

Unit Test Report

for Network Printer System

- Test Cases Specification
- Test Summary Report

Project Team

Team3

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Team Information

이재상 (201011355)

신보선 (201012047)

한재만 (201111396)

김종우 (201111345)

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1 Introduction

1.1 Objectives

본 문서는 2015년 건국대학교 컴퓨터 공학과의 소프트웨어 공학 개론 강의의 실습과제를 설명한다. 실습과제는 네트워크 프린터 시스템(NPS : Network Printer System)을 소프트웨어만을 이용한 가상의 시스템으로 구현하는 것이다.

1.2 References

T3_2015_SRA_3.0

T3_2015_SDS_1.0

2 Unit test case specification

2.1 Test case specification identifier

Identifier	Input Specification	Output Specification
Team3_NPS_000_000	Network Data = {“Admi”, “usrcheck”,\0} Account Storage = {“Admin”}	Username 재입력 요구
Team3_NPS_000_001	Network Data = {“Admin”,“usrd”,\0} Account Storage = {“Admin”}	Command 재입력 요구
Team3_NPS_000_002	Network Data = {“Admin”, “usradd”,“12345678900”} Account Storage = {“Admin”}	TargetUsername 재입력 요구
Team3_NPS_000_003	Network Data = {“Admin”, “usradd”,“”} Account Storage = {“Admin”}	TargetUsername 재입력 요구
Team3_NPS_000_004	Network Data = {“Admin”, “usradd”,“A”} Account Storage = {“Admin”}	Account Order = {“usradd”} TargetUsername = {“A”} Account Storage =

		{"Admin", "A"}
Team3_NPS_000_005	Network Data = {"Admin", "usrdel", "B"} Account Storage = {"Admin", "A"}	TargetUsername 재입력 요구
Team3_NPS_000_006	Network Data = {"Admin", "usrdel", "A"} Account Storage = {"Admin", "A"}	Account Order = {"usrdel"} TargetUsername = {"A"} Account Storage = {"Admin"}
Team3_NPS_000_007	Network Data = {"Admin", "usrcheck", \0 } Account Storage = {"Admin", "A"}	Listed Account Data = {"Admin", "A"}
Team3_NPS_000_008	Network Data = {"Admin", "refill", \0 } Account Storage = {"Admin"}	Verified Data = {"Admin", "refill", \0 }
Team3_NPS_000_009	Network Data = {"Admin", "prin", "test.txt" } Account Storage = {"Admin"}	Command 재입력 요구
Team3_NPS_000_010	Network Data = {"Admin", "print", "testtxt" } Account Storage = {"Admin"}	Filename 재입력 요구
Team3_NPS_000_011	Network Data = {"Admin", "print", "test1.txt" } Account Storage = {"Admin"}	Filename 재입력 요구
Team3_NPS_000_012	Network Data = {"Admin", "print", "test.txt" } Account Storage = {"Admin"}	Verified Data = {"Admin", "print", "test.txt" }
Team3_NPS_000_013	Network Data = {"Admin", "stop", \0}	Verified Data = {"Admin", "stop", \0}

	Account Storage = { "Admin" }	
Team3_NPS_000_014	Network Data = { "a", "print", "test.txt" } Account Storage = { "Admin", "A" }	Username 재입력 요구
Team3_NPS_000_015	Network Data = { "A", "usradd", "B" } Account Storage = { "Admin", "A" }	Command 재입력 요구
Team3_NPS_000_016	Network Data = { "A", "usrdel", "B" } Account Storage = { "Admin", "A" }	Command 재입력 요구
Team3_NPS_000_017	Network Data = { "A", "usrcheck", "\0" } Account Storage = { "Admin", "A" }	Command 재입력 요구
Team3_NPS_000_018	Network Data = { "A", "refill", "\0" } Account Storage = { "Admin", "A" }	Command 재입력 요구
Team3_NPS_000_019	Network Data = { "A", "prin", "test.txt" } Account Storage = { "Admin", "A" }	Command 재입력 요구
Team3_NPS_000_020	Network Data = { "A", "print", "testtxt" } Account Storage = { "Admin", "A" }	Filename 재입력 요구
Team3_NPS_000_021	Network Data = { "A", "print", "test1.txt" } Account Storage = { "Admin", "A" }	Filename 재입력 요구
Team3_NPS_000_022	Network Data = { "A", "print", "test.txt" } Account Storage = { "Admin", "A" }	Verified Data = { "A", "print", "test.txt" }

