

System Test

Public Transportation System

Team 6

- ✓ 201110202 김창규
- ✓ 201111339 김민우
- ✓ 201111359 배장길
- ✓ 201111382 전진영

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System Test Plan

- ✓ Features to be tested
- ✓ Features not to be tested
- ✓ Test case identification

Feature to be tested

Test function list

Identifier	Function	Function detail
PTS_STC_000	버스 승차	버스 단말기에서 사용자 카드.txt에 승차태그 기록 승차 가능 요금 계산 승차 정보 단말기에 출력
PTS_STC-001	버스 하차	하차 태그 시 환승 여부 확인 환승일 경우 환승 요금 계산 및 부과 하차 정보 사용자 카드.txt에 기록 하차 정보 단말기에 출력
PTS_STC_002	버스 환승	교통 카드 태그시 하차시간확인 하차시간, 승차시간 비교에 따른 환승여부 확인 환승 교통 수단 확인 환승 정보 단말기 출력
PTS_STC_003	지하철 승차	지하철 단말기에서 사용자 카드.txt에 승차태그 기록 승차 가능 요금 계산 승차 정보 단말기에 출력

Feature to be tested

Test function list

Identifier	Function	Function detail
PTS_STC_004	지하철 하차	하차 태그 시 환승 여부 확인 환승 일 경우 추가 구간 요금 계산 및 부과 하차 정보 사용자 카드.txt에 기록 하차 정보 단말기에 출력
PTS_STC_005	지하철 환승	교통 카드 태그시 하차시간확인 하차시간, 승차시간 비교에 따른 환승여부 확인 환승 교통 수단 확인 환승 정보 단말기 출력
PTS_STC_006	미환승	버스/지하철 각 요금을 각 회사로 분배

Feature to be tested

Test function list

Identifier	Function	Function detail
PTS_STC_007	환승	환승에 따른 요금계산여부 확인 계산된 요금 분배여부 확인
PTS_STC_008	미정산	사용자 카드.txt에서 미정산 여부 확인
PTS_STC_009	정산	각 회사에 전달되는 금액 출력 정산 완료 신호 전송 정산 시스템 초기화

Feature not to be tested

Not test function list

Identifier	Function	Function detail
PTS_STC_000	단말기	각 단말기 별로 고유한 식별자를 가지고 있어서 구분할수 있다.

Test Case Identification

버스 승차

Identifier	Input Specification	Output Specification
PTS_STC_000_000	Tag == IN / Bus tagger -> UserCard.txt = {YYYY,MM,DD,HH,MM,???,???,Balance,???,count}	Bus tagger -> UserCard.txt = {YYYY,MM,DD,HH,MM, BUS,IN ,Balance, BUS_0 +count}
PTS_STC_000_001	UserCard.txt -> Balance >= 1050	True
PTS_STC_000_002	UserCard.txt -> Balance <= 1050	False
PTS_STC_000_003	Usercard.txt -> Tagger	Tagger = {2014,12,04,08,50,BUS,IN,2100,BUS_00}

Test Case Identification

버스 하차

Identifier	Input Specification	Output Specification
PTS_STC_001_000	Tag == OUT	Check Transfer == True
PTS_STC_001_001	Tag == OUT	Check Transfer == false
PTS_STC_001_002	Check Transfer == True	Tagger = {2014,12,04,08,50,BUS, OUT,0 ,BUS_00}
PTS_STC_001_003	Check Transfer == false	Tagger = {2014,12,04,08,50,BUS, OUT,1050 ,BUS_00}
PTS_STC_001_004	Tagger -> UserCard.txt	UserCard.txt = {2014,12,04,08,50,BUS, OUT,1050 ,BUS_00}
PTS_STC_001_005	Tagger -> LED Interface	LED Interface = {2014,12,04,08,50,BUS, OUT,2100 ,BUS_00}

