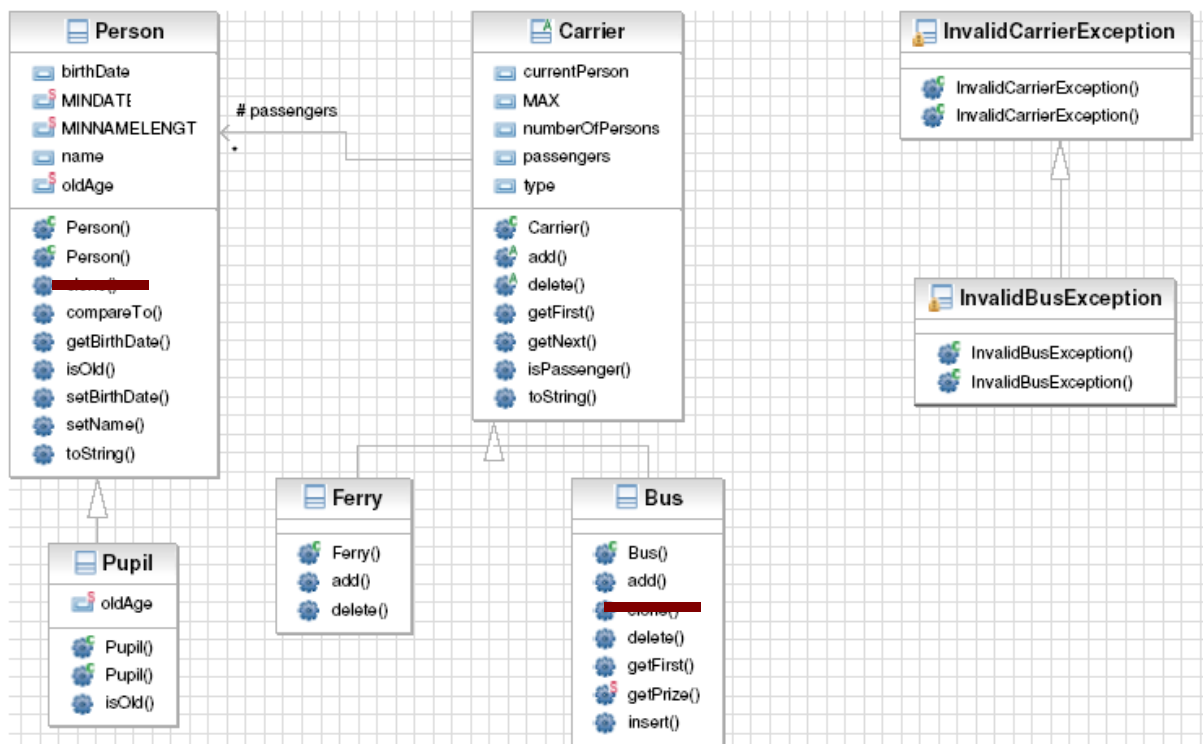


Upgrade

You have to define an abstract class „Carrier“, which defines some properties (see UML diagram). Furthermore we need a class „InvalidCarrierException“. Pay attention on *abstract* and *static*.

- **Person**
 - new Person(name, birthdate)...throws InvalidPersonException("name of person is too short")
 - new Person(name, birthdate)...throws InvalidPersonException "person is too young")
 - MINDATE...OLD_AGE / 2
 - OLD_AGE...34
- **Carrier**
 - Carrier (String _type, int _MAX)
 - abstract void add(Person _p)
 - abstract void delete(Person _p)
 - Person getFirst()
 - Person getNext()
 - boolean isPassenger(Person _p)
- **Bus**
 - void add(Person _p)...throws InvalidBusException("bus seems to be full")
 - void add(Person _p)...throws InvalidBusException("bus has already this passenger")
 - void delete(Person _p) ...throws InvalidBusException("bus hasn't this passenger")
 - getFirst()...throws InvalidBusException("bus has no passengers")
 - public String getPrize(Person _p)
 - clone...copy of bus and passengers
- **Ferry**
 - add()...LIFO - procedure
 - has no „own“ exception

UML



outcome:

----- generating persons -----

Exception happened in generatePupil(): person is too young

Exception happened in generatePupil(): name of person is too short

----- fill carriers -----

Exception happened in fillBusWithPerson(): [java.lang.NullPointerException](#)

Exception happened in fillBusWithPerson(): [InvalidBusException](#): bus has already this passenger

Exception happened in fillBusWithPerson(): [InvalidCarrierException](#): ferry seems to be full

-----list -----Bus: Ro 80

Pupil: Onestone O., 1993-02-14

Pupil: Twostone T., 1992-04-05

Pupil: Threestone, 1933-12-31

-----list -----Ferry: Queen Lizzy

Pupil: Threestone, 1933-12-31

Pupil: Twostone T., 1992-04-05

Pupil: Onestone O., 1993-02-14

-----list -----Bus: Isetta

Exception happened in getPassengers(): [InvalidBusException](#): bus has no passengers

-----list -----Ferry: Queen Mary

Exception happened in getPassengers(): [InvalidCarrierException](#): carrier has no passengers
