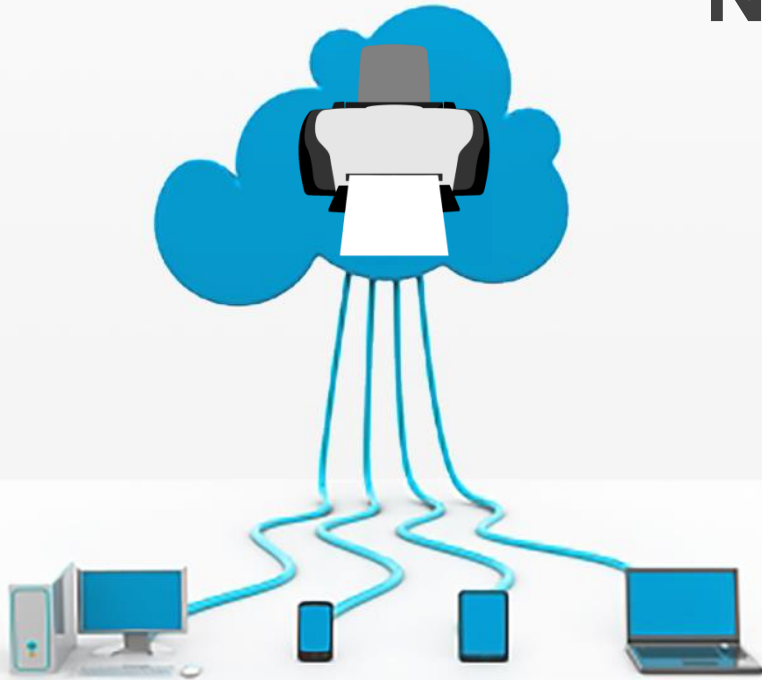


# N.P.S

# Network Printer System

T2\_ST Presentation



201011355 이재상  
201012047 신보선  
201111396 한재만  
201111345 김종우

## Adjustment

- SD
- Fail to Pass

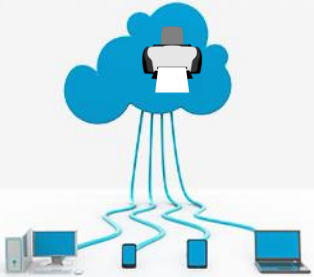
## T2 System Test

- Test Identification
- Test Specification
