Unit Test Report for POS System

- Test Cases Specification
- Test Summary Report

Project Team Team 5

Latest update on:

2017-11-06

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1 Introduction

1.1 Objectives

본 문서는 2017년 건국대학교의 소프트웨어공학 개론 강의의 실습과제를 설명한다. 실습 과제는 Point Of Sale (POS) System을 소프트웨어만을 이용한 가상의 시스템으로 구현 하는 것이다.

1.2 References

[2017SE_B][T5]SRA

[2017SE_B][T5]SDS

2 Unit test case specification

2.1 Test case specification identifier

Identifier	Input Specification	Output Specification
POS_1.3_000	mode : 1	settle_flag: 0
	n: 0	function: Sale Mode
POS_1.3_001	mode : 2	settle_flag: 0
	n:0	function: Quantity Change
		Mode
POS_1.3_002	mode: 3	settle_flag: 1
	n:0	function: Money Received Mode
POS_1.3_003	mode: 4	settle_flag: 0
	n: 1	function: Refund Mode
POS_1.3_004	mode: 4	settle_flag: 1
	n: 2	function: NULL
POS_1.3_005	mode: 5	settle_flag: 0
	n: 0	function: "Can not check Stock"
POS_1.3_006	mode: 5	settle_flag = 1
	n:1	function: Stock Check Mode
POS_1.3_007	mode: 6	settle_flag = 0
	n: 0	function: Reselect Mode
POS_1.4_000	temp: 1	1 (Power_on)
POS_1.4_001	temp: 2	0 (Power_off)
POS_2.1_000	barcode: 001	index: 1
POS_2.1_001	barcode: 010	index: 2

POS_2.1_002	barcode: 011	index: 3
POS_2.1_003	barcode: 100	index: 4
POS_2.1_004	barcode: 101	index: 5
POS_2.1_005	barcode: 110	index: 6
POS_2.1_006	barcode: 111	index: 7
POS_2.3_000	index: 1	sale_info_quantity: 0
	sale_info_quantity: 0	sale_info_total_price: 0
	sale_info_total_price: 0	stock_info_quantity: 0
	sale_info_price: 1000	"Sold out"
	stock_info_quantity: 0	
POS_2.3_001	index: 1	sale_info_quantity: 2
	sale_info_quantity: 1	sale_info_total_price: 1500
	sale_info_total_price: 500	stock_info_quantity: 99
	sale_info_price: 1000	"Sale_display"
	stock_info_quantity: 100	
POS_2.3_002	index: 2	sale_info_quantity: 4
	sale_info_quantity: 3	sale_info_total_price: 2500
	sale_info_total_price: 1000	stock_info_quantity: 3
	sale_info_price: 1500	"Sale_display"
	stock_info_quantity: 4	
POS_2.3_003	index: 3	sale_info_quantity: 0
	sale_info_quantity: 0	sale_info_total_price: 0
	sale_info_total_price: 0	stock_info_quantity: 0
	sale_info_price: 3000	"Sold out"
	stock_info_quantity: 0	
POS_2.3_004	index: 4	sale_info_quantity: 6
	sale_info_quantity: 5	sale_info_total_price: 2500
	sale_info_total_price: 2000	stock_info_quantity: 49
	sale_info_price: 500	"Sale_display"
	stock_info_quantity: 50	
POS_2.3_005	index: 5	sale_info_quantity: 0
	sale_info_quantity: 0	sale_info_total_price: 0
	sale_info_total_price: 0	stock_info_quantity: 0
	sale_info_price: 800	"Sold out"
DOC 22 225	stock_info_quantity: 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
POS_2.3_006	index: 6	sale_info_quantity: 11
	sale_info_quantity: 10	sale_info_total_price: 6200
	sale_info_total_price: 5000	stock_info_quantity: 2

