

# SMART PRESCRIPTION APPLICATION

Traceability Record

By

Mr. Natthakan      Kaeokanpai      552115020

Mr. Phithiwat      Sitthitun      552115051

Department of Software Engineering  
College of Arts, Media and Technology  
Chiang Mai University

Project Advisor

---

Dr.Prompong Sugunnasil

## Document History

Document Name	Version	Status	Date	Viewable	Editable	Responsible
<b>Documents</b>						
Smart prescription application _Traceability Record	Traceability Record_V1.0	Reviewed	25-07-2016	NAT,PHI, PROM	NAT,PHI, PROM	NAT,PHI
Smart prescription application _Traceability Record	Traceability Record_V1.1	Released	25-07-2016	NAT,PHI, PROM	NAT,PHI, PROM	NAT,PHI
Smart prescription application _Traceability Record	Traceability Record_V2.0	Released	30-07-2016	NAT,PHI, PROM	NAT,PHI, PROM	NAT,PHI
Smart prescription application _Traceability Record	Traceability Record_V3.0	Released	26-08-2016	NAT,PHI, PROM	NAT,PHI, PROM	NAT,PHI

### *Acronym*

NAT = NatthakanKaeokanpai

PHI = PhithiwatSiththitun

PROM = PrompongSugunnasil

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Siththitun	<b>Page</b>	2
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

# Table of Contents

Chapter One   Introduction.....	4
1.1 Purpose.....	4
1.2 Project Scope .....	4
Chapter Two   Traceability Record Matrix.....	5
Chapter Tree   Appendix.....	33
User Requirement Specification (URS).....	33
System Requirement Specification .....	34
Use case .....	38
Use Case Diagram.....	39
Class.....	39
User Interface .....	40
Activity Diagram (AD) .....	41
Sequence Diagram .....	42
Unit Test Case .....	43
System Test Case .....	44

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sithhitun	<b>Page</b>	3
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

# Chapter One | Introduction

## 1.1 Purpose

**Traceability** is the ability to verify the history, location, or application of an item by means of documented recorded identification. Other common definitions include the capability (and implementation) of keeping track of a given set or type of information to a given degree, or the ability to chronologically interrelate uniquely identifiable entities in a way that is verifiable

## 1.2 Project Scope

Smart prescription application can create the prescription of the patient in form of QR code that creates by a doctor. Smart prescription application requires a mobile application for scan QR code by the pharmacist. Pharmacist can get the prescription of patient with the detail of drug on a mobile application.

Smart prescription application can also record the history of allergy drug of patient and report to the Food and Drug Administration, Ministry of Public Health organization or (FDA) for observing unusually allergy drug that has been found in Thailand.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- [Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	4
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

# Chapter Two | Traceability Record Matrix

User Requirement Specification - System Requirement Specification (URS-SRS)

URS SRS	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026	027	028
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

URS	029	030	031	032	033	034	035	036	037	038	039	040	041	042	043	044	045	046	047	048	049	050	051	052	053	054
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sithitun	<b>Page</b>	6
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

URS SRS	055	056	057	058	059	060	061	062	063	064	065	066	067	068	069	070	071	072	073	074	075	076	077	078	079	080	081	082
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sithitun	<b>Page</b>	7
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

URS SRS	083	084	085	086	087	088	089	090	091	092	093	094	095	096	097	098	099	100	101	102	103	104	105	106	107	108
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	8
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016



URS SRS	109	110	111	112	113
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	9
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## User Requirement Specification - Use Case (URS-UC)

URS UC	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
01																														
02																														
03																														
04																														
05																														
06																														
07																														
08																														
09																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														
17																														
18																														
19																														
20																														
21																														
22																														
23																														
24																														
25																														
26																														
27																														
28																														
29																														
30																														

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sithitun	<b>Page</b>	10
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

### 2.3 Use Case Diagram - System Requirement Specification (UCD-SRS)

UC D SR S	00 1	00 2	00 3	00 4	00 5	00 6	00 7	00 8	00 9	01 0	01 1	01 2	01 3	01 4	01 5	01 6	01 7	01 8	01 9	02 0	02 1	02 2	02 3	02 4	02 5	02 6	02 7	02 8	02 9	03 0	03 1
	01																														
	02																														
	03																														
	04																														
	05																														
	06																														

