall disable the tool when a crash occurs

b.) Availability

The system shall not be under maintenance for longer than 24 hours

c.) Security

The system shall encrypt user data, so it is not accessible to the public

Data shall only be allowed to be taken from sources authorized in the database

d.) Maintainability

The system shall not be under maintenance for longer than 24 hours

e.) Portability

The system shall have a flexible aspect ratio so that it can be displayed on mobile devices

The system shall be able to run and be formatted for any device that it is displayed on

3.8 Supporting Information

- It should be noted that keys associated with each requirement are applicable within my own Jira project
- Some of the problems solved by this software:
 - An excess of documentation work that must be manually done by the managers
 - A lack of pricing on the website due to fluctuations in the market
 - The users have no way to get pricing without first contacting managers, which can take a couple days sometimes
- All assets that will be displayed on the tool will be imported from photoshop

4. Verification

Key	Summary	verification approach
C3-50	The max characters per text field is 10 characters	Inspection
C3-48	The system shall disable the tool if a crash occurs	Demonstration
C3-47	All online inquiries shall be sent through the website cart system	Test
C3-46	The system shall cost less than 2000 dollars	Demonstration

<u>C3-45 The data interchange format and user stories shall be made using XML</u>	Analysis
<u>C3-44 The tool shall not be larger than 1920 x 1080</u>	Inspection
<u>C3-43 The system shall be built using Windows</u>	Inspection
<u>C3-42 The system shall use github as the repository</u>	Inspection
<u>C3-41 The system shall import graphics from photoshop</u>	Inspection
<u>C3-40 The system shall have flexible aspect ratio</u>	Test
<u>C3-39 The system shall be created using Visual Studio Code</u>	Analysis
<u>C3-38 The system shall have less than a 400 ms response time</u>	Test
<u>C3-32 The product shall be integrated into the main website page by August,2022</u>	Inspection
<u>C3-31 The system shall give prices within 5 percent of the real price</u>	Test
<u>C3-30 The product shall have less than 2 maintnence periods per month</u>	Inspection
<u>C3-29 The system shall be delivered within 3 months</u>	Inspection
<u>C3-28 The system shall increase site revenue by 5 percent within 6 months</u>	Inspection
<u>C3-27 The client shall submit a quote request on mobile devices</u>	Demonstration
<u>C3-26 The system shall encrypt user info when a request is submitted</u>	Analysis
<u>C3-25 The system shall increase the amount of art sold by 5 percent</u>	Analysis
<u>C3-24 When the submit button is pressed, the system shall process the user request and return a quote for their product in 4 seconds</u>	Demonstration
<u>C3-23 When the submit button is pressed, the system shall submit a request to the database within 2 seconds</u>	Demonstration

5. Appendices

5.1 Assumptions and Dependencies

- The tool will generate more overall requests
- The tool will automate most of the managerial quote tasks
- The business will be operating at a similar capacity
- There are no disasters that halt production
- Current shipping issues will be resolved

- More accessible means more quotes

5.2 Acronyms and Abbreviations

- HTML
 - Hyper Text Markup Language
- CSS
 - Cascading Style Sheets
- UI
 - User Interface
- JVM
 - Java Virtual Machine
- IDE
 - Integrated Development Environment