	sale_info_price: 1200	"Sale_display"
	stock_info_quantity: 3	Sale_alsplay
POS_2.3_007	index: 7	sale_info_quantity: 0
. 00_1.00.	sale_info_quantity: 0	sale_info_total_price: 0
	sale_info_total_price: 0	stock_info_quantity: 0
	sale_info_price: 2000	"Sold out"
	stock_info_quantity: 0	Sold Gut
POS_2.4_000	index: 1	snd_money: 1000
	recv_money: 4000	"Calculate_sale"
	sale_info_total_price: 3000	64.64.446_54.6
POS_2.4_001	index: 2	snd_money: 0
	recv_money: 4000	"Received Money deffeceincy"
	sale_info_total_price :5000	
POS_2.4_002	index: 3	snd_money: 1500
	recv_money: 4000	"Calculate_sale"
	sale_info_total_price: 2500	_
POS_2.4_003	index: 4	snd_money: 0
	recv_money: 4000	"Received Money deffeceincy"
	sale_info_total_price: 6000	
POS_2.4_004	index: 5	snd_money: 4000
	recv_money: 9000	"Calculate_sale"
	sale_info_total_price: 5000	
POS_2.4_005	index: 6	snd_money: 0
	recv_money: 2000	"Received Money defficeincy"
	sale_info_total_price: 8000	
POS_2.4_006	index: 7	snd_money: 1200
	recv_money: 4500	"Calculate_sale"
	sale_info_total_price: 3300	
POS_2.5.1_000	index: 1	sale_quantity: 2
	sale_info_quantity: 1	sale_total_price: 1500
	sale_info_total_price: 500	stock_quantity: 99
	sale_info_price: 1000	"Sale_display"
	stock_info_quantity: 100	
POS_2.5.1_001	index: 2	sale_quantity: 4
	sale_info_quantity: 3	sale_total_price: 2500
	sale_info_total_price : 1000	stock_quantity: 3
	sale_info_price: 1500	"Sale_display"
	stock_info_quantity: 4	

POS_2.5.1_002	index: 3	sale_quantity: 1
	sale_info_quantity: 0	sale_total_price: 3000
	sale_info_total_price : 0	stock_quantity: 11
	sale_info_price: 3000	"Sale_display"
	stock_info_quantity: 12	
POS_2.5.1_003	index: 4	sale_quantity: 6
	sale_info_quantity: 5	sale_total_price: 2500
	sale_info_total_price: 2000	stock_quantity: 49
	sale_info_price: 500	"Sale_display"
	stock_info_quantity: 50	
POS_2.5.1_004	index: 5	sale_quantity: 5
	sale_info_quantity: 4	sale_total_price: 800
	sale_info_total_price: 0	stock_quantity: 19
	sale_info_price: 800	"Sale_display"
	stock_info_quantity: 20	
POS_2.5.1_005	index: 6	sale_quantity: 11
	sale_info_quantity: 10	sale_total_price: 6200
	sale_info_total_price: 5000	stock_quantity: 2
	sale_info_price: 1200	"Sale_display"
	stock_info_quantity: 3	
POS_2.5.1_006	index: 7	sale_quantity: 9
	sale_info_quantity: 8	sale_total_price: 2000
	sale_info_total_price: 0	stock_quantity: 9
	sale_info_price: 2000	"Sale_display"
	stock_info_quantity: 10	
POS_2.5.1_007	index: 0	sale_quantity: 9
	sale_info_quantity: 9	sale_total_price: 0
	sale_info_total_price: 0	stock_quantity: 5
	sale_info_price: 4000	"Invalid Index"
	stock_info_quantity: 5	
POS_2.5.2_000	index: 1	s_r_0: 3
	sale_info_quantity: 0	s_r_0_7: 2500
	sale_info_total_price: 1000	"sale_display"
	s_r_0_i: 3	"database_update"
	s_r_0_7_i: 1500	"receipt_list_file"
		"sale_receipt_print"
POS_2.5.2_001	index: 1	s_r_0: 3
	sale_info_quantity: 1	s_r_0_7: 3000

	sale_info_total_price: 1000	"sale_display"
	s_r_0_i: 2	"database_update"
	s_r_0_7_i: 2000	"receipt_list_file"
		"sale_receipt_print"
POS_2.6.1_000	check: 0	0
1 03_2.0.1_000	barcode: 001	
	t_barcode: 001	
	list_data: 0	
POS_2.6.1_001	check: 1	0
PO3_2.0.1_001	barcode: 001	0
	t_barcode: 001	
DOC 264 002	list_data: 0	
POS_2.6.1_002	check: 0	1
	barcode: 001	
	t_barcode: 001	
	list_data: 1	
POS_2.6.1_003	check: 0	2
	barcode: 001	
	t_barcode: 010	
	list_data: 1	
POS_2.6.1_004	check: 1	3
	barcode: 001	
	t_barcode: 001	
	list_data: 1	
POS_2.6.1_005	check: 1	4
	barcode: 001	
	t_barcode: 010	
	list_data: 1	
POS_2.6.2_000	refund_i_quantity : 0	stock_k_quantity: 2
	refund_i_name : "snack"	함수 호출
	stock_k_quantity : 2	
	stock_k_name: "water"	
POS_2.6.2_001	refund_i_quantity : 1	stock_k_quantity: 3
	refund_i_name : "snack"	함수 호출
	stock_k_quantity: 2	
	stock_k_name : "snack"	
POS_2.6.2_002	refund_i_quantity : 1	stock_k_quantity: 2
_	refund_i_name "snack"	/ 함수 호출
1		1