UC D SRS	03 2	03 3	03 4	03 5	03 6	03 7	03 8	03 9	04 0	04 1	04 2	04 3	04 4	04 5	04 6	04 7	04 8	04 9	05 0	05 1	05 2	05 3	05 4	05 5	05 6	05 7	05 8	05 9	06 0	06 1	06 2
01																															
02																															
03																															
04																															
05																															
06																															

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	11
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

UC D SRS	06 3	06 4	06 5	06 6	06 7	06 8	06 9	07 0	07 1	07 2	07 3	07 4	07 5	07 6	07 7	07 8	07 9	08 0	08 1	08 2	08 3	08 4	08 5	08 6	08 7	08 8	08 9	09 0	09 1	09 2	09 3
01																															
02																															
03																															
04																															
05																															
06																															

UCD SRS	094	095	096	097	098	099	100	101	102	103	104	105	106	107	108	109	110	111	112	113
01																				
02																				
03																				
04																				
05																				
06																				

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	12
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## 2.4 Activity Diagram - System Requirement Specification (AD-SRS)

AD SRS	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026	027	028
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	13
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

AD SRS	02 9	03 0	03 1	03 2	03 3	03 4	03 5	03 6	03 7	03 8	03 9	04 0	04 1	04 2	04 3	04 4	04 5	04 6	04 7	04 8	04 9	05 0	05 1	05 2	05 3	05 4
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

AD SRS	05 5	05 6	05 7	05 8	05 9	06 0	06 1	06 2	06 3	06 4	06 5	06 6	06 7	06 8	06 9	07 0	07 1	07 2	07 3	07 4	07 5	07 6	07 7	07 8	07 9	08 0	08 1	08 2
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

AD SRS	08 3	08 4	08 5	08 6	08 7	08 8	08 9	09 0	09 1	09 2	09 3	09 4	09 5	09 6	09 7	09 8	09 9	10 0	10 1	10 2	10 3	10 4	10 5	10 6	10 7	10 8
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										



AD SRS	109	110	111	112	113
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

<b>Document Name</b>	SMART-PRESCRIPTION- APPLICATION- [Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	17
--------------------------	--	--------------	--	-------------	----

## 2.5 User Requirement Specification - Activity Diagram (URS-AD)

URS AD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
01																														
02																														
03																														
04																														
05																														
06																														
07																														
08																														
09																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														
17																														
18																														
19																														
20																														
21																														
22																														
23																														
24																														
25																														
26																														
27																														
28																														
29																														
30																														

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	18
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## 2.6 User Requirement Specification - Sequence Diagram (URS-SD)

URS SD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
01																														
02																														
03																														
04																														
05																														
06																														
07																														
08																														
09																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														
17																														
18																														
19																														
20																														
21																														
22																														
23																														
24																														
25																														
26																														
27																														
28																														
29																														
30																														

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	19
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## 2.7 Sequence Diagram - System Requirement Specification (SD-SRS)

SD SR S	00 1	00 2	00 3	00 4	00 5	00 6	00 7	00 8	00 9	01 0	01 1	01 2	01 3	01 4	01 5	01 6	01 7	01 8	01 9	02 0	02 1	02 2	02 3	02 4	02 5	02 6	02 7	02 8
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability-Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	20
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

SD SRS	02 9	03 0	03 1	03 2	03 3	03 4	03 5	03 6	03 7	03 8	03 9	04 0	04 1	04 2	04 3	04 4	04 5	04 6	04 7	04 8	04 9	05 0	05 1	05 2	05 3	05 4
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- (Traceability Record V2.0)	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	21
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

SD SRS	05 5	05 6	05 7	05 8	05 9	06 0	06 1	06 2	06 3	06 4	06 5	06 6	06 7	06 8	06 9	07 0	07 1	07 2	07 3	07 4	07 5	07 6	07 7	07 8	07 9	08 0	08 1	08 2
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

SD SRS	08 3	08 4	08 5	08 6	08 7	08 8	08 9	09 0	09 1	09 2	09 3	09 4	09 5	09 6	09 7	09 8	09 9	10 0	10 1	10 2	10 3	10 4	10 5	10 6	10 7	10 8
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

SD SRS	109	110	111	112	113
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- [Traceability Record V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	24
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016



## 2.8 User Requirement Specification - Unit Test Case (URS-UTC)

URS UTC	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
01																									
02																									
03																									
04																									
05																									
06																									
07																									
08																									
09																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25																									
26																									
27																									
28																									
29																									
30																									