Test Case Identification

버스 환승

Identifier	Input Specification	Output Specification
PTS_STC_002_000	Tag == IN UserCard.txt -> Tagger = {2014,12,04, 08,50 ,BUS,IN,2100,BUS_00}	Tagger = {2014,12,04,08,50,BUS,IN,2100,BUS_00}
PTS_STC_002_001	(Tagger.prevTime + time) >= Tagger.nextTime	Transfer == True
PTS_STC_002_002	(Tagger.prevTime + time) <= Tagger.nextTime	Transfer == False
PTS_STC_002_003	Check Bus/Sub	Tagger = {2014,12,04,08,50, BUS ,IN,2100,BUS_00}
PTS_STC_002_004	Tagger -> LED Interface	LED Interface = {2014,12,04,08,50, BUS ,OUT,2100,BUS_00}

Test Case Identification

지하철 승차

Identifier	Input Specification	Output Specification
PTS_STC_003_000	Tag == IN / Sub tagger -> UserCard.txt = {YYYY, MM,DD,HH,MM,???,???,Balance,???, ount }	Sub tagger -> UserCard.txt = {YYYY,MM,DD,HH,MM, SUN,IN ,Balance , SUB_00 }
PTS_STC_003_001	UserCard.txt -> Balance >= 1050	True
PTS_STC_003_002	UserCard.txt -> Balance <= 1050	False
PTS_STC_003_003	Usercard.txt -> Tagger 출력	Tagger = {2014,12,04,08,50,SUB,IN,21 00,SUB_00}

Test Case Identification

지하철 하차

Identifier	Input Specification	Output Specification
PTS_STC_004_000	Tag == OUT	Check Transfer == True
PTS_STC_004_001	Tag == OUT	Check Transfer == false
PTS_STC_004_002	Check Transfer == True	Tagger = {2014,12,04,08,50,SUB, OUT,1100 ,BUS_00}
PTS_STC_004_003	Check Transfer == false	Tagger = {2014,12,04,08,50,SUB, OUT,2100 ,BUS_00}
PTS_STC_004_004	Tagger -> UserCard.txt	UserCard.txt = {2014,12,04,08,50,SUB, OUT,2100 ,BUS_00}
PTS_STC_004_005	Tagger -> LED Interface	LED Interface = {2014,12,04,08,50,SUB, OUT,2100 ,BUS_0,0}

Test Case Identification

지하철 환승

Identifier	Input Specification	Output Specification
PTS_STC_005_000	Tag == IN UserCard.txt -> Tagger = {2014,12,04, 08,50 ,SUB,IN,2100,BUS_00}	Tagger = {2014,12,04,08,50,SUB,IN,2100,BUS_00}
PTS_STC_005_001	(Tagger.prevTime + time) >= Tagger.nextTime	Transfer == True
PTS_STC_005_002	(Tagger.prevTime + time) <= Tagger.nextTime	Transfer == False
PTS_STC_005_003	Check Bus/Sub	Tagger = {2014,12,04,08,50, BUS ,IN,2100,BUS_00}
PTS_STC_005_004	Tagger -> LED Interface	LED Interface = {2014,12,04,08,50, SUB ,OUT,2100,BUS_00}

Test Case Identification

미환승 & 환승

Identifier	Input Specification	Output Specification
PTS_STC_006_000	Bus Charge -> Bus Company = {YYYY,MM,DD,TRANSFER,Charge}	Bus Charge -> Bus Company = {2014,12,04,BUS,125400}
PTS_STC_006_001	Sub Charge -> Sub Company = {YYYY,MM,DD,TRANSFER,Charge}	Sub Charge -> Sub Company = {2014,12,04,Sub,214500}
PTS_STC_007_000	Bus -> Sub All charge=(Bus+Sub)+Sub Charge=Bus+sub	Bus = (Bus+Sub)/(All Charge*Charge) Sub = Sub/(Allcharge*charge)
PTS_STC_007_001	Sub -> Bus All charge=(Sub+Bus)+Bus Charge=Sub+Bus	Sub = (Sub+Bus)/(All Charge*Charge) Bus = Bus/(Allcharge*charge)
PTS_STC_007_002	Bus -> Bus Company = {YYYY,MM,DD,TRANSFER,Charge}	Bus -> Bus Company = {2014,12,04,BUS,125400}
PTS_STC_007_003	Sub -> Sub Company = {YYYY,MM,DD,TRANSFER,Charge}	Sub -> Sub Company = {2014,12,04,Sub,214500}