- Test Result
- Test Summary

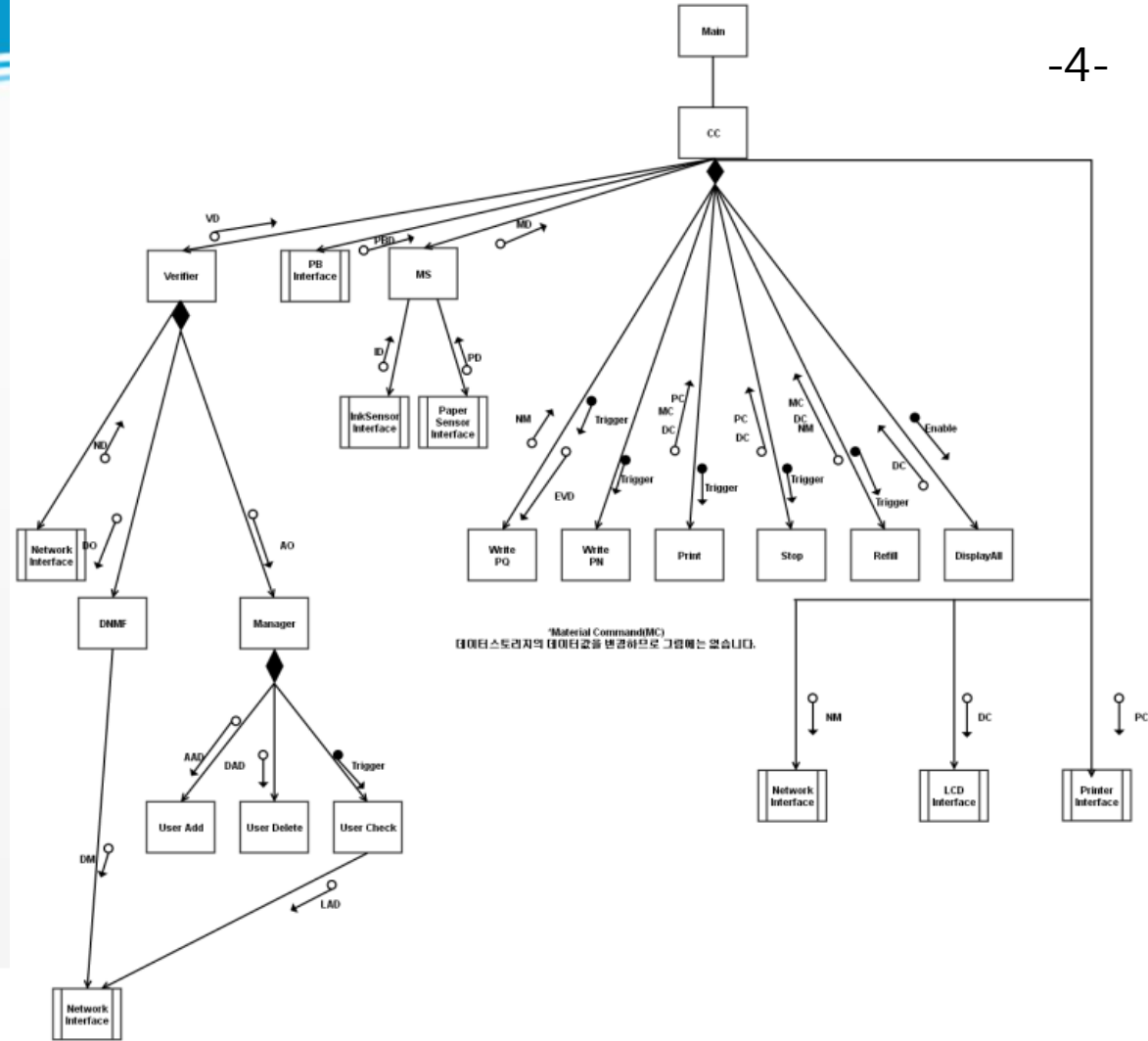
## Q&A



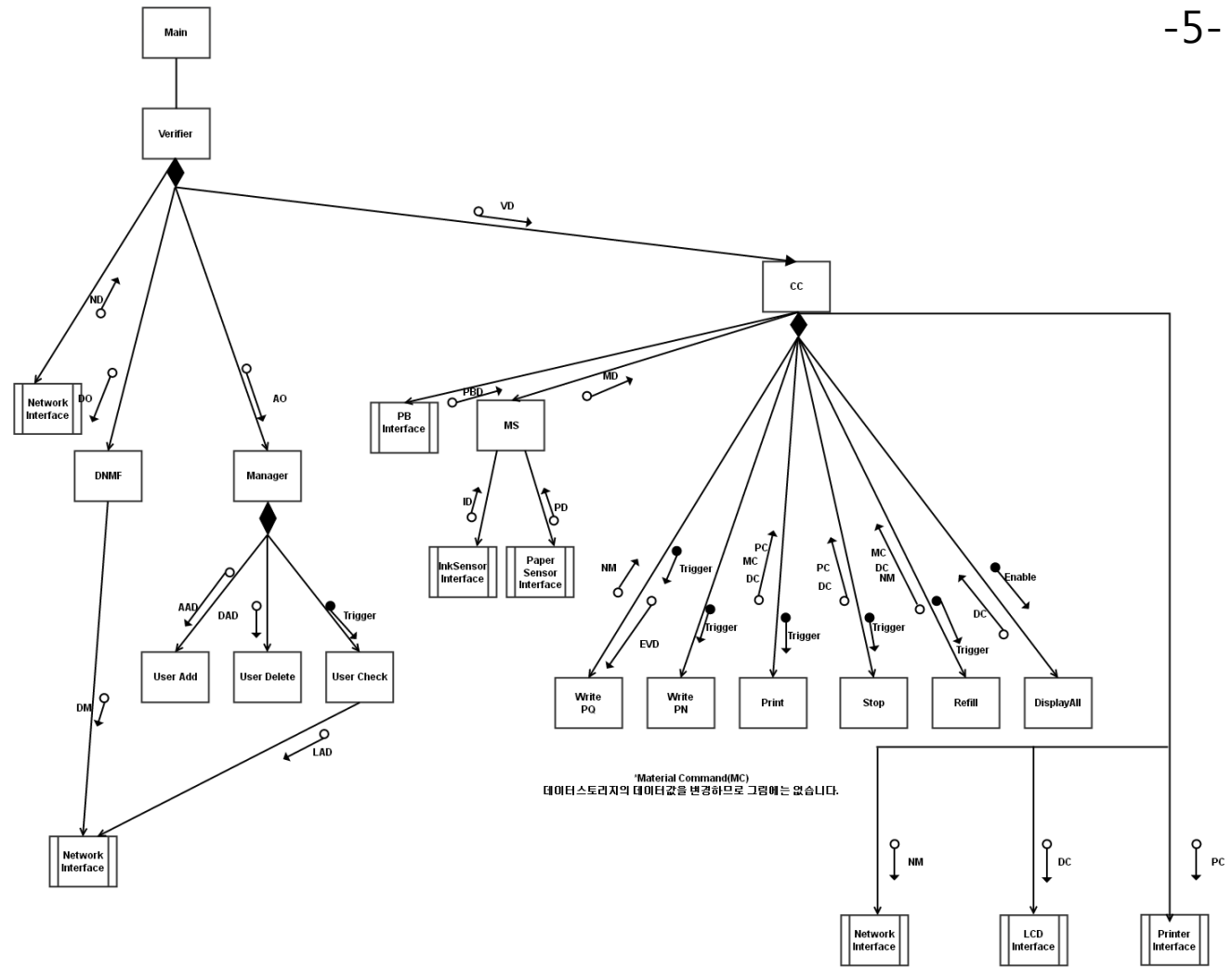
# Adjustment



# Structured Chart (Advanced)



# Structured Chart (Advanced)



# Fail to Pass

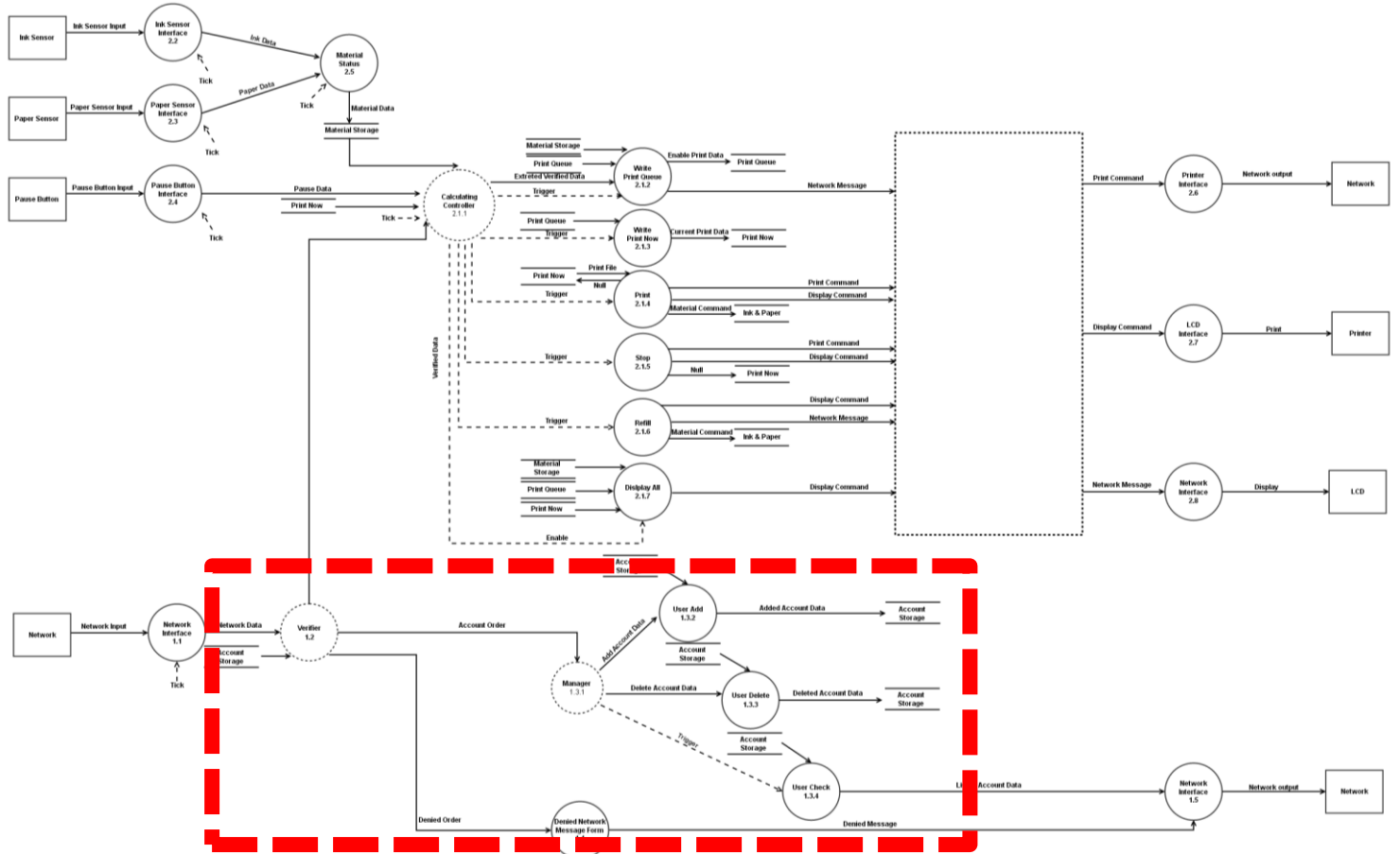


# Fail Items

	<b>Name</b>
1.2	Verifier
1.3.1	Manager