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- [Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	25
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## 2.9 System Test Case - System Requirement Specification (STC-SRS)

STC SRS	00 1	00 2	00 3	00 4	00 5	00 6	00 7	00 8	00 9	01 0	01 1	01 2	01 3	01 4	01 5	01 6	01 7	01 8	01 9	02 0	02 1	02 2	02 3	02 4	02 5	02 6	02 7	02 8
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- [Traceability-Record V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	26
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

STC SRS	02 9	03 0	03 1	03 2	03 3	03 4	03 5	03 6	03 7	03 8	03 9	04 0	04 1	04 2	04 3	04 4	04 5	04 6	04 7	04 8	04 9	05 0	05 1	05 2	05 3	05 4
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

STC SRS	05 5	05 6	05 7	05 8	05 9	06 0	06 1	06 2	06 3	06 4	06 5	06 6	06 7	06 8	06 9	07 0	07 1	07 2	07 3	07 4	07 5	07 6	07 7	07 8	07 9	08 0	08 1	08 2
01																												
02																												
03																												
04																												
05																												
06																												
07																												
08																												
09																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27																												
28																												
29																												
30																												

STC SRS	08 3	08 4	08 5	08 6	08 7	08 8	08 9	09 0	09 1	09 2	09 3	09 4	09 5	09 6	09 7	09 8	09 9	10 0	10 1	10 2	10 3	10 4	10 5	10 6	10 7	10 8
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

STC SRS	109	110	111	112	113
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

<b>Document Name</b>	SMART-PRESCRIPTION- APPLICATION- [Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	30
--------------------------	--	--------------	--	-------------	----

## 2.10 User Requirement Specification - User Interface (URS-UI)

URS UI	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01																								
02																								
03																								
04																								
05																								
06																								
07																								
08																								
09																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27																								
28																								
29																								
30																								

## 2.11 Class - Unit Test Case (Class-UTC)

Class UTC	00 1	00 2	00 3	00 4	00 5	00 6	00 7	00 8	00 9	01 0	01 1	01 2	01 3	01 4	01 5	01 6	01 7	01 8	01 9	02 0	02 1	02 2	02 3	02 4	02 5
01																									
02																									
03																									
04																									
05																									
06																									
07																									
08																									
09																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25																									
26																									
27																									

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	32
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016




# Chapter Tree | Appendix

## User Requirement Specification (URS)



- URS-01: Doctors can view a doctor home page on the web application.
- URS-02: Doctors can create a patient's profile on the web application by inputting personal id, name, surname, prescription and username.
- URS-03: Doctors can update a patient's profile on the web application by application by input personal id, name, surname, prescription and username.
- URS-04: Doctors can delete a patient's profile on the web application.
- URS-05: Doctors can search patient's profiles on the web application by using personal id, name, and surname.
- URS-06: Doctors can view a patient's profile on the web application.
- URS-07: Doctors can view list of patient's profiles on the web application.
- URS-08: Administrators can view an admin home page on the web application.
- URS-09: Administrators can create a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- URS-10: Administrators can update a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- URS-11: Administrators can delete a user's profile on the web application.
- URS-12: Administrators can search a user's profile on the web application by using name, surname, and username.
- URS-13: Administrators can view a user's profile on the web application.
- URS-14: Administrators can view list of user's profile on the web application.
- URS-15: Doctors, Administrations, and FDAs can login to the web application by using username and password.
- URS-16: Doctors, Administrations, and FDAs can logout from the web application.
- URS-17: Patients can login to the mobile application by using username and password.
- URS-18: Patients can logout from the mobile application.
- URS-19: Patients can view the QR code on the mobile application.
- URS-20: Pharmacists can scan the QR code on the mobile application.
- URS-21: Pharmacists can add the time of dispensation to the patient's profile on the mobile application.
- URS-01: Doctors can view a doctor home page on the web application.
- URS-22: Doctors can create an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- URS-23: Doctors can update an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- URS-24: Doctors can delete an allergy report on the web application.
- URS-25: Doctors can search an allergy report on the web application by using personal id, name, and surname.
- URS-26: Doctors can view an allergy drug report on the web application.
- URS-27: Doctors can view list of allergy drug reports on the web application.
- URS-28: FDAs can view a FDA home page on the web application.
- URS-29: FDAs can view an allergy report on the web application.
- URS-30: FDAs can view list of allergy reports on the web application.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sithitun	<b>Page</b>	33
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