Test Case Identification

미정산

Identifier	Input Specification	Output Specification
PTS_STC_008_000	Tagger = {2014, 12,04 ,08,50, BUS,IN ,2100,BUS_00} Tagger = {2014, 12,05 ,08,50, BUS,IN ,2100,BUS_00}	Add charge
PTS_STC_008_001	Tagger = {2014, 12,04 ,08,50, SUB,IN ,2100,BUS_00} Tagger = {2014, 12,05 ,08,50, BUS,IN ,2100,BUS_00}	Add Charge
PTS_STC_008_002	Tagger = {2014,12,04, 08,50 , SUB,IN ,2100,SUB_00} Tagger = {2014,12,04, 14,50 , SUB,IN ,2100,SUB_00}	Add Charge

Test Case Identification

정산

Identifier	Input Specification	Output Specification
PTS_STC_009_000	Bus Company -> BusCharge.txt = {2014,12,04,BUS,125400}	BusCharge.txt = {2014,12,04,BUS,125400}
PTS_STC_009_001	Sub Company -> SubCharge.txt = {2014,12,04,SUB,214500}	Sub Company ->SubCharge.txt = {2014,12,04, SUB,214500}
PTS_STC_009_002	Trigger.txt -> Tagger = {0}	Tagger Restart
PTS_STC_009_003	Trigger.txt -> Tagger = {1}	Tagger Stop
PTS_STC_009_004	Trigger.txt -> Tagger = {2}	Tagger data Delete

System Test Report

- ✓ Team 6 System test report
- ✓ Team 7 System test report

System Test Report

Team 6

버스 승차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_000_000	Tag == IN / Bus tagger -> UserCard.txt = {YYYY,MM,DD,HH,MM,???,???,Balance,???,count}	VALID
PTS_STC_000_001	UserCard.txt -> Balance >= 1050	VALID
PTS_STC_000_002	UserCard.txt -> Balance <= 1050	VALID
PTS_STC_000_003	Usercard.txt -> Tagger	VALID

System Test Report

Team 6

버스 하차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_001_000	Tag == OUT	VALID
PTS_STC_001_001	Tag == OUT	VALID
PTS_STC_001_002	Check Transfer == True	INVALID(true / false)
PTS_STC_001_003	Check Transfer == false	INVALID(true / false)
PTS_STC_001_004	Tagger -> UserCard.txt	VALID
PTS_STC_001_005	Tagger -> LED Interface	VALID

System Test Report

Team 6

버스 환승

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_002_000	Tag == IN UserCard.txt -> Tagger = {2014,12,04, 08,50 ,BUS,IN,2100,BUS_0 0}	VALID
PTS_STC_002_001	(Tagger.prevTime + time) >= Tagger.n extTime	INVALID(true or false)
PTS_STC_002_002	(Tagger.prevTime + time) <= Tagger.n extTime	INVALID(true or false)
PTS_STC_002_003	Check Bus/Sub	VALID
PTS_STC_002_004	Tagger -> LED Interface	VALID

System Test Report

Team 6

지하철 승차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_003_000	Tag == IN / Sub tagger -> UserCard.txt = {YYYY, MM,DD,HH,MM,???,???,Balance,???, ount }	VALID
PTS_STC_003_001	UserCard.txt -> Balance >= 1050	VALID
PTS_STC_003_002	UserCard.txt -> Balance <= 1050	VALID
PTS_STC_003_003	Usercard.txt -> Tagger 출력	VALID