	stock_k_quantity: 2	
	stock_k_name "water"	
POS_2.7.1_000	settle_flag: 0	0
POS_2.7.1_001	settle_flag: 1	1
POS_3.1.4_000	index : 1	· · 화면 출력
. 00_0	sale_info_recv_money: 1000	
	sale_info_snd_money: 2000	
	sale_info_s_arr[index].name: "snack"	
	sale_info_s_arr[index].quantity: 0	
	sale_info_s_arr[index].price: 1000	
	sale_info_total_price: 5000	
POS_3.1.4_001	index : 1	화면 출력
	sale_info_recv_money: 1000	
	sale_info_snd_money: 2000	
	sale_info_s_arr[index].name: "snack"	
	sale_info_s_arr[index].quantity: 1	
	sale_info_s_arr[index].price: 1000	
	sale_info_total_price: 5000	
POS_3.1.5_000	index: 1	화면 출력
	stock_info_s_arr[index].quantity: 0	
	stock_info_s_arr[index].name:	
	"snack"	
	stock_info_s_arr[index].price: 1000	
POS_3.1.5_001	index: 1	화면 출력
	stock_info_s_arr[index].quantity: 1	
	stock_info_s_arr[index].name:"snack"	
	stock_info_s_arr[index].price: 1000	
POS_3.1.6_000	index I:1	화면 출력
	year1: 2017	
	month1: 11	
	day1: 6	
	hour1: 12	
	min1: 7	
	t_price: 4500	
	refund_info[i].name: "snack"	
	refund_info[i].price: 3000	
	refund_info[i].quantity: 0	
POS_3.1.6_001	index I : 1	화면 출력

	year1 : 2017	
	month1: 11	
	day1: 6	
	hour1: 12	
	min1: 7	
	t_price: 4500	
	refund_info[i].name: "snack"	
	refund_info[i].price: 3000	
	refund_info[i].quantity: 1	
POS_3.1.7_000	index I :1	화면 출력
	sale_info: 0	
	sale_info_s_arr[i].quantity: 2	
	sale_info_s_arr[i].name: "snack"	
	sale_info_s_arr[i].price: 1000	
	sale_info_s_arr[i].total_price: 3500	
	stock_info_s_arr[i].name: "snack"	
	stock_info_s_arr[i].price: 1000	
	stock_info_s_arr[i].quantity: 0	
	year1: 2017	
	month1: 11	
	day1: 6	
	hour1: 12	
	min1: 7	
POS_3.1.7_001	index I : 1	화면 출력
	sale_info: 1	
	sale_info_s_arr[i].quantity: 2	
	sale_info_s_arr[i].name: "snack"	
	sale_info_s_arr[i].price: 1000	
	·	
	stock_info_s_arr[i].name: "snack"	
	stock_info_s_arr[i].price: 1000	
	·	
	year1: 2017	
	month1: 11	
	day1: 6	
	hour1: 12	
	min1: 7	
POS_3.1.7_002	index I =1	화면 출력
	sale_info: 1	
POS_3.1.7_001	index I :1 sale_info: 0 sale_info_s_arr[i].quantity: 2 sale_info_s_arr[i].name: "snack" sale_info_s_arr[i].price: 1000 sale_info_s_arr[i].total_price: 3500 stock_info_s_arr[i].name: "snack" stock_info_s_arr[i].price: 1000 stock_info_s_arr[i].quantity: 0 year1: 2017 month1: 11 day1: 6 hour1: 12 min1: 7 index I : 1 sale_info_s_arr[i].quantity: 2 sale_info_s_arr[i].name: "snack" sale_info_s_arr[i].price: 1000 sale_info_s_arr[i].price: 1000 stock_info_s_arr[i].price: 1000 stock_info_s_arr[i].price: 1000 stock_info_s_arr[i].quantity: 0 year1: 2017 month1: 11 day1: 6 hour1: 12 min1: 7 index I = 1	화면 출력