# System Requirement Specification

- SRS-001: The system shall provide menu bars (home, and logout).
- SRS-002: The system shall provide patient options menu box (create patient and manage patient) and allergy options menu box (create allergy report and manage allergy reports).
- SRS-003: The system shall display information of current doctor which includes position, name, surname and username.
- SRS-004: The system shall provide the breadcrumb link.
- SRS-005: The system shall provide patient create form to allow to doctor input information which includes personal ID, name, surname, prescription, and username.
- SRS-006: The system shall display error message “Personal ID cannot be blank.” when doctors do not input personal ID.
- SRS-007: The system shall display error message “Personal ID has already been exist.” when doctors input personal ID that exist in the database.
- SRS-008: The system shall display error message “Personal ID is invalid” when doctors input wrong personal Id.
- SRS-009: The system shall display error message “Name cannot be blank.” when doctors do not input name.
- SRS-010: The system shall display error message “Surname cannot be blank.” when doctors do not input surname.
- SRS-011: The system shall display error message “Prescription cannot be blank.” when doctors do not input prescription.
- SRS-012: The system shall display error message “Username cannot be blank.” when doctors do not input username.
- SRS-013: The system shall display error message “Username has already been taken. Please change.” when doctors input username that repeated with the database.
- SRS-014: The system shall display error message “Name is invalid.” when doctors input name with not a letter on English language.
- SRS-015: The system shall display error message “Surname is invalid.” when doctors input surname with not a letter on English language.
- SRS-016: The system shall provide a ‘Create’ button for creating patient’s profiles.
- SRS-017: The system shall generate the password to a patient’s profile, which is 5 digits number.
- SRS-018: The system shall store doctor’s id, and date time of creating profile into the database when doctors click ‘Create’ button.
- SRS-019: The system shall validate personal id, name, surname, prescription, and username by Ajax validation.
- SRS-020: The system shall save data of patient’s profiles to database and redirect user to patient’s profile UI.
- SRS-021: The system shall provide the manage page, which includes create button, search text field, search button.
- SRS-022: The system shall provide the table lists of patient which include seven columns (no., personal ID, name, surname, responsible, create date and options.)
- SRS-023: The system shall provide ‘Update’ button () in the options column of table.
- SRS-024: The system shall retrieve patient’s profiles from database.
- SRS-025: The system shall provide patient update profiles form that has default information (personal ID, name, surname, prescription, and username).
- SRS-026: The system shall provide a ‘Update’ button for updating patient’s profiles.
- SRS-027: The system shall store doctor’s id, and date time of updating profile into the database when doctors click ‘Update’ button.
- SRS-028: The system shall provide menu bars (home, and login).
- SRS-029: The system shall save a new data of patient’s profiles to database and redirect user to patient’s profile UI.
- SRS-030: The system shall display the message to show the number and total amount of patient’s profiles.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- [Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	34
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

- SRS-031: The system shall provide 'Delete' button () in the options column of table.
- SRS-032: The system shall interface to show the confirm box "Are you sure you want to delete this item?" when doctors click 'Delete' button on the web application.
- SRS-033: The system shall be able to delete a patient's profiles from the database when doctors click 'OK' button on the confirm box.
- SRS-034: The system shall be not able to delete a patient's profiles from the database when doctors click 'Cancel' button.
- SRS-035: The system shall display the message "*No results found*", when the data that input does not exist in the database.
- SRS-036: The system shall display the patient's information on the table, when searching found the match letters exist in the database.
- SRS-037: The system shall provide 'View' button () in the options column of table.
- SRS-038: The system shall provide the patient's profiles UI, which includes personal ID, name, surname, prescription, responsible, username, password, create date and update date of patient's profiles.
- SRS-039: The system shall provide the 'Update' button and 'Delete' button.
- SRS-040: The system shall provide user options menu box (create user and manage user).
- SRS-041: The system shall display information of current admin which includes position, name, surname and username.
- SRS-042: The system shall provide user's profiles form to allow to admin input information which include name, surname, username, password, confirm-password and select points of position (Administrator, Doctor, and FDA).
- SRS-043: The system shall display error message "Name cannot be blank." when admins do not input name.
- SRS-044: The system shall display error message "Surname cannot be blank." when admins do not input surname.
- SRS-045: The system shall display error message "Username cannot be blank." when admins do not input username.
- SRS-046: The system shall display error message "Username has already been taken. Please change." when admins input username that repeated with the database.
- SRS-047: The system shall display error message "Password and Confirm-Password do not Match, Please try again." when admins input password and confirm-password do not match.
- SRS-048: The system shall display error message "Name is invalid." when admins input name with not a letter on English language.
- SRS-049: The system shall display error message "Surname is invalid." when admins input surname with not a letter on English language.
- SRS-050: The system shall display error message "Position cannot be blank." when admins do not select the position.
- SRS-051: The system shall provide a 'Create' button for creating user's profile.
- SRS-052: The system shall save data of user's profiles to database and redirect user to user's profile UI.
- SRS-053: The system shall provide the table lists of patient which include seven columns (no., personal ID, name, surname, reporter, create date and options.)
- SRS-054: The system shall provide the table lists of user which include six columns (no., position, name, surname, username and options.)
- SRS-055: The system shall retrieve user's profiles from database.
- SRS-056: The system shall provide user update form that has default information (name, surname, username, password, confirm-password and position).
- SRS-057: The system shall provide a 'Update' button for updating user's profiles.
- SRS-058: The system shall save a new data of user's profiles to database and redirect user to user's profile UI.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	35
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