2.1.1	Calculation Controller

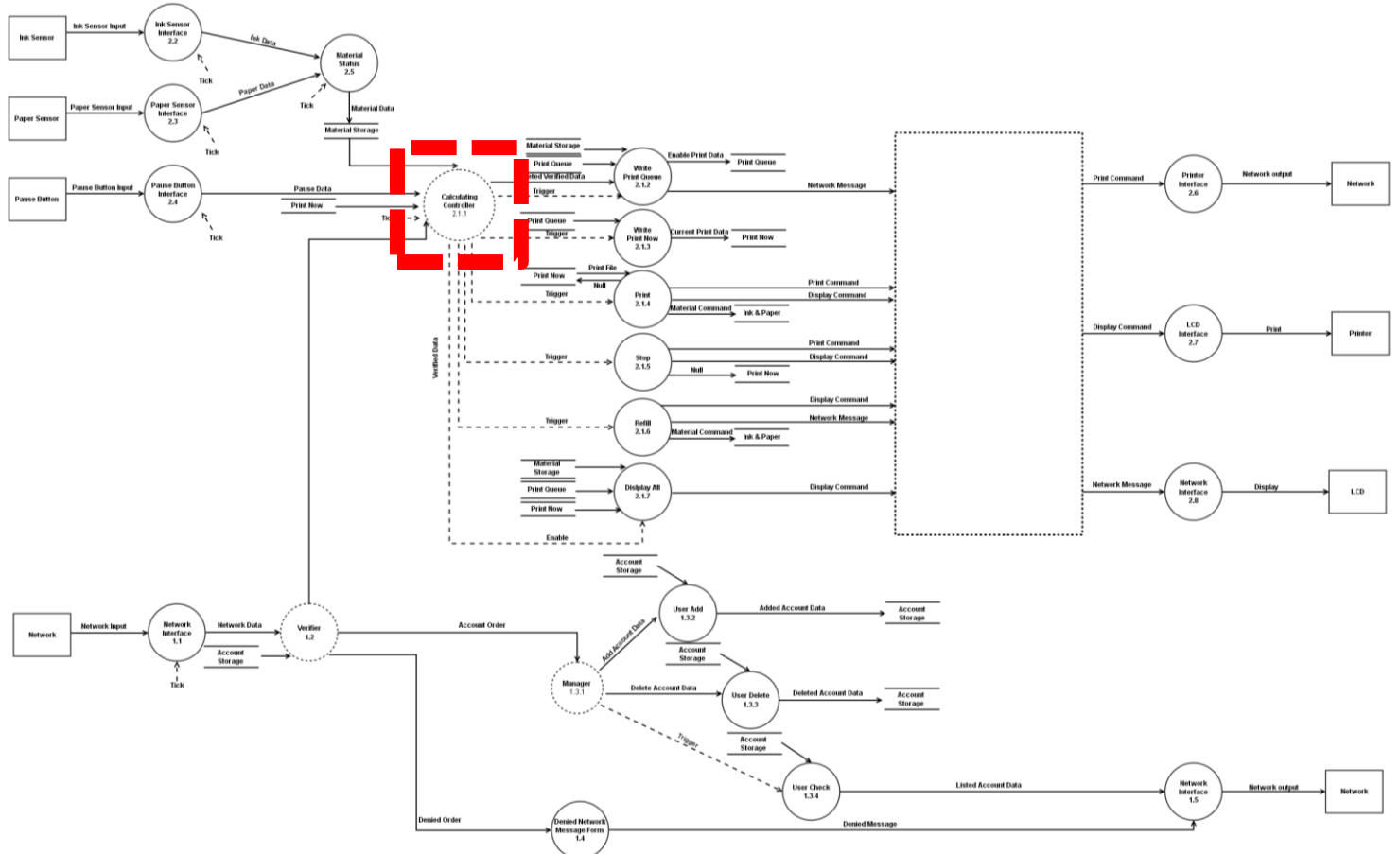


# Fail Unit





# Fail Unit



# Fail Case Specification

Team3\_NPS\_000\_002

Input	Output
Network Data = {"Admin", "usradd", "123456 78900"} Account Storage = {"Admin"}	TargetUsername 재입력 요구 ----- TargetUsername = {"1234567890"}



