1. **Report No.1 Introduction**
2. **Project Information**
3. **Introduction**
4. **Current Situation**
5. **Problem Definition**
6. **Proposed Solution**

**5.1 Feature functions:**

* Web app: For Staff only.
* Management routing: edit information for bus route and bus timetable.
* Notify new update data from server to staff: when have new data, background system will notify to staff and staff will decide should approve this update or not.
* Background:
* Check new data periodically: Background system will check new data after one day. When new data is coming. Write to temporary database and notify to staff about new data.
* Mobile app:
* Find bus route through two point: user inputs start point and end point and optional departure time. Application will find the best bus route from start point to end point which optimize condition (shortest time, least number change route)
* Find Bus route through 4 points: user inputs start point, two middle point and end point and optional departure time. Application will find the best bus route from start point through two middle point to end point which optimize condition (shortest time, least number change route)
* Find Bus route through 4 points with optimize: user inputs start point, two middle point and end point and optional departure time, then choose “optimize” option. Application will find the best bus route from start point through three point which optimize condition (shortest time, least number change route), no matter last three places.
* Find motorcycle route through two point: user inputs start point and end point. Application will find the best bus route from start point to end point which has the shortest distance.
* Find motorcycle route through 4 points: user inputs start point, two middle point and end point. Application will find the best bus route from start point through two middle point to end point which has the shortest distance.
* Find motorcycle route through 4 points with optimize: user inputs start point, two middle point and end point then choose optimize option. Application will find the best bus route from start point through three point which shortest distance.
* Wear app:
* Bus:
* Notify which bus station should take off: when bus drive near circular range of station in the plan. Application will herald name of station 2 minutes and will notify again 1 minutes later with special sound and vibrate the smart watch until user turn off.
* Motorcycle:
* Notify upcoming turn: when user drive nearly next turn, application will herald for user which should do next, and vibrate when you are in circular range.
* Map:
  + show your current location in map same with route you should to go (including bus or motorcycle).
  + show sequence action messages you should to do (including bus or motorcycle).

**5.2 Advantages and disadvantages:**

* Advantages:
* Support optimization passes through multi points.
* Support on smart wear, they can look up information easy. Don't need to use mobile phone. Decreased ability to stolen.
* Disadvantages:
* Smart wear has high price and these screen is slightly small, hard to use for newbie.
* Have not supported directly from the transportation office as other applications, so accurate data are limited.

1. **Functional Requirements**
2. **Role and Responsibility**