SRS-059: The system shall display the message to show the number and total amount of user's profiles.

SRS-060: The system shall interface to show the confirm box "Are you sure you want to delete this item?" when admins click 'Delete' button on the web application.

SRS-061: The system shall be able to delete a user's profiles from the database when admins click 'OK' button on the confirm box.

SRS-062: The system shall be not able to delete a user's profiles from the database when admins click 'Cancel' button.

SRS-063: The system shall display the user's information on the table, when searching found the match letters exist in the database.

SRS-064: The system shall provide the user's profiles page, which includes Id, name, surname, username, password, confirm-password and position.

SRS-065: The system shall provide the login form, to receive username and password.

SRS-066: The system displays the alert message "Cannot be blank" if users do not input the username and password on the login form.

SRS-067: The system shall redirect user to the main page if user login successful

SRS-068: The system shall validate username and password from database.

SRS-069: The system shall provide 'Login' button for login to the web application.

SRS-070: The system shall displays error message "Username cannot be blank." when user do not input username.

SRS-071: The system shall displays error message "Password cannot be blank." when user do not input password.

SRS-072: The system shall displays error box message "Username is incorrect!" when username does not exist in the database.

SRS-073: The system shall displays error box message "Password is incorrect!" when password does not exist in the database.

SRS-074: The system shall redirect user to particular home page if users login success.

SRS-075: The system shall redirect users to main page if users click logout button.

SRS-076: The system shall provide the login form, to receive username and password.

SRS-077: The system shall validate username and password from database.

SRS-078: The system shall provide 'login' button for login to the mobile application.

SRS-079: The system shall display message "Incorrect username or password" if username or password.

SRS-080: The system shall provide "logout" button on the main page.

SRS-081: The system shall redirect users to the login page if users click 'logout' button.

SRS-082: The system shall provide the QR code page, which includes exit button and "Show QR code" button.

SRS-083: The system shall generate the QR code after select "Show QR code" button.

SRS-084: The system shall display the QR code to patient.

SRS-085: The system shall provide the scan QR button for open the scan QR function.

SRS-086: The system shall scan QR code on the mobile application.

SRS-087: The system shall provide the information of patient after scan QR code completed.

SRS-088: The system shall provide 'confirm' button for specify prescription.

SRS-089: The system shall display message "Successful" after select "confirm" button.

SRS-090: The system shall record the current time to the patient's profile.

SRS-091: The system shall provide allergy report create form to doctor to input information which includes personal ID, name, surname, and allergy drug.

SRS-092: The system shall display error message "Allergy Drug cannot be blank." when doctors do not input allergy drug.

SRS-093: The system shall provide a 'Create' button for creating allergy report.

SRS-094: The system shall store doctor's id, and date time of creating report into the database when doctors click 'Create' button.

SRS-095: The system shall display error message "Confirm-Password cannot be blank." when admins does not input confirm-password.

SRS-096: The system shall save allergy report to database and redirect user to allergy report UI.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability-Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	36
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

SRS-097: The system shall retrieve allergy report from database.

SRS-098: The system shall provide allergy report update form that has default information (personal ID, name, surname, and allergy drug).

SRS-099: The system shall provide a 'Update' button for updating allergy report.

SRS-100: The system shall store doctor's id date time of updating profile into the database when doctors click 'Update' button.

