**Use Case Scenarios**

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| **Use Case ID:** | PTS001 |
| **Use Case Name:** | Making payment with smart card |
| **Summary:** | This use case covers the scenario of the passenger making the payment with the with the smart card(payment token) |
| **Priority:** | 1 |
| **Primary Actor:** | Passenger (A registered user) |
| **Secondary Actor:** | Inspector |
| **Frequency of Use:** | Regularly |

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| **Preconditions** |
| 1. The passenger should have opened a digital wallet with the transport provider by paying the initial amount and obtained the smart card. 2. The passenger should be logged into the mobile app. |

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| **Main Success Scenario** | |
| **Step** | **Actions** |
| **1** | The passenger inserts their smart card when entering to the bus |
| **2** | The passenger inserts their smart card at the exit location |
| **3** | The system calculates the price based on the exit and entrance location |
| **4** | The system checks whether the available balance is sufficient |
| **5** | The system deducts the amount from the customers wallet |
| **6** | Charging machine makes the confirmation sound |

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| **Extensions** | |
| **Step** | **Actions** |
| **4.1** | If the available balance is insufficient |
| **4.1.a** | Revert the transactions in the system |
| **4.1.b** | Display an error message in the charging machine |
| **4.1.c** | Make an alert sound |
| **4.1.d** | Send notification to the mobile app with the available balance |
| **4.1.e** | Display the smart loan facility |
| **4.1.e.i** | Check for existing loans |

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| **Post conditions** |
| 1. Updated trip history information should be available for the user to view |

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| **Special Requirements** |
| 1. The passengers are privileged to take a loan during a trip too in case of a scenario they got a situation to travel longer and more expensive than they initially expected. |

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| **Other Notes (Assumptions, Issues,)** |
| * It is assumed that the customer haven’t already taken a loan |

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| **Use Case ID:** | PTS002 |
| **Use Case Name:** | Recharging the Smartcard account at a service point` |
| **Summary:** | A Passenger Recharges his/her Account Using a Reload Machine |
| **Priority:** | 1 |
| **Primary Actor:** | Passenger |
| **Secondary Actor:** | - |
| **Frequency of Use:** | Occasionally |

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| **Preconditions** |
| 1. User should know their account no in order to recharge the account. 2. Users should have valid bank notes to enter the reload machine. |

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| **Main Success Scenario** | |
| **Step** | **Actions** |
| **1** | The user selects the smartcard payment option at the top-up machine. |
| **2** | The user enters the account number to the reload machine |
| **4** | The system asks the user to input the bank notes to the machine one after one. |
| **5** | The amount inputted is shown on the screen for the user to check |
| **6** | The user confirms the amount shown on the screen to be credited to his/her account. |
| **7** | The system will generate a receipt |
| **8** | The system shows the success notification for the mobile app |

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| **Post conditions** |
| 1. Update the digital wallet balance. |

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| **Special Requirements** |
| 1. Only the SriLankan currency(LKR) is accepted at service point. |

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| **Other Notes (Assumptions, Issues,)** |
| 1. The users can also top-up the account balance using a credit/debit card at the service point or using the service providers API |

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| **Use Case ID:** | PTS003 |
| **Use Case Name:** | Make Day Pass Payment |
| **Summary:** | This use case covers the scenario of the passenger making the payment with the day pass |
| **Priority:** | 2 |
| **Primary Actor:** | Passenger |
| **Secondary Actor:** | - |
| **Frequency of Use:** | Occasionally |

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| **Preconditions** |
| * Buy a day pass. |

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| **Main Success Scenario** | |
| **Step** | **Actions** |
| **1** | The user swipes the day pass at the charging machine at the exit location |
| **2** | The system checks whether the day pass is already expired |
| **3** | The charging machine makes the confirmation sound |

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| **Extensions** | |
| **Step** | **Actions** |
| **2.1** | If the day pass is expired |
| **2.1.a** | Revert transaction |
| **2.1.b** | Display an error message in the charging machine |
| **2.1.c** | Make an alert sound |

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| **Post conditions** |
| 1. Update the total price of the transportation route |

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| **Use Case ID:** | PTS004 |
| **Use Case Name:** | Make Express Card Payments |
| **Summary:** | If the passenger is a foreign customer, he has to pay the bus fare through Express Card |
| **Priority:** | 1 |
| **Primary Actor:** | Foreign Passenger |
| **Secondary Actor:** | - |
| **Frequency of Use:** | Occasionally |

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| **Preconditions** |
| * Customer should be a foreign customer * There should be sufficient balance |

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| **Main Success Scenario** | |
| **Step** | **Actions** |
| **1** | Passenger makes the payment through express card |
| **2** | The system checks whether the Visa card is expired or not |
| **3** | System makes a confirmation sound when the payment is success |

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| **Post conditions** |
| * Visa card balance must be updated |

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| **Special Requirements** |
| * In order to use Express Cards, the passenger should be a foreign passenger |

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| **Use Case ID:** | PTS005 |
| **Use Case Name:** | Validate Trip |
| **Summary:** | When a passenger made |
| **Priority:** | 3 |
| **Primary Actor:** | Inspector |
| **Secondary Actor:** | - |
| **Frequency of Use:** | Regularly |

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| **Preconditions** |
| * The passenger has made the payment * The payment should be successful |

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| **Main Success Scenario** | |
| **Step** | **Actions** |
| **1** | The user makes a payment |
| **2** | Inspector scan the smart card or express card using a scanning machine. |
| **3** | Checks the amount with the scanned amount |
| **4** | If the value is correct, inspector validate the trip. |

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| **Extensions** | |
| **Step** | **Actions** |
| **4.1** | In case if the value is incorrect a notification will be sent to the user and that additional charge will be added to the next trip. |

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| **Post conditions** |
| * Trip confirmation message should be sent to the customer |

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| **Other Notes (Assumptions, Issues,)** |
| * The system will auto calculate the trip fare. * If the card hasn’t been scanned the location it will be notified to the inspector when he san it manually |

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| **Use Case ID:** | PTS006 |
| **Use Case Name:** | Generate statistical report |
| **Summary:** | Public transport manager generates a report to monitor traffic and trip fare |
| **Priority:** | 5 |
| **Primary Actor:** | Public transport manager |
| **Secondary Actor:** |  |
| **Frequency of Use:** | Regularly |

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| **Preconditions** |
| * Should have records of trip fares and traffic around the city |

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| **Main Success Scenario** | |
| **Step** | **Actions** |
| **1** | Public transport manager takes details of trip fare |
| **2** | Public transport manager takes details of traffic details |
| **3** | After analyzing those details, he creates a statistical report |
| **4** | Updates the transport time as well |

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| **Post conditions** |
| * Those statistical data must be taken by observing several records |