Data Manager

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| checkPassword(email,psw) | |
| **Input** | Effect |
| An email in the database with the corresponding password | Returns the object user, corresponding to this email |
| An email in the database with an incorrect password | An InvalidPasswordException is raised |
| An email not in the database | An InvalidEmailException is raised |
| A null parameter | An NullPointerException is raised |

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| readVehicleInfo() | |
| **Input** | Effect |
| - | If there are vehicles in the database this method return a list with all the vehicles, if the database is empty an emptyDatabaseException is raised |

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| newUser(form) | |
| **Input** | Effect |
| Null parameter | NullArgumentException is raised |
| Invalid data in the form | Returns false |
| Correct data | The system creates a password, then sends it by email to the user and the method returns true |
| Incomplete data in the form | Returns false |

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| findVehicleInfo(vehicle) | |
| **Input** | Effect |
| Null parameter | NullArgumentException is raised |
| A vehicle with an id in the database | Returns the vehicle in the database |
| A vehicle with an id not in the database | Returns the vehicle in the database |

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| createReservation(user,vehicle) | |
| **Input** | Effect |
| A user and a vehicle in the database | Creates a new reservation object in the database and returns true |
| A user not in the database | IllegalArguementException is raised |
| A vehicle not in the database | IllegalArguementException is raised |
| A null parameter | NullPointerException is raised |

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| readReservation(user) | |
| **Input** | Effect |
| A user in the database | Returns the reservation associated to the user |
| A user not in the database | IllegalArguementException is raised |
| A user in the database without a reservation | IllegalArguementException is raised |
| A null parameter | NullPointerException is raised |

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| newRide(ride) | |
| **Input** | Effect |
| A ride with valid attributes | Creates a new ride object in the database with the correct attributes |
| A ride with wrong attributes | IllegalArguementException is raised |
| A null parameter | NullPointerException is raised |

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| updatePosition(vehicle,position) | |
| **Input** | Effect |
| A vehicle in the database and a valid position | Edits the vehicle position in the database |
| A vehicle not in the database | IllegalArguementException is raised |
| A null parameter | NullPointerException is raised |
| An invalid position | IllegalArguementException is raised |

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| findPaymentInformation(user) | |
| **Input** | Effect |
| A user in the database | Returns an object paymentInfo associated with the user |
| A user not in database | IllegalArguementException is raised |
| A null parameter | NullPointerException is raised |

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| findAllChargingStation() | |
| **Input** | Effect |
| - | Returns the list of the charging station in the database |

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| updateState(state,vehicle) | |
| **Input** | Effect |
| A valid state and a vehicle in the database | Edits the vehicle state stored in the database |
| A null parameter | NullPointerException is raised |
| An invalid state | IllegalArguementException is raised |
| A vehicle not in database | IllegalArguementException is raised |

Vehicle manager

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| findAllVehicles() | |
| **Input** | Effect |
| - | Returns a list with all the vehicles in the database |

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| unlockVehicle(vehicle,user) | |
| **Input** | Effect |
| A valid state and a vehicle in the database | Edits the vehicle state stored in the database |
| A null parameter | NullPointerException is raised |
| An invalid state | IllegalArguementException is raised |
| A vehicle not in database | IllegalArguementException is raised |

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| lockCar(vehicle) | |
| **Input** | Effect |
| A valid vehicle in the database | Locks the car’s doors and returns true |
| A null parameter | NullPointerException is raised |
| A vehicle not in database | IllegalArguementException is raised |
| A vehicle with state in use, in the database | Returns false |