

# Unit Test Report

## for Public Transportation System

- Test Cases Specification
- Test Summary Report

### Project Team

T1 Team

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1 Introduction

1.1 Objectives

본 문서는 Public Transportation System의 unit test를 수행한 결과에 대한 report 문서이다. Test 요소들에 대한 test case와 test 수행 결과에 대한 내용을 담고 있다.

1.2 References

- Team1 – SRA ver3.0
- Team1 – SDS ver2.0

2 Unit test case specification

2.1 Test case specification identifier

Identifier	Feature	Valid/Invalid value
PTS.UTC_2111_000	2.1.1.1 Calculate Controller	201411210115,BUS,5000,OUT,60
PTS.UTC_2111_001	2.1.1.1 Calculate Controller	201411210115,METRO,50000,IN,00
PTS.UTC_2111_002	2.1.1.1 Calculate Controller	201411456070,METRO,20000,IN,61
PTS.UTC_2111_003	2.1.1.1 Calculate Controller	201411190301,MEMO,2000000000000000,IN,61
PTS.UTC_2111_004	2.1.1.1 Calculate Controller	201411190301,METRO,1950,OUT,711
PTS.UTC_2112_000	2.1.1.2 Lack Money	Trigger IN
PTS.UTC_2113_000	2.1.1.3 Standard Fee	201411210115,BUS,5000,OUT,60
PTS.UTC_2113_001	2.1.1.3 Standard Fee	201411210115,METRO,-10000,IN,60
PTS.UTC_2114_000	2.1.1.4 Transfer Fee	201411210115,METRO,50000,IN,00
PTS.UTC_2114_001	2.1.1.4 Transfer Fee	201411210115,METRO,50000,IN,6-1
PTS.UTC_221_000	2.2.1 Display Controller	time.year= "2014" month="11" day="21" hour = "00" min=00" Card Info.fee = 500 / Cardinfo.balance =10000
PTS.UTC_221_001	2.2.1 Display Controller	time.year= "2014" month="11" day="21" hour = "00" min=70" Card Info.fee = 500 / Cardinfo.balance =10000
PTS.UTC_221_002	2.2.1 Display Controller	time.year= "2014" month="11" day="21" hour = "00" min=10"

		Card Info.fee = -11 / Cardinfo.balance =-222
PTS.UTC_222_000	2.2.2 Lack Display	Trigger IN
PTS.UTC_223_000	2.2.3 Card Display	Card Info.fee = 500 / Cardinfo.balance =10000
PTS.UTC_223_001	2.2.3 Card Display	Card Info.fee = -40 / Cardinfo.balance =0
PTS.UTC_224_000	2.2.4 Time Display	time.year= "2014" month="11" day="21" hour = "00" min=00"
PTS.UTC_224_001	2.2.4 Time Display	time.year= "-2222" month="11" day="21" hour = "00" min=00"
PTS.UTC_231_000	2.3.1 Reader Write Controller	readerWriteCommand == 1
PTS.UTC_231_001	2.3.1 Reader Write Controller	readerWriteCommand ==0
PTS.UTC_232_000	2.3.2 Reader Writer	CardInfo.fee =1050
PTS.UTC_232_001	2.3.2 Reader Writer	CardInfo.fee =-5999
PTS.UTC_233_000	2.3.3 Initialization	Tick, Trigger IN
PTS.UTC_241_000	2.4.1 Card Write Controller	cardWriteCommand ==1
PTS.UTC_241_001	2.4.1 Card Write Controller	cardWriteCommand ==0
PTS.UTC_242_000	2.4.2 Card Writer	time.year= "2014" month="11" day="21" hour = "00" min=00" CardInfo.balance =10000 CardInfo.filename = "abc.txt" CardInfo.IDcount = 60 CardInfo.traffic ="METRO" CardInfo.inout=0
PTS.UTC_242_001	2.4.2 Card Writer	time.year= "-2222" month="11" day="21" hour = "00" min=00" CardInfo.balance =10000 CardInfo.filename = "abc.txt" CardInfo.IDcount = 60 CardInfo.traffic ="TAXI" CardInfo.inout=0