SRS-101: The system shall display error message "Password cannot be blank." when admins does not input password.

SRS-102: The system shall save a new data of allergy report to database and redirect user to allergy report page.

SRS-103: The system shall display the message to show the number and total amount of allergy reports.

SRS-104: The system shall interface to show the confirm box "Are you sure you want to delete this item?" when doctors click 'Delete' button on the web application.

SRS-105: The system shall be able to delete an allergy report from the database when doctors click 'OK' button on the confirm box.

SRS-106: The system shall be not able to delete an allergy report from the database when doctors click 'Cancel' button.

SRS-107: The system shall display the user's information on the table, when searching found the match letters exist in the database.

SRS-108: The system shall validate personal ID, name, surname, and allergy drug by Ajax validation.

SRS-109: The system shall provide allergy options menu box (view reports list).

SRS-110: The system shall display information of current FDA which includes position, name, surname and username.

SRS-111: The system shall validate name, surname, username, password, confirm-password and position by Ajax validation.

SRS-112: The system shall provide the list of allergy report page,

SRS-113: The system shall validate input data by Ajax validation.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- [Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	37
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016



## Use case

- UC-01: Doctors can view a doctor home page on the web application.
- UC-02: Doctors can create a patient's profile on the web application by inputting personal id, name, surname, prescription and username.
- UC-03: Doctors can update a patient's profile on the web application by application by input personal id, name, surname, prescription or username.
- UC-04: Doctors can delete a patient's profile on the web application.
- UC-05: Doctors can search patient's profiles on the web application by using personal id, name, and surname.
- UC-06: Doctors can view a patient's profile on the web application.
- UC-07: Doctors can view list of patient's profiles on the web application.
- UC-08: Administrators can view an admin home page on the web application.
- UC-09: Administrators can create a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- UC-10: Administrators can update a user's profile on the web application by inputting name, surname, username, password, confirm-password or position.
- UC-11: Administrators can delete a user's profile on the web application.
- UC-12: Administrators can search a user's profile on the web application by using name, surname, and username.
- UC-13: Administrators can view a user's profile on the web application.
- UC-14: Administrators can view list of user's profile on the web application.
- UC-15: Doctors, Administrations, and FDAs can login to the web application by using username and password.
- UC-16: Doctors, Administrations, and FDAs can logout from the web application.
- UC-17: Patients can login to the mobile application by using username and password.
- UC-18: Patients can logout from the mobile application.
- UC-19: Patients can view the QR code on the mobile application.
- UC-20: Pharmacists can scan the QR code on the mobile application.
- UC-21: Pharmacists can add the time of dispensation to the patient's profile on the mobile application.
- UC-01: Doctors can view a doctor home page on the web application.
- UC-22: Doctors can create an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- UC-23: Doctors can update an allergy report on the web application by inputting personal id, name, surname, or allergy drug.
- UC-24: Doctors can delete an allergy report on the web application.
- UC-25: Doctors can search an allergy report on the web application by using personal id, name, and surname.
- UC-26: Doctors can view an allergy drug report on the web application.
- UC-27: Doctors can view list of allergy drug reports on the web application.
- UC-28: FDAs can view a FDA home page on the web application.
- UC-29: FDAs can view an allergy report on the web application.
- UC-30: FDAs can view list of allergy reports on the web application.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	38
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## Use Case Diagram

UCD-01: Prescription System.

UCD-02: Account Management System.

UCD-03: Authentication System.

UCD-04: Verification System.

UCD-05: Allergy Report System.

UCD-06: Summary Allergy Report System.

## Class

Class-01: LoginForm

Class-02: SiteController

Class-03: User

Class-04: UserController

Class-05: Role

Class-06: AdminController

Class-07: DoctorController

Class-08: FdaController

Class-09: Patient

Class-10: PatientController

Class-11: Allergy

Class-12: AllergyController

Class-13: MainActivity

Class-14: QrEncodeActivity

Class-15: LoginActivity

Class-16: QRCodeEncoder

Class-17: ApiService

Class-18: LoginListener

Class-19: LoginEventManager

Class-20: PreferencesManager

Class-21: PrescriptionManager

Class-22: UpdateTimeListener

Class-23: LoginFragment

Class-24: MainFragment

Class-25: Config (web service)

Class-26: login (web service)

Class-27: update\_prescription (web service)

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION- [Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	39
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## User Interface

