ACAT Testing & Quality Assurance Document

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Introduction

This document outlines the methods and degrees to which the ACAT software system designed by our team was tested. This document was also used as a tool by our development team to ensure that all requirements for our system were met.

Testing Checklist

The following checklist details the areas of our system that were tested with a description detailed where applicable.

SYSTEM LEVEL REQUIREMENTS VALIDATION

|  |  |  |
| --- | --- | --- |
| **Item** | **Response** | **Description** |
| Have the business context and justification for the system been properly developed? | Yes |  |
| Has overall feasibility been addressed? | Yes |  |
| Have all stakeholders been identified and polled for agreement? | N/A |  |
| Have the overall function and behavior of the system been defined? | Yes |  |
| Based on existing documentation/information, do you understand the system in the context of each of the views in the system engineering hierarchy? | Yes |  |
| Have system processes been adequately (unambiguously) and consistently defined? | Yes |  |
| Is system output and input adequately defined? | Yes |  |
| Have system-level assumptions, simplifications, limitations, constraints and preferences been explicitly and unambiguously stated? | Yes |  |
| Has simulation been done to demonstrate technological feasibility? | No | We created a feasibility document, but ran no real simulation. |
| Has a data architecture been identified? | Yes |  |
| Has an application (functional) architecture been defined? | Yes | Three-tier architecture |
| Has the required technology infrastructure for the system been adequately defined? | Yes |  |
| For business applications: Have ISP and BAA (SEPA, 5/e, p. 253) been performed? | N/A |  |
| Has requirements elicitation been performed at the system level? | No |  |
| Has the scope of the system been bounded? | Yes |  |
| Has business and technical feasibility been assessed? | Yes |  |
| Have usage scenarios been created at the system level? | Yes | Use cases are outlined in our design document. |
| Has a requirements management process been established for the system? | Yes |  |
| Is the allocation for software reasonable and well-defined?` | Yes |  |

SOFTWARE REQUIREMENTS SPECIFICATION

|  |  |  |
| --- | --- | --- |
| **Item** | **Response** | **Description** |
| Do stated goals and objectives for software remain consistent with system goals and objectives? | Yes |  |
| Have important interfaces to all system elements been described? | Yes |  |
| Have all data objects been described? Have all attributes been identified? | No |  |
| Do major functions remain within scope and has each been adequately described? | Yes |  |
| Have functions been refined (elaborated) to an appropriate level of detail? | Yes |  |
| Is information flow adequately defined for the problem domain? | No |  |
| Are diagrams clear; can each stand alone without supplementary text? | No | Our diagrams require captions. |
| Is the behavior of the software consistent with the information it must process and the functions it must perform? | Yes |  |
| Have events and states been identified? | No | I don’t know what that means. |
| Are design constraints realistic? | Yes |  |
| Have technological risks been fully defined? | Yes |  |
| Have alternative software requirements been considered? | N/A |  |
| Have validation criteria been stated in detail; are they adequate to describe a successful system? | Yes |  |
| Have inconsistencies, omissions or redundancy been identified and corrected? | Yes | Our software system has many omissions. |
| Is the customer contact complete? | N/A |  |
| Has the user reviewed the Preliminary User's Manual or prototype? | No |  |
| How are the Software Project Plan estimates affected? | N/A |  |

SOFTWARE DESIGN CHECKLIST

|  |  |  |
| --- | --- | --- |
| **Item** | **Response** | **Description** |
| Does the overall design implement all explicit requirements? Has a traceability table been developed? | Yes |  |
| Does the overall design achieve all implicit requirements? | Yes |  |
| Is design notation standardized? Consistent? | Yes |  |
| Is the design represented in a form that is easily understood by outsiders? | No | Nothing about this stuff would be easily understood by outsiders. |
| Does the overall design provide sufficient information for test case design? | Yes |  |
| Is the design created using recognizable architectural and procedural patterns? | Yes | Three-tier |
| Does the design strive to incorporate reusable components? | No |  |
| Is the design modular? | Maybe | Not sure what that means |
| Has the design defined both procedural and data abstractions that can be reused? | Yes |  |
| Has the design been defined and represented in a stepwise fashion? | no |  |
| Has the resultant software architecture been partitioned for ease of implementation? Maintenance? | Yes |  |
| Have the concepts of information hiding and functional independence been followed throughout the design? | Yes |  |
| Has a Design Specification been developed for the software? | No |  |