PTS.UTC_11_000	Reader Interface	reader file names.
PTS.UTC_12_000	Sorting	file의 한 줄과 그 줄의 시간.
PTS.UTC_211_000	Distribute Controller	sorted Linked List
PTS.UTC_221_000	Exact Calculation Display	displaycommand==1
PTS.UTC_221_001	Exact Calculation Display	displaycommand==0

## 2.2 Test items

Test Identifier	Case	Input specification	Output specification
PTS.UTC_2111_000		201411210115,BUS,5000,OUT,60	Trigger to Standard Fee
PTS.UTC_2111_001		201411210115,METRO,50000,IN,00	Trigger to Standard Fee
PTS.UTC_2111_002		201411456070,METRO,20000,IN,61	Trigger to Transfer Fee
PTS.UTC_2111_003		201411190301,MEMO,20000000000000,IN,61	Trigger to Lack Money
PTS.UTC_2111_004		201411190301,METRO,1950,OUT,711	Trigger to Standard Fee
PTS.UTC_2112_000		Trigger IN	Display Command == 0
PTS.UTC_2113_000		201411210115,BUS,5000,OUT,60	Trigger to Standard fee out
PTS.UTC_2113_001		201411210115,METRO,-10000,IN,60	Trigger to Standard fee in
PTS.UTC_2114_000		201411210115,METRO,50000,IN,60	Trigger to Transfer fee in
PTS.UTC_2114_001		201411210115,METRO,50000,IN,6-1	Trigger to Transfer fee in
PTS.UTC_221_000		time.year= "2014"	display

	month="11" day="21" hour = "00" min=00" Card Info.fee = 500 / Cardinfo.balance =10000	
PTS.UTC_221_001	time.year= "2014" month="11" day="21" hour = "00" min=70" Card Info.fee = 500 / Cardinfo.balance =10000	display
PTS.UTC_221_002	time.year= "2014" month="11" day="21" hour = "00" min=10" Card Info.fee = -11 / Cardinfo.balance =-222	display
PTS.UTC_222_000	Trigger IN	display Lack Money Message
PTS.UTC_223_000	Card Info.fee = 500 / Cardinfo.balance =10000	display fee= 500/ balance = 100000
PTS.UTC_223_001	Card Info.fee = -40 / Cardinfo.balance =0	display fee = -40/ balance = 0
PTS.UTC_224_000	time.year= "2014" month="11" day="21" hour = "00" min=00"	Time : 201411210000
PTS.UTC_224_001	time.year= "-2222" month="11" day="21" hour = "00" min=00"	Time : -222211210000
PTS.UTC_231_000	readerWriteCommand == 1	Trigger to readerFileWrite
PTS.UTC_231_001	readerWriteCommand ==0	NONE.
PTS.UTC_232_000	CardInfo.fee =1050	ex>201411210115,METRO,1050,IN,60
PTS.UTC_232_001	CardInfo.fee =-5999	ex>201411210115,METRO,-5999,IN,60
PTS.UTC_233_000	Tick, Trigger IN	delete reader file.

PTS.UTC_241_000	cardWriteCommand ==1	Trigger to cardFileWrite
PTS.UTC_241_001	cardWriteCommand ==0	NONE
PTS.UTC_242_000	time.year= "2014" month="11" day="21" hour = "00" min="00" CardInfo.balance =10000 CardInfo.filename ="abc.txt" CardInfo.IDcount = 60 CardInfo.traffic ="METRO" CardInfo.inout=0	abc.txt에 201411210000,METRO,OUT,10000,60
PTS.UTC_242_001	time.year= "-2222" month="11" day="21" hour = "00" min="00" CardInfo.balance =10000 CardInfo.filename ="abc.txt" CardInfo.IDcount = 60 CardInfo.traffic ="TAXI" CardInfo.inout=0	abc.txt에 -222211210000,TAXI,OUT,10000,60
PTS.UTC_11_000	reader file names.	add to linked list
PTS.UTC_12_000	file의 한 줄과 그 줄의 시간.	시간을 Key로 list에 insert하면서 sort
PTS.UTC_211_000	sorted Linked List	환승->버스->지하철 순서로 정산계산 한 정산결과(result.busresult와 result.metroresult)
PTS.UTC_221_000	displaycommand==1	display result.
PTS.UTC_221_001	displaycommand==0	NONE