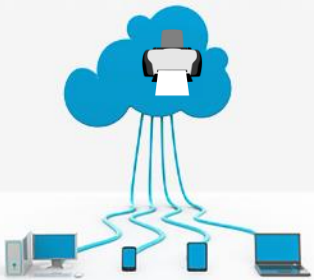
# Fail to Pass

Team3\_NPS\_000\_002

```

/cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
$ ls
a.exe bin LCD.cbp LCD.depend LCD.layout main.c main.exe main.o obj
jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/LCD
$ cd ..
jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin
$ cd nps
jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
$ ./a.exe
jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
$ ./a
jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
$ gcc main.c
jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
$ ./a.exe
Initializing Printer
Please Order : Admin usradd 12345678901
Please Input targetID within length 10.(code:10)
Please Order :

```



# Fail Case Specification

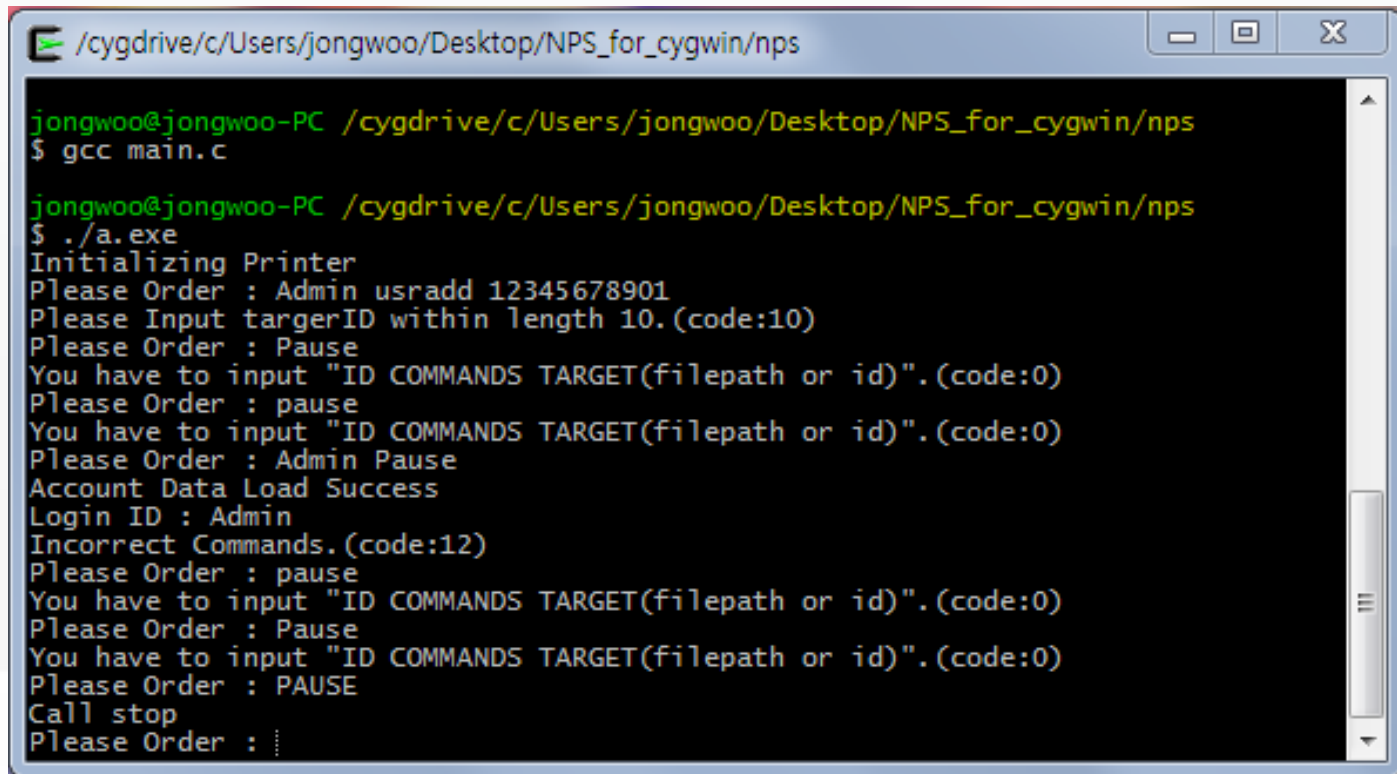
Team3\_NPS\_001\_005

Input	Output
Verified Data = {\0, \0, \0}	call Stop -----
Pause Data = {True}	don't call Stop
Print Now = {"Q1"}	Random Result



# Fail to Pass

Team3\_NPS\_001\_005



```

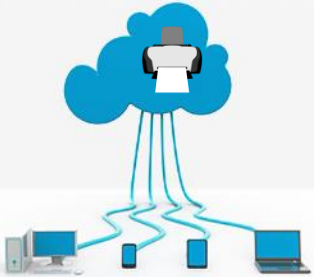
/cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
$ gcc main.c

jongwoo@jongwoo-PC /cygdrive/c/Users/jongwoo/Desktop/NPS_for_cygwin/nps
$ ./a.exe
Initializing Printer
Please Order : Admin usradd 12345678901
Please Input targerID within length 10.(code:10)
Please Order : Pause
You have to input "ID COMMANDS TARGET(filepath or id)".(code:0)
Please Order : pause
You have to input "ID COMMANDS TARGET(filepath or id)".(code:0)
Please Order : Admin Pause
Account Data Load Success
Login ID : Admin
Incorrect Commands.(code:12)
Please Order : pause
You have to input "ID COMMANDS TARGET(filepath or id)".(code:0)
Please Order : Pause
You have to input "ID COMMANDS TARGET(filepath or id)".(code:0)
Please Order : PAUSE
Call stop
Please Order :

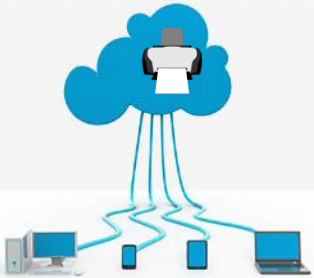
```



# T2 System Test



# Test Identification



# Test Identification

T2\_NPS.STC.000.000

Feature	Valid / Invalid Value
사용자 검증 테스트	· 사용자 목록에 들어있는 사용자가 아닐 경우에는 명령어 입력을 받지 않는다.