UI-01: Main page  
 UI-02: Administration home page  
 UI-03: Create user page UI-04: Update user page UI-05: Manage users page UI-06:  
 User's profile page UI-07: Doctor home page UI-08: Create patient page  
 UI-09: Update patient page  
 UI-10: Manage patients page  
 UI-11: Patient's profile page  
 UI-12: Create allergy report page  
 UI-13: Update allergy report page UI-14: Manage allergy reports page UI-15: Allergy report  
 page  
 UI-16: FDA home page  
 UI-17: List allergy reports page  
 UI-18: FDA Allergy report page  
 UI-19: Login page  
 UI-20: Login page (mobile) UI-21: Main page (mobile)  
 UI-22: QR code page (mobile)  
 UI-23: Scan QR code page (mobile) UI-24: Pharmacist page (mobile)

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	40
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016



## Activity Diagram (AD)

- AD-01: Doctors can view a doctor home page on the web application.
- AD-02: Doctors can create a patient's profile on the web application by inputting personal id, name, surname, prescription and username.
- AD-03: Doctors can update a patient's profile on the web application by application by input personal id, name, surname, prescription and username.
- AD-04: Doctors can delete a patient's profile on the web application.
- AD-05: Doctors can search patient's profiles on the web application by using personal id, name, and surname.
- AD-06: Doctors can view a patient's profile on the web application.
- AD-07: Doctors can view list of patient's profiles on the web application.
- AD-08: Administrators can view an admin home page on the web application.
- AD-09: Administrators can create a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- AD-10: Administrators can update a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- AD-11: Administrators can delete a user's profile on the web application.
- AD-12: Administrators can search a user's profile on the web application by using name, surname, and username.
- AD-13: Administrators can view a user's profile on the web application.
- AD-14: Administrators can view list of user's profile on the web application.
- AD-15: Doctors, Administrations, and FDAs can login to the web application by using username and password.
- AD-16: Doctors, Administrations, and FDAs can logout from the web application.
- AD-17: Patients can login to the mobile application by using username and password.
- AD-18: Patients can logout from the mobile application.
- AD-19: Patients can view the QR code on the mobile application.
- AD-20: Pharmacists can scan the QR code on the mobile application.
- AD-21: Pharmacists can add the time of dispensation to the patient's profile on the mobile application.
- AD-22: Doctors can create an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- AD-23: Doctors can update an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- AD-24: Doctors can delete an allergy report on the web application.
- AD-25: Doctors can search an allergy report on the web application by using personal id, name, and surname.
- AD-26: Doctors can view an allergy drug report on the web application.
- AD-27: Doctors can view list of allergy drug reports on the web application.
- AD-28: FDAs can view a FDA home page on the web application.
- AD-29: FDAs can view an allergy report on the web application.
- AD-30: FDAs can view list of allergy reports on the web application.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability-Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	41
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## Sequence Diagram

- SD-01: Doctors can view a doctor home page on the web application.
- SD-02: Doctors can create a patient's profile on the web application by inputting personal id, name, surname, prescription and username.
- SD-03: Doctors can update a patient's profile on the web application by application by input personal id, name, surname, prescription and username.
- SD-04: Doctors can delete a patient's profile on the web application.
- SD-05: Doctors can search patient's profiles on the web application by using personal id, name, and surname.
- SD-06: Doctors can view a patient's profile on the web application.
- SD-07: Doctors can view list of patient's profiles on the web application.
- SD-08: Administrators can view an admin home page on the web application.
- SD-09: Administrators can create a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- SD-10: Administrators can update a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- SD-11: Administrators can delete a user's profile on the web application.
- SD-12: Administrators can search a user's profile on the web application by using name, surname, and username.
- SD-13: Administrators can view a user's profile on the web application.
- SD-14: Administrators can view list of user's profile on the web application.
- SD-15: Doctors, Administrations, and FDAs can login to the web application by using username and password.
- SD-16: Doctors, Administrations, and FDAs can logout from the web application.
- SD-17: Patients can login to the mobile application by using username and password.
- SD-18: Patients can logout from the mobile application.
- SD-19: Patients can view the QR code on the mobile application.
- SD-20: Pharmacists can scan the QR code on the mobile application.
- SD-21: Pharmacists can add the time of dispensation to the patient's profile on the mobile application.
- SD-22: Doctors can create an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- SD-23: Doctors can update an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- SD-24: Doctors can delete an allergy report on the web application.
- SD-25: Doctors can search an allergy report on the web application by using personal id, name, and surname.
- SD-26: Doctors can view an allergy drug report on the web application.
- SD-27: Doctors can view list of allergy drug reports on the web application.
- SD-28: FDAs can view a FDA home page on the web application.
- SD-29: FDAs can view an allergy report on the web application.
- SD-30: FDAs can view list of allergy reports on the web application.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	42
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## Unit Test Case

