Acceptance Criteria

- The system should be able to cover sections **Q-LESS Transport Card** *(see Section A)* and **Q-LESS Discounted Transport Card** *(see Section B)* sections in this document only.
- Sections C and D are optional. It is not needed to complete the Machine Problem but any additional completed section will be given merit.

Machine Problem Statement

With the ever-increasing problem of Metro Manila's transport system, The DOTC *(Department of Transportation and Communication)* is trying to maximize the use of Metro Manila Transit System *(MRT)*. One of the initiatives that the department is undertaking is to ensure that the commuter's queue system is as efficient as it can be with the use of modern technology. You were asked to create a computer system that would support a new version of their pre-paid travel cards or Stored Value Tickets.

The new computer system is named Q-LESS Transport *(Quick Line and Efficient Service System)* which aims to lessen the time and cost that a commuter will spend in using the public MRT transport system. Below are the capabilities of the application.

Features

Section A: Q-LESS Transport Card

- Q-LESS Transport Card is valid up to 5 years after the last used date.
- Q-LESS Transport Cards will have an initial load of P100.
- Upon exit, a fix rate of P15 will be deducted regardless of station.

Section B: Q-LESS Discounted Transport Card

- Q-LESS Discounted Transport Card is valid up to 3 years after the last used date.
- Q-LESS Transport Cards will have an initial load of P500.
- Upon exit, a fix rate of P10 will be deducted regardless of station.
- The commuter would have to provide either a Senior Citizen Control Number or PWD ID Number.
  - Senior Citizen Control Number is a 10-character length string with "##-####-####" format.
  - PWD ID Number is a 12-character length string with "####-####-####" format.

Section C: Q-LESS Discount Definitions (OPTIONAL)

- Discounted Card Types should apply a base discount of 20%.
- For succeeding use of the transport system using the Q-LESS Discounted Transport Card, an additional 3% discount will be applied. The additional 3% discount can be availed up to 4 trips within the day.
- When the maximum number of discounts use has been reached, regular rates for the card type are applied.

- - - Sample 1: Customer uses a Discounted Q-LESS Transport Card on the same day.
    - 1st Trip: 20% discount
    - 2nd Trip: 23% discount
    - 3rd Trip: 23% discount
    - 4th Trip: 23% discount
    - 5th Trip: 23% discount
    - 6th Trip: 20% discount
  - Sample 2: Customer uses a Discounted Q-LESS Transport Card on two different days.
    - 1st Trip on same day: 20% discount
    - 2nd Trip on same day: 23% discount
    - 1st Trip the next day: 20% discount

Section D: Q-LESS Transport Card Reloading (OPTIONAL)

- Q-LESS Transport Cardholder should be able to load their card with a starting value of P100 up to P1,000.
- Q-LESS Transport Card can only have a maximum balance of P10,000.
- The Card Loading interface should provide the user with an interface that enables them to provide an amount to load and cash value fields.
- Their change should be computed and displayed based on the difference of the cash value and amount to load.
  - Sample: Customer has P100 balance in their transport card
    - Amount to Load: P500
    - Customer Money: P1,000
    - Change: P500
    - New Balance: P600
  - Sample: Customer has P9,500 balance in their transport card
    - Amount to Load: P1,000
    - Customer Money: P1,000
    - Change: P500
    - New Balance: P10,000