

CAMT Exam Dashboard with Tesseract

Traceability Matrix

By

Lingyu Kong 612115506

Jiajun Tao 612115503

BACHELOR OF SOFTWARE ENGINEERING PROGRAM

COLLEGE OF ARTS, MEDIA AND

TECHNOLOGY CHIANG MAI UNIVERSITY

Advisor

Pree Thiengburanathum,PhD

CAMT Exam Dashboard with Tesseract

Lingyu Kong 612115506

Jiajun Tao 612115503

THIS REPORT HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE SOFTWARE ENGINEERING PROGRAM: COLLEGE OF ARTS MEDIA AND TECHNOLOGY

…………………………………………………. ADVISOR

Dr. PREE THIENGBURANATHUM

…………………………………………………...MEMBER

Lingyu Kong

…………………………………………………...MEMBER

Jiajun Tao

**Document History**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Version** | **History** | **Status** | **Date** | **View-able** | **Editable** | **Respon-sible** |
| Traceability\_Version.1.docx | **Add**   * Chapter 1 * Chapter 2 | Draft | 1  June , 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Traceability\_Version.2.docx | **Edit**   * Chapter 1 * Chapter 2 | Draft | 3  June , 2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Traceability\_Version.3.docx | **Update**   * Check if they correspond to each other * Correct spelling and grammar mistakes | Draft | 1  July ,  2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Traceability\_Version.4.docx | **Update**   * Chapter two | Draft | 7  July ,  2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Traceability\_Version.5.docx | **Update**   * Chapter two * Correct spelling and grammar mistakes * Check if they correspond to each other | Release | 3  Aug ,  2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Traceability\_Version.6.docx | **Update**   * Chapter two | Release | 10  Sep ,  2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Traceability\_Version.7.docx | **Update**   * Chapter two | Draft | 7  Oct ,  2021 | Advisor  LK  JT | LK  JT | LK  JT |
| Traceability\_Version.8.docx | **Update**   * Correct spelling and grammar mistakes * Check if they correspond to each other | Release | 10  Oct ,  2021 | Advisor  LK  JT | LK  JT | LK  JT |

Table of Contents

Chapter One | Introduction 6

1.1 Purpose 6

1.2 Acronyms and Definition……………………………………………………………………………………………………6

1.2.1 Acronyms 6

1.2.2 Definition 7

Chapter Two |Traceability Record Matrix 9

2.1 UC-URS-SRS-CDD-SD-UI………………………………………………………………………………………………. 9

2.2 UC-MD-UTC-STC………………………………………………………………………………………………. 11

Chapter one | Introduction

* 1. Purpose

The traceability record of the Activity Management System is established to show relation between URS, SRS, UC, MD, SD, UI, CDD, MD, UTC. Traceability record will allow traceability and verification of requirements developed in the project.

* 1. Acronyms and Definitions

1.2.1 Acronyms

SD - Sequence Diagram

SRS - Software Requirement Specification/System Requirement Specification

UTC - Unit Test Case

STC - System Test Case

UC - Use Case

UI - User Interface

URS - User Requirement Specification

CDD- Class Diagram Description

MD – Method Description

AD – Activity Diagram

|  |  |
| --- | --- |
| SD | Sequence Diagram |
| SRS | Software Requirement Specification/System Requirement Specification |
| UTC | Unit Test Case |
| STC | System Test Case |
| UC | Use Case |
| UI | User Interface |
| URS | User Requirement Specification |
| CDD | Class Diagram Description |
| MD | Method Description |
| AD | Activity Diagram |

* + 1. Definition

|  |  |
| --- | --- |
| Name | Definition |
| IEEE | Institute for Electrical and Electronics Engineers. Biggest global interest group for engineers of different branches and computer scientists. [IEEE90] |
| Requirement | (1) A condition or capability needed by the user to solve a problem or achieve an objective.  (2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document.  (3) A documented representation of a condition or capability as in definition (1) or (2). [IEEE90] |
| Specification | Precise description of an activity or work product that serves as the basic or input for further activities or work product. A specification can comprise requirements for a product and how they will be solved. Different parts of a specification (e.g. what is to be done, how it will be done) must not be mixed. [IEEE90] |
| Use case | (1) Concept to describe a system based on usage of system resources by its environment. Characterized by an objective-set of interactions within and at the borders of that system.  (2) Notation from UML for describing a scenario (Usage approach, operational scenario) from the perspective of this user. [IEEE90] |