UTC-01: login(String username, String password) : Boolean  
UTC-02: logout() : Boolean  
UTC-03: getUserList() : ArrayList  
UTC-04: viewUser(Int userId) : Mixed  
UTC-05: createUser(User user) : Boolean  
UTC-06: updateUser(User user) : Boolean  
UTC-07: deleteUser(Int userId) : Boolean  
UTC-08: searchUser(String users) : ArrayList  
UTC-09: getPatientList() : ArrayList  
UTC-10: viewPatient(Int personal\_id) : Mixed  
UTC-11: createPatient(Patient patient) : Boolean  
UTC-12: updatePatient(Patient patient) : Boolean  
UTC-13: deletePatient(Int personal\_id) : Boolean  
UTC-14: searchPatient(String patients) : ArrayList  
UTC-15: getAllergyList() : ArrayList  
UTC-16: viewAllergy(Int allergy\_id) : Mixed  
UTC-17: getAllergyList2() : ArrayList  
UTC-18: viewAllergy2(Int allergy\_id) : Mixed  
UTC-19: createAllergy(Allergy allergy) : Boolean  
UTC-20: updateAllergy(Allergy allergy) : Boolean  
UTC-21: deleteAllergy(Int allergy\_id) : Boolean  
UTC-22: searchAllergy(String allergies) : ArrayList  
UTC-23: Login() : void  
UTC-24: getUserInformation() : UserInformationModel  
UTC-25: encode(String contents, BarcodeFormat format, int width, int height): BitMatrix

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	43
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016

## System Test Case

- STC-01: Doctors can view a doctor home page on the web application.
- STC-02: Doctors can create a patient's profile on the web application by inputting personal id, name, surname, prescription and username.
- STC-03: Doctors can update a patient's profile on the web application by application by input personal id, name, surname, prescription and username.
- STC-04: Doctors can delete a patient's profile on the web application.
- STC-05: Doctors can search patient's profiles on the web application by using personal id, name, and surname.
- STC-06: Doctors can view a patient's profile on the web application.
- STC-07: Doctors can view list of patient's profiles on the web application.
- STC-08: Administrators can view an admin home page on the web application.
- STC-09: Administrators can create a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- STC-10: Administrators can update a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
- STC-11: Administrators can delete a user's profile on the web application.
- STC-12: Administrators can search a user's profile on the web application by using name, surname, and username.
- STC-13: Administrators can view a user's profile on the web application.
- STC-14: Administrators can view list of user's profile on the web application.
- STC-15: Doctors, Administrations, and FDAs can login to the web application by using username and password.
- STC-16: Doctors, Administrations, and FDAs can logout from the web application.
- STC-17: Patients can login to the mobile application by using username and password.
- STC-18: Patients can logout from the mobile application.
- STC-19: Patients can view the QR code on the mobile application.
- STC-20: Pharmacists can scan the QR code on the mobile application.
- STC-21: Pharmacists can add the time of dispensation to the patient's profile on the mobile application.
- STC-01: Doctors can view a doctor home page on the web application.
- STC-22: Doctors can create an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- STC-23: Doctors can update an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
- STC-24: Doctors can delete an allergy report on the web application.
- STC-25: Doctors can search an allergy report on the web application by using personal id, name, and surname.
- STC-26: Doctors can view an allergy drug report on the web application.
- STC-27: Doctors can view list of allergy drug reports on the web application.
- STC-28: FDAs can view a FDA home page on the web application.
- STC-29: FDAs can view an allergy report on the web application.
- STC-30: FDAs can view list of allergy reports on the web application.

<b>Document Name</b>	SMART-PRESCRIPTION-APPLICATION-[Traceability- Record_V3.0]	<b>Owner</b>	Natthakan Kaeokanpai, Phithiwat Sitthitun	<b>Page</b>	44
<b>Document Type</b>	Traceability Record	<b>Release Date</b>	August 26 <sup>th</sup> , 2016	<b>Print Date</b>	December 9 <sup>th</sup> , 2016