Preliminary project – Bus Reservation System

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# Aim of the project

This project’s aim is to manage a bus reservation system, where clients can book bus trips.

# Restrictions

1. Trip can have only 1 bus assigned to it.
2. Bus can be assigned to only 1 trip.
3. There can be no more passengers than places in the bus.
4. Bus cannot start another trip before finishing the previous one.
5. Buses cannot have 0 capacity.
6. Client cannot book trips if they overlap.

# Functionality

* Client:
  + Has a name (set when adding a client) and ID (set automatically)
  + Can book trips.
  + Can cancel reservation.
  + Name can be changed.
* Trip:
  + Has following parameters:
    - ID
    - Starting place
    - Destination
    - Distance
    - Departure time
    - Duration
    - Assigned bus
    - List of enrolled clients
  + Time can be changed.
  + Bus can be changed.
  + Can print enrolled clients.
* Bus:
  + Has ID, capacity and assigned trip.
  + Its assigned trip can be changed.
* Program can print the timetable.
* There’s a *Time* class, which helps with time management (months, days, hours, minutes).

# Test scenarios

1. Testing adding and removing objects:
   * Clients:
     + Add some clients.
     + Print the list of the clients.
     + Remove a client from front, middle, back.
     + Test passed if the list is printed properly.