Team3_NPS_000_023	Network Data = { "A", "stop", \0} Account Storage = { "Admin", "A"}	Verified Data = { "A", "stop", \0}
Team3_NPS_001_000	Verified Data = { "Admin", "print", "test.txt"} Pause Data = {False} Print Now = {\0}	call Write Print Queue Extracted Verified Data = { "A", "print", "test.txt"}
Team3_NPS_001_001	Verified Data = { "Admin", "stop", \0} Pause Data = {False} Print Now = {\0}	call Stop
Team3_NPS_001_002	Verified Data = { "Admin", "refill", \0} Pause Data = {False} Print Now = {\0}	call Refill
Team3_NPS_001_003	Verified Data = { "A", "print", "test.txt"} Pause Data = {False} Print Now = {\0}	call Write Print Queue Extracted Verified Data = { "A", "print", "test.txt"}
Team3_NPS_001_004	Verified Data = { "A", "stop", \0} Pause Data = {False} Print Now = {"Q1"}	call Stop
Team3_NPS_001_005	Verified Data = { \0, \0, \0} Pause Data = {True} Print Now = {"Q1"}	call Stop
Team3_NPS_001_006	Verified Data = { \0, \0, \0} Pause Data = {False} Print Now = {\0}	call Write Print Now
Team3_NPS_001_007	Verified Data = { \0, \0, \0} Pause Data = {False} Print Now = {"Q1"}	call Print
Team3_NPS_002_000	Extracted Print Data = { "A", "print", "test.txt"} Material Storage Data = { Ink=0, Paper=0} Print Queue =	Network Message = { "Can't Print"}

	{ "Q1", "Q2", "Q3", "Q4", "Q5" }	
Team3_NPS_002_001	<p>Extracted Print Data = {"A", "print", "test.txt"}</p> <p>Material Storage Data = {Ink=3000, Paper=0}</p> <p>Print Queue = { "Q1", "Q2", "Q3", "Q4", "Q5" }</p>	Network Message = {"Can't Print"}
Team3_NPS_002_002	<p>Extracted Print Data = {"A", "print", "test.txt"}</p> <p>Material Storage Data = {Ink=0, Paper=100}</p> <p>Print Queue = { "Q1", "Q2", "Q3", "Q4", "Q5" }</p>	Network Message = {"Can't Print"}
Team3_NPS_002_003	<p>Extracted Print Data = {"A", "print", "test.txt"}</p> <p>Material Storage Data = {Ink=3000, Paper=100}</p> <p>Print Queue = { "Q1", "Q2", "Q3", "Q4", "Q5" }</p>	Network Message = {"Can't Print"}
Team3_NPS_002_004	<p>Extracted Print Data = {"A", "print", "test.txt"}</p> <p>Material Storage Data = {Ink=0, Paper=0}</p> <p>Print Queue = { "Q1", "Q2", "Q3", "Q4", \0 }</p>	Network Message = {"Can't Print"}
Team3_NPS_002_005	<p>Extracted Print Data = {"A", "print", "test.txt"}</p> <p>Material Storage Data = {Ink=0, Paper=0}</p> <p>Print Queue = { "Q1", "Q2", \0, \0, \0 }</p>	Network Message = {"Can't Print"}
Team3_NPS_002_006	<p>Extracted Print Data = {"A", "print", "test.txt"}</p> <p>Material Storage Data = {Ink=0, Paper=0}</p> <p>Print Queue =</p>	Network Message = {"Can't Print"}

	{ "Q1", "Q2", "Q3", "Q4", "Q5" }	
Team3_NPS_002_007	Extracted Print Data = { "A", "print", "test.txt" } Material Storage Data = { Ink=3000, Paper=0 } Print Queue = { "Q1", "Q2", "Q3", "Q4", \0 }	Network Message = { "Can't Print" }
Team3_NPS_002_008	Extracted Print Data = { "A", "print", "test.txt" } Material Storage Data = { Ink=3000, Paper=0 } Print Queue = { "Q1", "Q2", \0, \0, \0 }	Network Message = { "Can't Print" }
Team3_NPS_002_009	Extracted Print Data = { "A", "print", "test.txt" } Material Storage Data = { Ink=3000, Paper=0 } Print Queue = { \0, \0, \0, \0, \0 }	Network Message = { "Can't Print" }
Team3_NPS_002_010	Extracted Print Data = { "A", "print", "test.txt" } Material Storage Data = { Ink=0, Paper=100 } Print Queue = { "Q1", "Q2", "Q3", "Q4", \0 }	Network Message = { "Can't Print" }
Team3_NPS_002_011	Extracted Print Data = { "A", "print", "test.txt" } Material Storage Data = { Ink=0, Paper=100 } Print Queue = { "Q1", "Q2", \0, \0, \0 }	Network Message = { "Can't Print" }
Team3_NPS_002_012	Extracted Print Data = { "A", "print", "test.txt" } Material Storage Data = { Ink=0, Paper=100 } Print Queue = { \0, \0, \0, \0, \0 }	Network Message = { "Can't Print" }
Team3_NPS_002_013	Extracted Print Data = { "A", "print", "test.txt" } Material Storage Data =	Print Queue = { "Q1", "Q2", "Q3", "Q4",