# Test Identification

T2\_NPS.STC.001.000

Feature	Valid / Invalid Value
관리자 명령어 테스트	<ul style="list-style-type: none"><li>· 사용자를 추가 할 경우 사용자의 이름이 중복된 경우 추가하지 않는다.</li><li>· 사용자를 삭제 할 경우 사용자 이름이 있는지 확인하고 있을 경우에만 삭제하고 없을 경우 삭제하지 않는다.</li><li>· 사용자 목록을 확인할 경우 사용자 목록을 출력한다.</li><li>· 관리자만이 사용자 추가 및 삭제 , 유저확인을 할 수 있다.</li><li>· 관리자만이 리필 명령을 줄 수 있다.</li></ul>



# Test Identification

T2\_NPS.STC.002.000

Feature	Valid / Invalid Value
프린트 가능 여부 테스트	<ul style="list-style-type: none"><li>· 대기 가능한 출력물 상태가 max인 경우 출력이 불가능하다.</li><li>· 종이와 잉크의 잔량이 사용자의 요청보다 적을 경우 출력이 불가능하다.</li></ul>



# Test Identification

T2\_NPS.STC.003.000

Feature	Valid / Invalid Value
프린트 기본 기능 테스트	<ul style="list-style-type: none"><li>· 중지 버튼이 눌리면 현재까지 진행 된 상태만 파일에 저장 된다.</li><li>· 출력물의 저장 이름은 현재년도 월 일 시 초로 저장된다.</li><li>· 현재 진행중인 출력이 완료된 후 해당 출력을 진행한다.</li><li>· 충전 중일 경우에 출력요청이 올 경우에 대기열로 돌린다.</li><li>· 출력 중일 경우에 출력요청이 올 경우에 대기열로 돌린다.</li><li>· 한 사용자가 중복으로 프린트 요청을 할 수 없다.</li><li>· 여러 사용자가 동시에 출력을 요청할 경우, 가장 먼저 온 순서대로 출력한다.</li></ul>



# Test Identification

T2\_NPS.STC.004.000

Feature	Valid / Invalid Value
LCD 화면 테스트	· 항상 프린터의 현재상태를 LCD에 출력한다.



# Test Specification



# Test Specification

T2\_NPS.STC.000.000

Input Specification	Output Specification
Network Input = {userD a.txt } userDB = {userA,userB,userC}	Network Output = {“Not exist User”}



# Test Specification

T2\_NPS.STC.001.000 ~ T2\_NPS.STC.001.001

Input Specification	Output Specification
Network Input = {Admin Reg userA} UserDB = {userA, userB, userC}	Network Output = {"Register Already!!"}
Network Input = {Admin Del userA} UserDB = {userA, userB, userC}	Network Output = {"Delete User userA"}



# Test Specification

T2\_NPS.STC.001.002 ~ T2\_NPS.STC.001.004

Input Specification	Output Specification
Network Input = {Admin Del userA} UserDB = {userB, userC}	Network Output = {"Not register User in DB"}
Network Input = {Admin Show UserList} UserDB = {userA, userB}	Network Output = {"-UserList-, userA, userB"}
Network Input = {userA Reg userC} UserDB = {userA, userB, userC}	Network Output = {auth error}





# Test Specification

T2\_NPS.STC.001.005 ~ T2\_NPS.STC.001.007

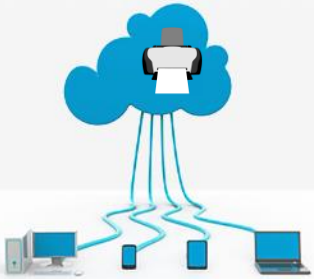
Input Specification	Output Specification
Network Input = {userA Del userB} UserDB = {userA, userB, userC}	Network Output = {auth error}
Network Input = {userA Show UserList} UserDB = {userA, userB, userC}	Network Output = {auth error}
Network Input = {Admin De userA} UserDB = {userA, userB, userC}	Network Output = {"Incorrect Command!!"}



# Test Specification

T2\_NPS.STC.001.008 ~ T2\_NPS.STC.001.010

Input Specification	Output Specification
Network Input = {Admin Reg} UserDB = {userA, userB, userC}	Network Output = {"Please Input Targer ID"}
Network Input = {Admin Reg userD} UserDB = {userA, userB, userC}	Network Output = {"Add Success!!"} UserDB = {userA, userB, userC, userD}
Network Input = {Admin Del userB} UserDB = {userA, userC}	Network Output = {"B is not exist!!"}



# Test Specification

T2\_NPS.STC.001.011 ~ T2\_NPS.STC.001.013

Input Specification	Output Specification
Network Input = {Admin Del userA} UserDB = {userA, userC}	Network Output = {"Delete Success!!"} UserDB = {userC}
Network Input = {Admin A4 10} INK = 2860            PAPER = 90	INK = 2860 PAPER = 100
Network Input = {Admin ink 140} INK = 2860            PAPER = 90	INK = 3000 PAPER = 90



# Test Specification

T2\_NPS.STC.001.014 ~ T2\_NPS.STC.001.016

Input Specification	Output Specification
Network Input = {Admin A4 200} INK = 2860                  PAPER = 90	Network Output = {"Exceed Full amount of charge"}
Network Input = {Admin ink 200} INK = 2860                  PAPER = 90	Network Output = {"Exceed Full amount of charge"}
Network Input = {A A4 paperAmount or A ink inkAmount}	Network Output = {auth error}



# Test Specification

T2\_NPS.STC.002.000 ~ T2\_NPS.STC.002.001

Input Specification	Output Specification
Network Input = {userA a.txt} 출력중 = {userB , a.txt } 대기열 = {Full} a.txt = {INK(250),PAPER(2)}	Network Output = { OverFlow! Waiting Number is 5}
Network Input = {userA a.txt} INK = 120            PAPER = 68 a.txt = {INK(250),PAPER(2)}	Network Output = { Ink is not enough... Request Admin}