### 2.3 Input specifications

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### 2.4 Output specifications

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## 3 Environmental needs

Public Transportation System의 unit test를 위한 환경적 요구사항은 다음과 같다.

- cygwin : gcc compiler/linker

#### 4 Unit test summary report

##### 4.1 Test summary report identifier

Identifier	expected	Output specification	test result
PTS.UTC_2111_000	Trigger to Standard Fee	Trigger to Standard Fee	passed
PTS.UTC_2111_001	Trigger to Standard Fee	Trigger to Standard Fee	passed
PTS.UTC_2111_002	Trigger to Transfer Fee	Trigger to Transfer Fee	passed
PTS.UTC_2111_003	Trigger to Lack Money	Trigger to Lack Money	passed
PTS.UTC_2111_004	Trigger to Standard Fee	Trigger to Standard Fee	passed
PTS.UTC_2112_000	Display Command == 0	Display Command == 0	passed
PTS.UTC_2113_000	Trigger to Standard fee out	Trigger to Standard fee out	passed
PTS.UTC_2113_001	Trigger to Standard fee in	Trigger to Standard fee in	passed
PTS.UTC_2114_000	Trigger to Transfer fee in	Trigger to Transfer fee in	passed
PTS.UTC_2114_001	Trigger to Transfer fee in	Trigger to Transfer fee in	passed
PTS.UTC_221_000	display	display	passed
PTS.UTC_221_001	display	display	passed
PTS.UTC_221_002	display	display	passed
PTS.UTC_222_000	display Lack Money Message	display Lack Money Message	passed
PTS.UTC_223_000	display fee= 500/ balance = 100000	display fee= 500/ balance = 100000	passed
PTS.UTC_223_001	display fee = -40/ balance = 0	display fee = -40/ balance = 0	passed
PTS.UTC_224_000	Time : 201411210000	Time : 201411210000	passed



PTS.UTC_224_001	Time : -222211210000	Time : -222211210000	passed
PTS.UTC_231_000	Trigger to readerFileWrite	Trigger to readerFileWrite	passed
PTS.UTC_231_001	NONE.	NONE.	passed
PTS.UTC_232_000	ex>201411210115,METRO,1050,IN,60	ex>201411210115,METRO,1050,IN,60	passed
PTS.UTC_232_001	ex>201411210115,METRO,-5999,IN,60	ex>201411210115,METRO,-5999,IN,60	passed
PTS.UTC_233_000	delete reader file.	delete reader file.	passed
PTS.UTC_241_000	Trigger to cardFileWrite	Trigger to cardFileWrite	passed
PTS.UTC_241_001	NONE	NONE	passed
PTS.UTC_242_000	abc.txt에 201411210000,METRO,OUT,10000,60	abc.txt에 201411210000,METRO,OUT,10000,60	passed
PTS.UTC_242_001	abc.txt에 -222211210000,TAXI,OUT,10000,60	abc.txt에 -222211210000,TAXI,OUT,10000,60	passed
PTS.UTC_11_000	add to linked list	add to linked list	passed
PTS.UTC_12_000	시간을 Key로 list에 insert하면서 sort	시간을 Key로 list에 insert하면서 sort	passed
PTS.UTC_211_000	환승->버스->지하철 순서로 정산계산 한 정산결과(result.busresult와 result.metroresult)	환승->버스->지하철 순서로 정산계산 한 정산결과(result.busresult와 result.metroresult)	passed
PTS.UTC_221_000	display result.	display result.	passed
PTS.UTC_221_001	NONE	NONE	passed

## 4.2 Evaluation