System Test Report

Team 6

지하철 하차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_004_000	Tag == OUT	VALID
PTS_STC_004_001	Tag == OUT	VALID
PTS_STC_004_002	Check Transfer == True	INVALID(true or false)
PTS_STC_004_003	Check Transfer == false	INVALID(true or false)
PTS_STC_004_004	Tagger -> UserCard.txt	VALID
PTS_STC_004_005	Tagger -> LED Interface	VALID

System Test Report

Team 6

지하철 환승

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_005_000	Tag == IN UserCard.txt -> Tagger = {2014,12,04, 08,50 ,SUB,IN,2100,BUS_0 0}	VALID
PTS_STC_005_001	(Tagger.prevTime + time) >= Tagger.n extTime	INVALID(true or false)
PTS_STC_005_002	(Tagger.prevTime + time) <= Tagger.n extTime	INVALID(true or false)
PTS_STC_005_003	Check Bus/Sub	VALID
PTS_STC_005_004	Tagger -> LED Interface	VALID

System Test Report

Team 6

미환승 & 환승

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_006_000	Bus Charge -> Bus Company = {YYYY,MM,DD,TRANSFER,Charge}	VALID
PTS_STC_006_001	Sub Charge -> Sub Company = {YYYY,MM,DD,TRANSFER,Charge}	VALID
PTS_STC_007_000	Bus -> Sub All charge=(Bus+Sub)+Sub Charge=Bus+sub	INVALID (NOT implementation)
PTS_STC_007_001	Sub -> Bus All charge=(Sub+Bus)+Bus Charge=Sub+Bus	INVALID (NOT implementation)
PTS_STC_007_002	Bus -> Bus Company = {YYYY,MM,DD,TRANSFER,Charge}	INVALID (NOT implementation)
PTS_STC_007_003	Sub -> Sub Company = {YYYY,MM,DD,TRANSFER,Charge}	INVALID (NOT implementation)

System Test Report

Team 6

미정산

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_008_000	Tagger = {2014, 12,04 ,08,50, BUS,IN ,2100.BUS_00} Tagger = {2014, 12,05 ,08,50, BUS,IN ,2100,BUS_00}	VALID
PTS_STC_008_001	Tagger = {2014, 12,04 ,08,50, SUB,IN ,2100.BUS_00} Tagger = {2014, 12,05 ,08,50, BUS,IN ,2100,BUS_00}	VALID
PTS_STC_008_002	Tagger = {2014,12,04, 08,50 , SUB,IN ,2100,SUB_00} Tagger = {2014,12,04, 14,50 , SUB,IN ,2100,SUB_00}	VALID

System Test Report

Team 6

정산

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_009_000	Bus Company -> BusCharge.txt = {2014,12,04,BUS,125400}	VALID
PTS_STC_009_001	Sub Company -> SubCharge.txt = {2014,12,04,SUB,214500}	VALID
PTS_STC_009_002	Trigger.txt -> Tagger = {0}	VALID
PTS_STC_009_003	Trigger.txt -> Tagger = {1}	VALID
PTS_STC_009_004	Trigger.txt -> Tagger = {2}	VALID

System Test Report

Team 7

버스 승차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_000_000	Tag == IN / Bus tagger -> UserCard.txt = {MM,DD,HH,MM,SS,???,???,Balance,?? ??????}	VALID
PTS_STC_000_001	UserCard.txt -> Balance >= 1050	VALID
PTS_STC_000_002	UserCard.txt -> Balance <= 1050	VALID
PTS_STC_000_003	Usercard.txt -> Tagger	VALID

System Test Report

Team 7

버스 하차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_001_000	Tag == OUT	VALID
PTS_STC_001_001	Tag == OUT	VALID
PTS_STC_001_002	Check Transfer == True	VALID
PTS_STC_001_003	Check Transfer == false	VALID
PTS_STC_001_004	Tagger -> UserCard.txt	VALID
PTS_STC_001_005	Tagger -> LED Interface	VALID