# Test Specification

T2\_NPS.STC.002.002~ T2\_NPS.STC.002.003

Input Specification	Output Specification
Network Input = {userA a.txt} INK = 280            PAPER = 0 a.txt = {INK(250),PAPER(2)}	Network Output = {Paper is not enough... Request Admin.}
Network Input = {userA a.txt} INK = 0              PAPER = 0 a.txt = {INK(250),PAPER(2)}	Network Output = {Ink&Paper are not enough...R equest Admin.}



# Test Specification

T2\_NPS.STC.003.000 ~ T2\_NPS.STC.003.001

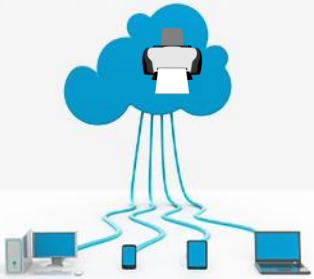
Input Specification	Output Specification
Network Input = {stop print} a.txt = {INK(250),PAPER(2)}	currenttime.txt = {"현재 인쇄중이던 곳"}
Network Input for userA = {stop print}	currenttime.txt = {"현재 인쇄중이던 곳"}



# Test Specification

T2\_NPS.STC.003.002~ T2\_NPS.STC.003.004

Input Specification	Output Specification
Network Input = {userA a.txt}	currenttime.txt
대기열 = {"a.txt","a.txt","a.txt"} 출력중 = {"a.txt"}	대기열 = {"a.txt","a.txt"} Print Now = {"a.txt" }
Network Input = {userA a.txt }	대기열 = {"a.txt"}
대기열 = { }	출력중 = { }
출력중 = { }	





# Test Specification

T2\_NPS.STC.003.005 ~ T2\_NPS.STC.003.006

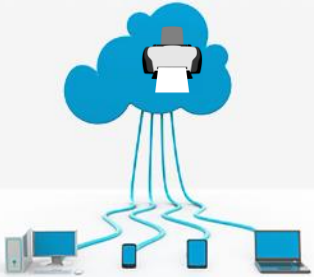
Input Specification	Output Specification
Network Input = {userB b.txt } 대기열 = {"a.txt"} 출력중 = {userA "a.txt"}	대기열 = {"a.txt","b.txt" } 출력중 = {userA "a.txt"}
Network Input = {userB b.txt } 대기열 = { } 출력중 = {userB "b.txt"}	대기열 = {"b.txt"} 출력중 = {userB "b.txt"}



# Test Specification

T2\_NPS.STC.003.007 ~ T2\_NPS.STC.003.008

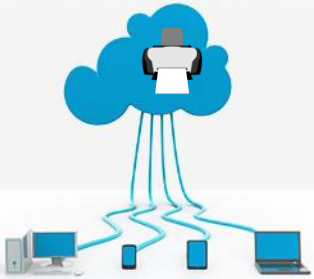
Input Specification	Output Specification
Network Input1 = {userB a.txt } Network Input2 = {userA a.txt } 대기열 = { } 출력중 = {userA "a.txt"}	대기열 = { userB a.txt, userA a.txt} 출력중 = {userA "a.txt"}
Network Input = {userA a.txt}	currenttime.txt이 enter로 1장 당 잘 구분되어 있는지 여부



# Test Specification

T2\_NPS.STC.003.009 ~ T2\_NPS.STC.003.010

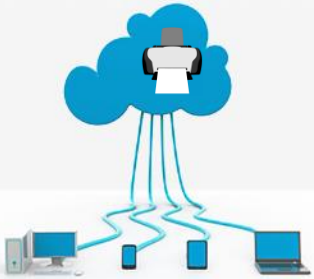
Input Specification	Output Specification
Network Input = {userB b.txt } 대기열 = {"a","a","a","b"} 출력중 = {userA "a.txt"} INK = 0                      PAPER = 0	Network Output = {can't print}
Network Input = {userB b.txt } 대기열 = {"a","a"} 출력중 = {userA "a.txt"} INK = 0                      PAPER = 0	Network Output = {can't print}



# Test Specification

T2\_NPS.STC.003.011 ~ T2\_NPS.STC.003.012

Input Specification	Output Specification
Network Input = {userB b.txt } 대기열 = {"a","a","a","b","a"} 출력중 = {userA "a.txt"} INK = 0                      PAPER = 0	Network Output = {can't print}
Network Input = {userB b.txt } 대기열 = {"a","a"} 출력중 = {userA "a.txt"} INK = 2200                  PAPER = 0	Network Output = {can't print}



# Test Specification

T2\_NPS.STC.003.013 ~ T2\_NPS.STC.003.014

Input Specification	Output Specification
Network Input = {userB b.txt } 대기열 = { } INK = 2200                  PAPER = 0	Network Output = {can't print}
Network Input = {userB b.txt } 대기열 = { } INK = 0                          PAPER = 60	Network Output = {can't print}



# Test Specification

T2\_NPS.STC.003.015

Input Specification	Output Specification
Network Input = {userB aa.txt} INK = 3000      PAPER = 100	Network Output = {File not exist!}



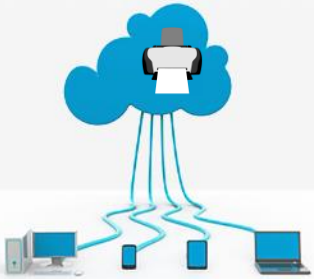
# Test Specification

T2\_NPS.STC.004.000

Input Specification	Output Specification
Network Input or NOT input	Always Displaying Screen_Interface.txt = {now_paper, now_ink,username, printpaper, needpaper, printing, stop, nextuser, nextcontentpaper }