sale_info_s_arr[i].quantity: 2	
sale_info_s_arr[i].name: "snack"	
sale_info_s_arr[i].price: 1000	
sale_info_s_arr[i].total_price: 3500	
stock_info_s_arr[i].name: "snack"	
stock_info_s_arr[i].price: 1000	
stock_info_s_arr[i].quantity: 1	
year1: 2017	
month1: 11	
day1: 6	
hour1: 12	
min1: 7	
POS_3.1.8_000 index I :1 화면	출력
sale_info_s_arr[i].name: "snack"	
sale_info_s_arr[i].price: 1000	
sale_info_s_arr[i].quantity: 0	
sale_info_total_price: 5000	
year1 : 2017	
month1: 11	
day1: 6	
hour1: 12	
min1: 15	
POS_3.1.8_001 index I : 1 화면	출력
sale_info_s_arr[i].name: "snack"	
sale_info_s_arr[i].price: 1000	
sale_info_s_arr[i].quantity: 1	
sale_info_total_price: 5000	
year1: 2017	
month1: 11	
day1: 6	
hour1: 12	
min1: 15	
POS_3.1.9_000 index I :1 화면	출력
refund_info_quantity: 0	
refund_info_name: "snack"	
refund_info_price: 1000	
year1: 2017	
month1: 11	

	1 1 12	
	hour1: 12	
	min1: 17	
POS_3.1.9_001	index I :1	화면 출력
	refund_info_quantity: 1	
	refund_info_name: "snack"	
	refund_info_price: 1000	
	year1: 2017	
	month1: 11	
	day1: 6	
	hour1: 12	
	min1:17	
POS_3.1.10_000	index I : 1	화면 출력
	stock_info_s_arr[i].name: "snack"	
	stock_info_s_arr[i].price: 1000	
	stock_info_s_arr[i].quantity: 4	
	year1 : 2017	
	month1: 11	
	day1: 6	
	hour1: 12	
	min1: 19	
POS_3.1.11_000	index I : 1	화면 출력
	day1 : 6	
	month1: 11	
	year1: 2017	
	sale_info_temp[i].name: "snack"	
	sale_info_temp[i].price: 1000	
	sale_info_temp[i].quantity: 0	
	refund_info_temp[i].name: "snack"	
	refund_info_temp[i].price: 1000	
	refund_info_quantity: 0	
	total_sale_price: 2000	
	total_refund_price: 1000	
POS_3.1.11_001	index I : 1	화면 출력
	day1: 6	
	month1: 11	
	year1: 2017	
	sale_info_temp[i].name: "snack"	
	sale_info_temp[i].price: 1000	

	sale_info_temp[i].quantity: 0	
	refund_info_temp[i].name: "snack"	
	refund_info_temp[i].price: 1000	
	refund_info_quantity: 1	
	total_sale_price: 2000	
	total_refund_price: 1000	
POS_3.1.11_002	index I : 1	화면 출력
	day1: 6	
	month1: 11	
	year1: 2017	
	sale_info_temp[i].name: "snack"	
	sale_info_temp[i].price: 1000	
	sale_info_temp[i].quantity: 1	
	refund_info_temp[i].name: "snack"	
	refund_info_temp[i].price: 1000	
	refund_info_quantity: 0	
	total_sale_price: 2000	
	total_refund_price: 1000	
POS_3.1.11_003	index I = 1	화면 출력
	day1: 6	
	month1:11	
	year1: 2017	
	sale_info_temp[i].name: "snack"	
	sale_info_temp[i].price: 1000	
	sale_info_temp[i].quantity: 1	
	refund_info_temp[i].name: "snack"	
	refund_info_temp[i].price: 1000	
	refund_info_quantity: 1	
	total_sale_price:2000	
	total_refund_price:1000	
POS_3.1.12_000	settle_flag: 2	check: 0
	get_time_flag: 0	get_time_flag: 0
	check: 0	update_flag: 0
	year: 2017	return int: 0
	month: 11	
	day: 6	
	hour: 3	
	min: 47	
	start: 1	

	end: 100	
POS_3.1.12_001	settle_flag: 1	check = 0;
	get_time_flag: 1	get_time_flag :0
	check: 1	update_flag 0
	year: 2017	return int 2
	month: 11	
	day: 6	
	hour: 3	
	min: 47	
	start: 0	
	end: 100	