	{Ink=3000, Paper=100} Print Queue = {“Q1”, “Q2”, “Q3”, “Q4”, \0}	“Q5”}
Team3_NPS_002_014	Extracted Print Data = {“A”, “print”, “test.txt”} Material Storage Data = {Ink=3000, Paper=100} Print Queue = {“Q1”, “Q2”, \0, \0, \0}	Print Queue = {“Q1”, “Q2”, “Q3”, \0, \0}
Team3_NPS_002_015	Extracted Print Data = {“A”, “print”, “test.txt”} Material Storage Data = {Ink=3000, Paper=100} Print Queue = {\0, \0, \0, \0, \0}	Print Queue = {“Q1”, \0, \0, \0, \0}
Team3_NPS_003_000	Print Queue = {“Q1”, “Q2”, “Q3”, “Q4”, “Q5”}	Print Now = {“Q1”} Print Queue = {“Q2”, “Q3”, “Q4”, “Q5”, \0}
Team3_NPS_003_001	Print Queue = {“Q1”, “Q2”, “Q3”, “Q4”, \0}	Print Now = {“Q1”} Print Queue = {“Q2”, “Q3”, “Q4”, \0, \0}
Team3_NPS_003_002	Print Queue = {“Q1”, “Q2”, “Q3”, \0, \0}	Print Now = {“Q1”} Print Queue = {“Q2”, “Q3”, \0, \0, \0}
Team3_NPS_003_003	Print Queue = {“Q1”, “Q2”, \0, \0, \0}	Print Now = {“Q1”} Print Queue = {“Q2”, \0, \0, \0, \0}
Team3_NPS_003_004	Print Queue = {“Q1”, \0, \0, \0, \0}	Print Now = {“Q1”} Print Queue = {\0, \0, \0, \0, \0}
Team3_NPS_004_000	Print Now = {“Q1”}	Print Now = {\0} Print Command = {“currenttime.txt”} Display Command = {status=1} Material Command = {Ink-=100, paper-=1}
Team3_NPS_004_001	Print Now = {“Q2”}	Print Now = {\0} Print Command = {“currenttime.txt”} Display Command = {status=1} Material Command = {Ink-=1000, paper-=3}

Team3_NPS_005_000	Trigger	Print Now = {\0} Display Command = {status=3}
Team3_NPS_006_000	Trigger	Display Command = {status=2} Material Command = {lnk=3000, paper=100}

<Table 1 Test Case Specification>

2.2 Test items

<Table 1 : Test Case Identification> 참조

2.3 Input specifications

<Table 1 : Test Case Identification> 참조

2.4 Output specifications

<Table 1 : Test Case Identification> 참조

3 Environmental needs

NPS의 unit test를 위한 환경적 요구사항은 다음과 같다.

(1) IDE : Code Blocks

(2) Cygwin

4 Unit test summary report

4.1 Test summary report identifier

Test case Identifier	Result
Team3_NPS_000_000	Pass
Team3_NPS_000_001	Pass
Team3_NPS_000_002	Fail
Team3_NPS_000_003	Pass
Team3_NPS_000_004	Pass
Team3_NPS_000_005	Pass
Team3_NPS_000_006	Pass
Team3_NPS_000_007	Pass
Team3_NPS_000_008	Pass
Team3_NPS_000_009	Pass
Team3_NPS_000_010	Pass

Team3_NPS_000_011	Pass
Team3_NPS_000_012	Pass
Team3_NPS_000_013	Pass
Team3_NPS_000_014	Pass
Team3_NPS_000_015	Pass
Team3_NPS_000_016	Pass
Team3_NPS_000_017	Pass
Team3_NPS_000_018	Pass
Team3_NPS_000_019	Pass
Team3_NPS_000_020	Pass
Team3_NPS_000_021	Pass
Team3_NPS_000_022	Pass
Team3_NPS_000_023	Pass
Team3_NPS_001_000	Pass
Team3_NPS_001_001	Pass
Team3_NPS_001_002	Pass
Team3_NPS_001_003	Pass
Team3_NPS_001_004	Pass
Team3_NPS_001_005	Fail
Team3_NPS_001_006	Pass
Team3_NPS_001_007	Pass
Team3_NPS_002_000	Pass
Team3_NPS_002_001	Pass
Team3_NPS_002_002	Pass
Team3_NPS_002_003	Pass
Team3_NPS_002_004	Pass
Team3_NPS_002_005	Pass
Team3_NPS_002_006	Pass
Team3_NPS_002_007	Pass
Team3_NPS_002_008	Pass
Team3_NPS_002_009	Pass
Team3_NPS_002_010	Pass
Team3_NPS_002_011	Pass
Team3_NPS_002_012	Pass
Team3_NPS_002_013	Pass
Team3_NPS_002_014	Pass
Team3_NPS_002_015	Pass
Team3_NPS_003_000	Pass

Team3_NPS_003_001	Pass
Team3_NPS_003_002	Pass
Team3_NPS_003_003	Pass
Team3_NPS_003_004	Pass
Team3_NPS_004_000	Pass
Team3_NPS_004_001	Pass
Team3_NPS_005_000	Pass
Team3_NPS_006_000	Pass

4.2 Evaluation

Total test case : 57

Passed : 55개

Failed : 2개