# Result





# Result

T2\_NPS.STC.000.000

Test Case Identifier	Result
T2_NPS.STC.000.000	Pass



# Result

T2\_NPS.STC.001.000 ~ T2\_NPS.STC.001.003

Test Case Identifier	Result
<b>T2_NPS.STC.001.000</b>	Pass
<b>T2_NPS.STC.001.001</b>	Pass
<b>T2_NPS.STC.001.002</b>	Pass
<b>T2_NPS.STC.001.003</b>	Pass



# Result

T2\_NPS.STC.001.004 ~ T2\_NPS.STC.001.008

Test Case Identifier	Result
T2_NPS.STC.001.004	Pass
T2_NPS.STC.001.005	Pass
T2_NPS.STC.001.006	Pass
T2_NPS.STC.001.007	Pass
T2_NPS.STC.001.008	Pass



# Result

T2\_NPS.STC.001.004 ~ T2\_NPS.STC.001.008

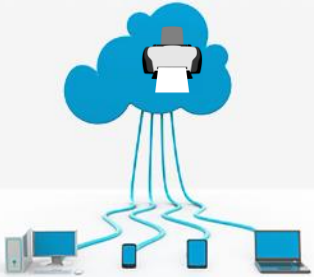
```
Select Function
1.Open UserList //Admin Show UserList ***
2.Remove User //Admin Del ***
3.Register User //Admin Reg ***
4.Refill ink paper //Admin A4 *** or Admin ink ***
5.Exit
userA Del userB
Input Again
Select Function
1.Open UserList //Admin Show UserList ***
2.Remove User //Admin Del ***
3.Register User //Admin Reg ***
4.Refill ink paper //Admin A4 *** or Admin ink ***
5.Exit
```



# Result

T2\_NPS.STC.001.009 ~ T2\_NPS.STC.001.016

Test Case Identifier	Result
T2_NPS.STC.001.009	Pass
T2_NPS.STC.001.010	Pass
T2_NPS.STC.001.012	Pass
T2_NPS.STC.001.013	Pass
T2_NPS.STC.001.014	Pass
T2_NPS.STC.001.015	Pass
T2_NPS.STC.001.016	Pass



# Result

T2\_NPS.STC.001.016

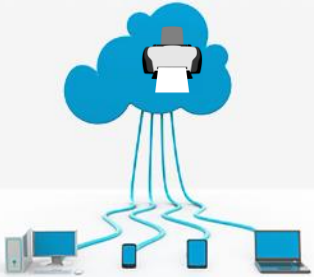
```
Select Function
1.Open UserList //Admin Show UserList ***
2.Remove User //Admin Del ***
3.Register User //Admin Reg ***
4.Refill ink paper //Admin A4 *** or Admin ink ***
5.Exit
userA ink 1000
Input Again
Select Function
1.Open UserList //Admin Show UserList ***
2.Remove User //Admin Del ***
3.Register User //Admin Reg ***
4.Refill ink paper //Admin A4 *** or Admin ink ***
5.Exit
```



# Result

T2\_NPS.STC.002.000 ~ T2\_NPS.STC.001.003

Test Case Identifier	Result
<b>T2_NPS.STC.002.000</b>	Pass
<b>T2_NPS.STC.002.001</b>	Pass
<b>T2_NPS.STC.002.002</b>	Pass
<b>T2_NPS.STC.002.003</b>	Pass



# Result

T2\_NPS.STC.003.000 ~ T2\_NPS.STC.003.006

Test Case Identifier	Result
T2_NPS.STC.003.000	Pass
T2_NPS.STC.003.001	Fail
T2_NPS.STC.003.002	Pass
T2_NPS.STC.003.003	Pass
T2_NPS.STC.003.004	Pass
T2_NPS.STC.003.005	Pass
T2_NPS.STC.003.006	Pass





# Result

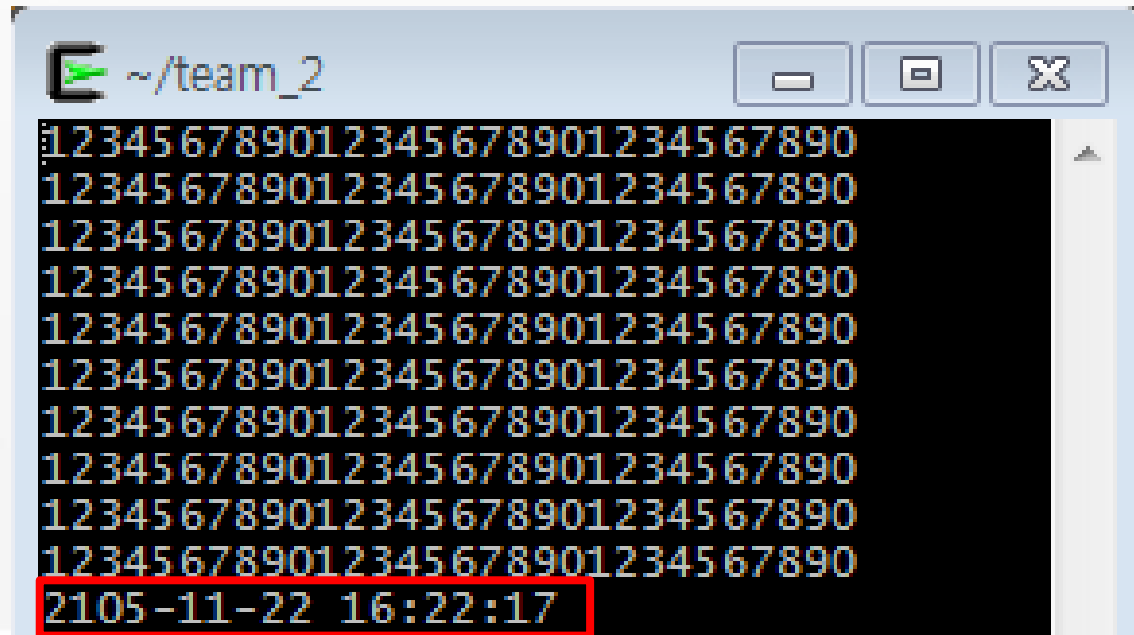
T2\_NPS.STC.003.001

```
1. Enter by Admin
2. Enter by User for Print
3. Check Ink & Paper
4. Exit Programm
2
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if
you want to stop print, input ~stop print~)
userA a2.txt
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if
you want to stop print, input ~stop print~)
stop print
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if
you want to stop print, input ~stop print~)
```