Chapter two | Traceability Record Matrix

2.1 UC-URS-SRS-CDD-SD-UI

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| UC | URS | SRS | AD | CDD | SD | UI |
| UC-01 | URS-01 | SRS-001  SRS-002  SRS-003  SRS-004  SRS-005  SRS-006 | AD-01 | CDD-1  CDD-2  CDD-3  CDD-4  CDD-5 | SD-01 | UI-01 |
| UC-02 | URS-02 | SRS-001  SRS-007  SRS-008  SRS-009 | AD-02 | CDD-1  CDD-2  CDD-3  CDD-4  CDD-5 | SD-02 | UI-01 |
| UC-03 | URS-03 | SRS-010 | AD-03 | CDD-1  CDD-2  CDD-3  CDD-4  CDD-5 | SD-03 | UI-02 |
| UC-04 | URS-04 | SRS-011  SRS-012  SRS-013  SRS-014  SRS-015  SRS-016 | AD-04 | CDD-1  CDD-6  CDD-7  CDD-8  CDD-9  CDD-10  CDD-11  CDD-12  CDD-13  CDD-14  CDD-15  CDD-16 | SD-04 | UI-03 |
| UC-05 | URS-05 | SRS-017 | AD-05 | CDD-1  CDD-6  CDD-10  CDD-11  CDD-12  CDD-13 | SD-05 | UI-03 |
| UC-06 | URS-06 | SRS-018 | AD-06 | CDD-1  CDD-6  CDD-10  CDD-17  CDD-18  CDD-19  CDD-20  CDD-21 | SD-06 | UI-04 |
| UC-07 | URS-07 | SRS-019  SRS-020  SRS-021 | AD-07 | CDD-1  CDD-6  CDD-22  CDD-23  CDD-24 | SD-07 | UI-05  UI-06  UI-07 |
| UC-08 | URS-08 | SRS-019  SRS-022 | AD-08 | CDD-1  CDD-6  CDD-22  CDD-23  CDD-24 | SD-08 | UI-05  UI-07 |

2.2 UC-MD-UTC-STC

|  |  |  |  |
| --- | --- | --- | --- |
| UC | MD | UTC | STC |
| UC-01 | MD-1  MD-2  MD-5  MD-6  MD-8  MD-9 | UTC-001  UTC-002  UTC-003  UTC-004 | STC-01 |
| UC-02 | MD-4  MD-7  MD-10  MD-11 | UTC-001  UTC-002  UTC-003  UTC-004 | STC-01 |
| UC-03 | MD-3 | UTC-001  UTC-002  UTC-003  UTC-004 | STC-02 |
| UC-04 | MD-12  MD-13  MD-14  MD-16  MD-18  MD-19  MD-20  MD-22  MD-23  MD-24  MD-25  MD-26  MD-27  MD-28  MD-29 | UTC-005  UTC-006 | STC-03  STC-04  STC-07 |
| UC-05 | MD-15  MD-17  MD-21 | UTC-005  UTC-006 | STC-06  STC-07  STC-08 |
| UC-06 | MD-30  MD-31  MD-32  MD-33  MD-34  MD-36  MD-37 | UTC-007  UTC-008  UTC-011  UTC-012  UTC-013  UTC-014  UTC-015  UTC-019  UTC-020 | STC-09 |
| UC-07 | MD-38  MD-39  MD-41  MD-42  MD-44  MD-45  MD-46 | UTC-009  UTC-010  UTC-016  UTC-017 | STC-10  STC-11  STC-12 |
| UC-08 | MD-38  MD-40  MD-41  MD-43  MD-44  MD-46  MD-46 | UTC-009  UTC-010  UTC-016  UTC-018 | STC-10  STC-11  STC-12 |