Section: UML Class Diagram

New Classes Added:
- SystemEfficiency
- PassengerManagement
- SystemState

Modified Classes:
- EventHandler [act as the overall system orchestrator, expanded to handle systems efficiency calculations, passenger management and replay capabilities]
- Route [to handle TransitStops changes in routes]
- Bus [to handle bus capacity and bus speed change]
- TransitStop [to handle calculation of passenger waiting and transfers]

Section: UML Sequence Diagram

Modifies move_bus sequence:
- Detailed sequence to get following objects: event, bus, route,
- Elaborated on distance calculations using current and next location in the bus route
- Elaborated on travel time calculations using bus speed and distance. Also setting of travel time as new event rank.
- Detailed sequence for Passenger Management including calculation for rider's arrival in transit stop, riders on the bus, riders off the bus and rider departure from transit stop.
- Detailed sequence for System efficiency calculation including System waiting passenger calculation and System bus cost calculations.
- Handling of rewind capabilities
- Handling of route change as well as bus capacity and bus speed change.

General Notes:
- UI rendering, file IO such as reading the commands from test_scenario.txt and user interactions will be executed in working_system class.
- As commands are processed from file IO to bootstrap the system simulation, these are processed as follows –
  - add_stop/add_depot: location object gets created and the created location objects along with stop number, name, abbreviation, initial riders and isdepot flag are used to instantiate TransitStop object.
  - add_route/extend_route: uses created TransitStop objects along with route number & name to create and update Route objects
  - add_bus: created Location, TransitStop, Route objects are passed along with bus number, riders, riders capacity, fuel, fuel capacity & speed to create bus object
  - add_event command: use a Priority Queue to add the event.
- EventHandler leverages a priority queue to process events where it will move_bus that has lowest event rank. EventHandler leverages a Stack for rewind capabilities.
- move_bus command uses Location, TransitStop, Route and Bus objects to update the event rank, trigger passenger management and update system efficiency values. This redraws the UI and/or print the status in standard output.