System Test Report

Team 7

버스 환승

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_002_000	Tag == IN UserCard.txt -> Tagger = {1204 162253 ,1,0,3950,50010026}	VALID
PTS_STC_002_001	(Tagger.prevTime + time) >= Tagger.n extTime	VALID
PTS_STC_002_002	(Tagger.prevTime + time) <= Tagger.n extTime	VALID
PTS_STC_002_003	Check Bus/Sub	VALID
PTS_STC_002_004	Tagger -> LED Interface	VALID

System Test Report

Team 7

지하철 승차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_003_000	Tag == IN / Sub tagger -> UserCard.txt = {MM,DD,HH,MM,SS,??,??,Balance,?? ??????}	VALID
PTS_STC_003_001	UserCard.txt -> Balance >= 1050	VALID
PTS_STC_003_002	UserCard.txt -> Balance <= 1050	VALID
PTS_STC_003_003	Usercard.txt -> Tagger 출력	VALID

System Test Report

Team 7

지하철 하차

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_004_000	Tag == OUT	VALID
PTS_STC_004_001	Tag == OUT	VALID
PTS_STC_004_002	Check Transfer == True	VALID
PTS_STC_004_003	Check Transfer == false	VALID
PTS_STC_004_004	Tagger -> UserCard.txt	VALID
PTS_STC_004_005	Tagger -> LED Interface	VALID

System Test Report

Team 7

지하철 환승

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_005_000	Tag == IN UserCard.txt -> Tagger = {1204 162253 ,0,0,3950,50010026}	VALID
PTS_STC_005_001	(Tagger.prevTime + time) >= Tagger.n extTime	VALID
PTS_STC_005_002	(Tagger.prevTime + time) <= Tagger.n extTime	VALID
PTS_STC_005_003	Check Bus/Sub	VALID
PTS_STC_005_004	Tagger -> LED Interface	VALID

System Test Report

Team 7

미환승 & 환승

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_006_000	Bus Charge -> Bus Company = {MMDDHHMMSS,TRANSFER,Charge}	VALID
PTS_STC_006_001	Sub Charge -> Sub Company = {MMDDHHMMSS,TRANSFER,Charge}	VALID
PTS_STC_007_000	Bus -> Sub All charge=(Bus+Sub)+Sub Charge=Bus+sub	INVALID(Not Divide)
PTS_STC_007_001	Sub -> Bus All charge=(Sub+Bus)+Bus Charge=Sub+Bus	INVALID(Not Divide)
PTS_STC_007_002	Bus -> Bus Company = {MMDDHHMMSS,TRANSFER,Charge }	INVALID(Not Divide)
PTS_STC_007_003	Sub -> Sub Company = {MMDDHHMMSS,TRANSFER,Charge }	INVALID(Not Divide)

System Test Report

Team 7

미정산

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_008_000	Tagger = { 1204 085000, 1,0 ,2100.500100000} Tagger = { 1205 085000, 1,0 ,2100,500100000}	VALID
PTS_STC_008_001	Tagger = { 1204 085000, 0,0 ,2100,500100000} Tagger = { 1205 085000, 1,0 ,2100,500100000}	INVALID(Not balance)

System Test Report

Team 7

정산

Identifier	Input Specification	Valid/ Invalid value
PTS_STC_009_000	Bus Company -> BusCharge.txt = {1204161818,1,16782}	VALID
PTS_STC_009_001	Sub Company -> SubCharge.txt = {1204161733,0,6850}	VALID
PTS_STC_009_002	Trigger.txt -> Tagger = {0}	VALID
PTS_STC_009_003	Trigger.txt -> Tagger = {1}	VALID
PTS_STC_009_004	Trigger.txt -> Tagger	INVALID(Not Delete data)