# Result

T2\_NPS.STC.003.006



A terminal window titled '~ /team\_2' with standard window controls. The terminal output consists of 12 lines of the sequence '123456789012345678901234567890' followed by a final line '2105-11-22 16:22:17' which is highlighted with a red border.

```
~/team_2  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
123456789012345678901234567890  
2105-11-22 16:22:17
```



# Result

T2\_NPS.STC.003.007 ~ T2\_NPS.STC.003.014

Test Case Identifier	Result
T2_NPS.STC.003.007	Fail
T2_NPS.STC.003.008	Fail
T2_NPS.STC.003.009	Fail
T2_NPS.STC.003.010	Fail
T2_NPS.STC.003.011	Pass
T2_NPS.STC.003.012	Pass
T2_NPS.STC.003.013	Pass
T2_NPS.STC.003.014	Pass
T2_NPS.STC.003.015	Pass



# Result

T2\_NPS.STC.003.007 ~ T2\_NPS.STC.003.010

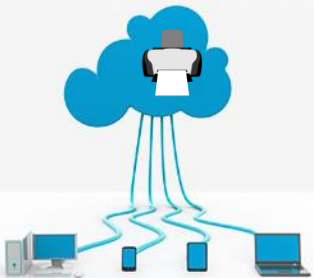
```
Input : UserName Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
put ~stop print~)  
return main  
Not exist User  
Input : UserName Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
put ~stop print~)  
return main  
Not exist User  
Input : UserName Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
put ~stop print~)  
return main  
Not exist User  
Input : Username Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
put ~stop print~)  
return main  
Not exist User  
Input : Username Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
put ~stop print~)
```



# Result

T2\_NPS.STC.003.007 ~ T2\_NPS.STC.003.010

```
Shin bo seon@Shinboseon-PC ~/team_2
$ ./t2_nps.exe
1. Enter by Admin
2. Enter by User for Print
3. Check Ink & Paper
4. Exit Programm
2
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if you want to stop print, in
put ~stop print~)
userA a2.txt
```



# Result

T2\_NPS.STC.003.007 ~ T2\_NPS.STC.003.010

```
Input : UserName Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
out ~stop print~)  
userA a2.txt  
Input : UserName Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
out ~stop print~)  
Waiting Number is 1  
userA a2.txt  
Input : UserName Input : CopyFile :  
(if you want to retrun main , input ~return main~)(if you want to stop print, in  
out ~stop print~)  
Waiting Number is 2
```



# Result

T2\_NPS.STC.003.007 ~ T2\_NPS.STC.003.010

```
userA a2.txt
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if you want to stop print, in
put ~stop print~)
Waiting Number is 3
userA a2.txt
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if you want to stop print, in
put ~stop print~)
Waiting Number is 4
userA a2.txt
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if you want to stop print, in
put ~stop print~)
Waiting Number is 5
```



# Result

T2\_NPS.STC.003.007 ~ T2\_NPS.STC.003.010

```
userA a2.txt
OverFlow!Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if you want to stop print, in
put ~stop print~)
Waiting Number is 5
Ink is not enough...Request Admin

Shin bo seon@Shinboseon-PC ~/team_2
$
```

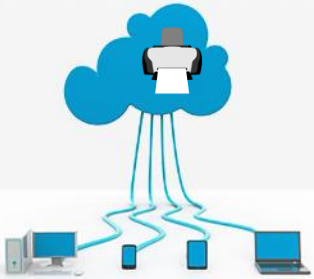




# Result

T2\_NPS.STC.004.000

Test Case Identifier	Result
T2_NPS.STC.004.000	Fail



# Result

T2\_NPS.STC.004.000

```
~/team_2
-----T2_NPS_PRINTSCREEN-----
---Now Time - 2105-11-23 00:34:40---
---Amount Of PAPER -- 0-----
---Amount Of INK -- 0-----
---User - `2 0 /2280960-----
---Stopping-----
---Next - 1! / 0 papers-----
```



```
~/team_2
Shin bo seon@Shinboseon-PC ~
$ cd team_2

Shin bo seon@Shinboseon-PC ~/team_2
$ ls
21051123002117.txt  21051123002423.txt  a.txt  Screen_Interface.txt
21051123002123.txt  21051123002428.txt  a2.txt  ScreenInterface.c
21051123002136.txt  21051123002434.txt  b.txt  T2_NPS.exe
21051123002315.txt  21051123004052.txt  c.txt  T2_Screen.exe
21051123002321.txt  21051123004839.txt  NPS.c  t2_screen.exe.stackdump
21051123002327.txt  21051123004844.txt  NPS.h

Shin bo seon@Shinboseon-PC ~/team_2
$ ./t2_nps.exe
1. Enter by Admin
2. Enter by User for Print
3. Check Ink & Paper
4. Exit Programm
2
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if you want to stop print, in
put ~stop print~)
userA a2.txt
Input : UserName Input : CopyFile :
(if you want to retrun main , input ~return main~)(if you want to stop print, in
put ~stop print~)
return main
1. Enter by Admin
2. Enter by User for Print
3. Check Ink & Paper
4. Exit Programm
1
Select Function
1.Open UserList //Admin Show UserList ***
2.Remove User //Admin Del ***
3.Register User //Admin Reg ***
4.Refill ink paper //Admin A4 *** or Admin ink ***
5.Exit
Admin ink 900
Start Charging Time
2015 - 11 - 23 - 22 - 12 - 45 -
```

```
~/team_2
-----T2_NPS_PRINTSCREEN-----
---Now Time - 2105-11-23 22:12:48---
---Amount Of PAPER -- 94-----
---Amount Of INK -- 2300-----
---User notexist/ 0 / 0-----
---Next - ----Waiting-----
---Next - notexist/ 0 papers-----
```



# Summary



# Summary

T2\_NPS.System Test Case

<b>Total Test Case</b>	<b>38</b>
<b>Fail</b>	<b>6</b>
<b>Pass</b>	<b>32</b>