2.2 Test items

<Table 3 Test Design Identification> 참조

2.3 Input specifications

<Table 4 Test Case Identification> 참조

2.4 Output specifications

<Table 4 Test Case Identification> 참조

- 3 Environmental needs
 - (1) Hardware & Platform

gcc complier/linker

(2) Continuous Testing & Integrated Platform Environment

Cygwin

(3) Framework

CUnit

- 4 Unit test summary report
 - 4.1 Test summary report identifier

Identifier	Result
POS_1.3_000	Passed
	❷ ● □ sonhayoung@sonhayoung-VirtualBox: ~
	파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H)
	<pre>sonhayoung@sonhayoung-VirtualBox:~\$./1_3 CUnit - A unit testing framework for C - Version 2.1-3 http://cunit.sourceforge.net/</pre>
	Suite: testing a suite Test: POS_1.3_000()passed Test: POS_1.3_001()passed Test: POS_1.3_002()passed Test: POS_1.3_003()passed Test: POS_1.3_004()passed Test: POS_1.3_005()passed Test: POS_1.3_005()passed Test: POS_1.3_006()passed Test: POS_1.3_007()passed
	Run Summary: Type Total Ran Passed Failed Inactive suites 1 1 n/a 0 0 tests 8 8 8 0 0 asserts 14 14 14 0 n/a Elapsed time = 0.000 seconds
	Elapsed time = 0.000 seconds sonhayoung@sonhayoung-VirtualBox:~\$
POS_1.3_001	Passed
POS_1.3_002	Passed
POS_1.3_003	Passed
POS_1.3_004	Passed
POS_1.3_005	Passed
POS_1.3_006	Passed
POS_1.3_007	Passed
POS_1.4_000	Passed

```
🔊 🖨 📵 sonhayoung@sonhayoung-VirtualBox: ~
                          파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H)
                                          suites
                                                                                          0
                                          tests
                                                                                          0
                                        asserts
                                                                                        n/a
                          Elapsed time = 0.000 seconds
                          sonhayoung@sonhayoung-VirtualBox:~$ gcc -o 1_4 1_4.c -lcunit
                          sonhayoung@sonhayoung-VirtualBox:~$ ./1_4
                               CUnit - A unit testing framework for C - Version 2.1-3
                               http://cunit.sourceforge.net/
                         Suite: testing a suite
                           Test: POS_1.4_000() ...passed Test: POS_1.4_001() ...passed
                          Run Summary:
                                            Type Total
                                                             Ran Passed Failed Inactive
                                                             1 n/a
2 2
                                          suites
                                                                                          0
                                          tests
                                                                                           0
                                        asserts
                                                                                        n/a
                          Elapsed time = 0.000 seconds
                          sonhayoung@sonhayoung-VirtualBox:~$
POS_1.4_001
                         Passed
POS_2.1_000
                         Passed
                           👂 🖯 🗊 sonhayoung@sonhayoung-VirtualBox: ~ 🏾
                          파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H)
                          sonhayoung@sonhayoung-VirtualBox:~$ gcc -o 2_1 2_1.c -lcunit sonhayoung@sonhayoung-VirtualBox:~$ ./2_1
                               CUnit - A unit testing framework for C - Version 2.1-3
                               http://cunit.sourceforge.net/
                         Suite: testing a suite
                           Test: POS_2.1_000() ...passed
Test: POS_2.1_001() ...passed
Test: POS_2.1_001() ...passed
Test: POS_2.1_002() ...passed
Test: POS_2.1_003() ...passed
Test: POS_2.1_004() ...passed
Test: POS_2.1_005() ...passed
Test: POS_2.1_006() ...passed
                          Run Summary:
                                            Type Total
                                                              Ran Passed Failed Inactive
                                          suites
                                                               1 n/a 0
                                                                                          0
                                                                                 0
                                           tests
                                                                                           0
                                         asserts
                                                                                          n/a
                          Elapsed time = 0.000 seconds
                          sonhayoung@sonhayoung-VirtualBox:~$
POS_2.1_001
                         Passed
                         Passed
POS_2.1_002
POS_2.1_003
                         Passed
                         Passed
POS_2.1_004
POS_2.1_005
                         Passed
POS_2.1_006
                         Passed
```

```
POS 2.3 000
                                Passed
                                   🕽 🗐 📵 sonhayoung@sonhayoung-VirtualBox: ~
                                 파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H)
                                 sonhayoung@sonhayoung-VirtualBox:~$ ./2_3
                                        CUnit - A unit testing framework for C - Version 2.1-3
                                       http://cunit.sourceforge.net/
                               Suite: testing a suite

Test: POS_2.3_000() ...passed

Test: POS_2.3_001() ...passed

Test: POS_2.3_002() ...passed

Test: POS_2.3_003() ...passed

Test: POS_2.3_004() ...passed

Test: POS_2.3_005() ...passed

Test: POS_2.3_006() ...passed

Test: POS_2.3_006() ...passed

Test: POS_2.3_007() ...passed
                                                    Type Total suites 1
                                Run Summary:
                                                                              Ran Passed Failed Inactive
                                                                            1 n/a
8 8
                                                      tests
                                                                               32
                                                   asserts
                                                                                                                n/a
                                Elapsed time = 0.000 seconds sonhayoung@sonhayoung-VirtualBox:~$
POS 2.3 001
                                Passed
                               Passed
POS_2.3_002
POS_2.3_003
                               Passed
POS 2.3 004
                                Passed
POS_2.3_005
                                Passed
POS_2.3_006
                                Passed
POS_2.3_007
                                Passed
POS_2.4_000
                                Passed
                                  🔊 🖯 🕕 sonhayoung@sonhayoung-VirtualBox: ~
                                 파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H)
                                sonhayoung@sonhayoung-VirtualBox:~$ gcc -o 2_4 2_4.c -lcunit
sonhayoung@sonhayoung-VirtualBox:~$ ./2_4
                                       CUnit - A unit testing framework for C - Version 2.1-3 http://cunit.sourceforge.net/
                                Suite: testing a suite

Test: POS_2.4_000() ...passed

Test: POS_2.4_001() ...passed

Test: POS_2.4_002() ...passed

Test: POS_2.4_003() ...passed

Test: POS_2.4_004() ...passed

Test: POS_2.4_005() ...passed

Test: POS_2.4_006() ...passed
                                Run Summary:
                                                       Type Total
                                                                              Ran Passed Failed Inactive
                                                                              1 n/a 0
7 7 0
14 14 0
                                                    suites
                                                      tests
                                                                                                                n/a
                                                   asserts
                                Elapsed time = 0.000 seconds
                                 sonhayoung@sonhayoung-VirtualBox:~$
POS 2.4 001
                                Passed
POS_2.4_002
                                Passed
POS_2.4_003
                                Passed
POS 2.4 004
                                Passed
```

POS_2.4_005	Passed
POS_2.4_006	Passed
POS_2.5.1_000	passed ② □ □ sonhayoung@sonhayoung-VirtualBox: ~ 파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H) sonhayoung@sonhayoung-VirtualBox: ~\$./2_5_1 CUnit - A unit testing framework for C - Version 2.1-3 http://cunit.sourceforge.net/ Suite: testing a suite Test: POS_2.5.1_000()passed Test: POS_2.5.1_001()passed Test: POS_2.5.1_002()passed Test: POS_2.5.1_003()passed Test: POS_2.5.1_004()passed Test: POS_2.5.1_005()passed Test: POS_2.5.1_006()passed Test: POS_2.5.1_006()passed Test: POS_2.5.1_007()passed Run Summary: Type Total Ran Passed Failed Inactive suites 1 1 n/a 0 0 tests 8 8 8 0 0 asserts 32 32 32 0 n/a Elapsed time = 0.000 seconds sonhayoung@sonhayoung-VirtualBox:-\$
POS_2.5.1_001	passed
POS_2.5.1_002	passed
POS_2.5.1_003	passed
POS_2.5.1_004	passed
POS_2.5.1_005	passed
POS_2.5.1_006	passed
POS_2.5.1_007	passed
POS_2.5.2_000	passed

```
🥦 🗐 📵 sonhayoung@sonhayoung-VirtualBox: ~
                             파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H)
                                                         1 1 n/a 0 0
2 2 1 1 0
12 12 11 1 n/a
                                               tests
                                             asserts
                            Elapsed time = 0.000 seconds
                            sonhayoung@sonhayoung-VirtualBox:~$ gcc -o 2_5_2 2_5_2.c -lcunit
sonhayoung@sonhayoung-VirtualBox:~$ ./2_5_2
                                   CUnit - A unit testing framework for C - Version 2.1-3
                                   http://cunit.sourceforge.net/
                            Suite: testing a suite
Test: POS_2.5.2_000() ...passed
Test: POS_2.5.2_001() ...passed
                                                                    Ran Passed Failed Inactive
                             Run Summary: Type Total
                                              suites
                                                         1 1 n/a 0
2 2 2 0
                                                        2 2 2 0
12 12 12 0
                                                                                                    0
                                               tests
                                             asserts
                                                                                                 n/a
                             Elapsed time = 0.000 seconds
                             sonhayoung@sonhayoung-VirtualBox:~$
POS_2.5.2_001
                            passed
POS_2.6.1_000
                            passed
                              🔊 🖯 🗊 sonhayoung@sonhayoung-VirtualBox: ~
                                  CUnit - A unit testing framework for C - Version 2.1-3 http://cunit.sourceforge.net/
                             Suite: testing a suite
Test: POS_2.6.1_000() ...
                             Casher Screen
                             Display
Can not Refund this Receipt
passed
                              Test: POS_2.6.1_001() ...
                             Display
Can not Refund this Receipt
passed
                              Test: POS_2.6.1_002() ...
                             Casher Screen
                             Casner Scieen
Display
Can not Refund this Receiptpassed
Test: POS_2.6.1_003() ...passed
Test: POS_2.6.1_004() ...passed
Test: POS_2.6.1_005() ...passed
                             Run Summary: Type Total Ran Passed Failed Inactive suites 1 1 n/a 0 0 tests 6 6 6 0 0 asserts 6 6 6 0 n/a
                             Elapsed time = 0.000 seconds
sonhayoung@sonhayoung-VirtualBox:~$
POS_2.6.1_001
                            passed
POS_2.6.1_002
                            passed
POS_2.6.1_003
                            passed
POS 2.6.1 004
                            passed
POS_2.6.1_005
                            passed
POS_2.6.2_000
                            passed
```

```
🕽 🖨 📵 sonhayoung@sonhayoung-VirtualBox: ~
                                          tests
                                         asserts
                          Elapsed time = 0.000 seconds
                          sonhayoung@sonhayoung-VirtualBox:~$ gcc -o 2_6_2 2_6_2.c -lcunit sonhayoung@sonhayoung-VirtualBox:~$ ./2_6_2
                               CUnit - A unit testing framework for C - Version 2.1-3 http://cunit.sourceforge.net/ \,
                         Suite: testing a suite
Test: POS_2.6.2_000() ...passed
Test: POS_2.6.2_001() ...passed
Test: POS_2.6.2_002() ...passed
                          Run Summary: Type Total
suites 1
                                                             Ran Passed Failed Inactive
                                                   1 1 n/a 0 0
3 3 3 0 0
6 6 6 0 n/a
                                          tests
                                         asserts
                          Elapsed time = 0.000 seconds
sonhayoung@sonhayoung-VirtualBox:~$
POS_2.6.2_001
                          passed
POS_2.6.2_002
                          passed
POS_2.7.1_000
                          passed
                            🔊 🖨 📵 sonhayoung@sonhayoung-VirtualBox: ~
                          sonhayoung@sonhayoung-VirtualBox:~$ gcc -o 2_7_1 2_7_1.c -lcunit
                          sonhayoung@sonhayoung-VirtualBox:~$ ./2_7_1
                                CUnit - A unit testing framework for C - Version 2.1-3
                                http://cunit.sourceforge.net/
                          Suite: testing a suite
                           Test: POS_2.7.1_000() ...passed
Test: POS_2.7.1_001() ...passed
                          Run Summary: Type Total
                                                                Ran Passed Failed Inactive
                                          suites 1 1 n/a 0 0
tests 2 2 2 0 0
asserts 2 2 2 0 n/a
                                          asserts
                          Elapsed time = 0.000 seconds
                          sonhayoung@sonhayoung-VirtualBox:~$
POS_2.7.1_001
                          passed
POS_3.1.4_000
                         Passed
```

	Casher Screen Display Total Sale Money 5000 Receive Money 1000 Send Money 2000 Client Screen Display Total Sale Money 5000 Receive Money 1000 Send Money 2000
POS_3.1.4_001	Passed
1 03_3.1.4_001	Casher Screen Display Total Sale Money 5000 Receive Money 1000 Send Money 2000 snack quantity: 1 / price: 1000 / sum_price: 1000 Client Screen Display Total Sale Money 5000 Receive Money 1000 Send Money 2000
POS_3.1.5_000	Passed
	:3 Casher Screen Display
POS_3.1.5_001	Passed
	Casher Screen Display snack quantity: 1 / price: 1000
POS_3.1.6_000	Passed
L	ı

```
Casher Screen
                     Display
                     Date
                                       2017.11.06 12:07
                     Total Refund Money
                                                         4500
                     Client Screen
                     Display
                     Date
                                       2017.11.06 12:07
                     Total Refund Money
                                                         4500
POS_3.1.6_001
                    Passed
                     Casher Screen
                     Display
                     Date
                                   2017.11.06 12:07
                     Total Refund Money
                                   quantity: 3000 / price: 1 / sum_price: 3000
                     snack
                     Client Screen
                     Display
                                   2017.11.06 12:07
                     Date
                     Total Refund Money 4500
POS_3.1.7_000
                    Passed
                     make_stock_file part
                     20171106_product.txtDate : 2017.11.06 (년 .월 .일)
                     Sale Product
                    Name, Price, Quantity
snack, 1000, 0
POS_3.1.7_001
                    Passed
                     make_stock_file part
                     20171106_product.txtDate : 2017.11.06 (년 .월 .일)
                     Sale Product
                    Name, Price, Quantity
snack, 1000, O
sale_list_file part
                     20171106_sale_management.txtReceipt Num : 2017.11.06.12.07 (년 .월 .일 .시 .분 )
                     Date : 2017.11.06 (년 .월 .일)
                     Sale Product
                     Name, Price, Quantity, Sum_price
                     snack, 1000, 2, 2000
                     Total Sale price : 3500
POS_3.1.7_002
                    Passed
```

```
make_stock_file part
                     20171106_product.txtDate : 2017.11.06 (년 .월 .일)
                     Sale Product
                     Name, Price, Quantity
                    snack, 1000, 1
                    sale_list_file part
                    20171106_sale_management.txtReceipt Num : 2017.11.06.12.07 (년 .월 .일 .시 .분 )
                    Date : 2017.11.06 (년 .월 .일 )
                     Sale Product
                     Name, Price, Quantity, Sum_price
                    snack, 1000, 2, 2000
                    Total Sale price : 3500
POS_3.1.8_000
                    Passed
                    :10
                    sale_201711061215.txtReceipt Num : 2017.11.06.12.15 (년 .월 .일 .시 .분 )
                    Date : 2017.11.06 (년 .월 .일)
                    Sale Product
                    Total Sale Price : 5000
POS_3.1.8_001
                    Passed
                     sale_201711061215.txtReceipt Num : 2017.11.06.12.15 (년 .월 .일 .시 .분 )
                    Date : 2017.11.06 (년 .월 .일 )
                    Sale Product
                     Name, Price, Quantity, Sum_price
                     snack, 1000, 1, 1000
                     Total Sale Price : 5000
POS_3.1.9_000
                    Passed
                    :12
                    refund_201711061217.txtReceipt Num : 2017.11.06.12.17 (년 .월 .일 .시 .분 )
                    Date : 2017.11.06 (년 .월 .일 )
                    Refund Product
                     Total Refund Price : 0
POS_3.1.9_001
                    Passed
                     refund_201711061217.txtReceipt Num : 2017.11.06.12.17 (년 .월 .일 .시 .분 )
                    Date : 2017.11.06 (년 .월 .일 )
                     Refund Product
                     Name, Price, Quantity, Sum_price
                    snack, 1000, 1, 1000
                     Total Refund Price : 1000
POS 3.1.10 00
                    Passed
0
                     :14
                    stock_20171106.txtDate : 2017.11.06.12.19 (년 .월 .일 .시 .분 )
                     Name, Price, Quantity
                    snack, 1000, 4
POS_3.1.11_00
                    Passed
```

	:15 settle_20171106.txtDate : 2017.11.06 (년 .월 .일) Sale Product Total Sale Price : 2000 Refund Product Total Refund Price : 1000
POS_3.1.11_00	Passed
1	:16 settle_20171106.txtDate : 2017.11.06 (년 .월 .일) Sale Product Total Sale Price : 2000 Refund Product Name, Price, Quantity, Sum_price snack, 1000, 1, 1000 Total Refund Price : 1000
POS_3.1.11_00	Passed
2	:17 settle_20171106.txtDate : 2017.11.06 (년 .월 .일) Sale Product Name, Price, Quantity, Sum_price snack, 1000, 1, 1000 Total Sale Price : 2000 Refund Product Total Refund Price : 1000
POS_3.1.11_00	Passed
3	:18 settle_20171106.txtDate : 2017.11.06 (년.월.일) Sale Product Name, Price, Quantity, Sum_price snack, 1000, 1, 1000 Total Sale Price : 2000 Refund Product Name, Price, Quantity, Sum_price snack, 1000, 1, 1000 Total Refund Price : 1000
POS_3.1.12_00	Passed
0	

```
🔊 🖨 📵 sonhayoung@sonhayoung-VirtualBox: ~
                              파일(F) 편집(E) 보기(V) 검색(S) 터미널(T) 도움말(H)
                                                           1 1 n/a 0 0
8 8 2 6 0
32 32 21 11 n/a
                                                suites
                                                 tests
                                               asserts 32
                            Elapsed time = 0.000 seconds
sonhayoung@sonhayoung-VirtualBox:~$ gcc -o 3_1_12 3_1_12.c -lcunit
sonhayoung@sonhayoung-VirtualBox:~$ ./3_1_12
                                   CUnit - A unit testing framework for C - Version 2.1-3 http://cunit.sourceforge.net/
                             Suite: testing a suite
Test: POS_3.1.12_000() ...passed
Test: POS_3.1.12_001() ...passed
                                                 Type Total
                                                                       Ran Passed Failed Inactive
                             Run Summary:
                                                                                n/a
2
8
                                                suites
                                                 tests
                                              asserts
                                                                                                       n/a
                             Elapsed time = 0.000 seconds
sonhayoung@sonhayoung-VirtualBox:~$
POS_3.1.12_00
                            Passed
```

4.2 Evaluation

Total test case: 73개

Passed: 73개

Failed: 0개