Operation Contracts

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# C.D. Message

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| Operation:  Cross References: | toString()  Use Cases: Message |
| Preconditions: | - body was initialized |
| Postconditions: | - a new reference to body was returned |

# C.D. MessageHeader

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| Operation:  Cross References: | MessageHeader(time: String, UUID: String, title: String)  Use Cases: MessageHeader | |
| - Void  - A new MessageHeader instance was initialized  - UMID, title, and hidden were all initialized | |
|  | |
| Operation: | compareTo(that: MessageHeader) | |
| Cross References: | Use Cases: MessageHeader | |
| Preconditions: | - that was initialized | |
| Postconditions: | - that was compared to that by UMID and a new Instance of int was returned | |
| Operation: | toString() | |
| Cross References: | Use Cases: MessageHeader | |
| Preconditions: | - title was initialized | |
| Postconditions: | - a new reference to title was returned | |

# C.D. Trip

Trip()

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| Cross References: | Use Cases: Trip |
| Preconditions: | - Void |
| Postconditions: | - A new instance of Trip was created |
| Operation: | toString() |
| Cross References: | Use Cases: Trip |
| Preconditions: | - Void |
| Postconditions: | - A new String was formed by the data members and returned |
| Operation: | insertRider(rider: String) |
| Cross References: | Use Cases: Trip |
| Preconditions: | - Void |
| Postconditions: | - rider was inserted into riders, if successful true was returned otherwise false |
| Operation: | insertRequirement(requirement: String) |
| Cross References: | Use Cases: Trip |
| Preconditions: | - Void |
| Postconditions: | - requirement was inserted into requirements |

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| Operation: | removeRider(rider: String) |
| Cross References: | Use Cases: Trip |
| Preconditions: | - riders was initialized |
| Postconditions: | - rider was removed from riders if it was there |
| Operation: | removeRequirement(requirement: String) |
| Cross References: | Use Cases: Trip |
| Preconditions: | - requirements was initialized |
| Postconditions: | - requirement was removed from requirements if it was there |

# C.D. User

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| Operation: | User(email: String, password: String) | |
| Cross References: | Use Cases: User | |
| Preconditions: | - Void | |
| Postconditions: | * a new User instance was initialized * email and password were updated | |
| Operation: | compareTo(that: User) | |
| Cross References: | Use Cases: User | |
| Preconditions: | - that was initialized | |
| Postconditions: | - thwas and that are compared by UUID and a new instance of  Int was returned | |
| Operation: | insertRating(rating: Integer) |
| Cross References: | Use Cases: User |
| Preconditions: | - Void |
| Postconditions: | - this.rating average was updated |

C.D. Message Board MessageBoard()

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| --- | --- |
| Cross References: | Use Cases: Message Board |
| Preconditions: | - Void |
| Postconditions: | - a new MessageBoard instance was initialized |
| Operation: | insert(message: Message) |
| Cross References: | Use Cases: Message Board |
| Preconditions: | - messageBoard was initialized |
| Postconditions: | - message was inserted into MessageBoard if it was not there |
| Operation: | remove(message: MessageHeader) |
| Cross References: | Use Cases: Message Board |
| Preconditions: | - messageBoard was initialized |
| Postconditions: | - the corresponding message was removed from messageBoard if it was there |
| Operation: | get(message: MessageHeader) |
| Cross References: | Use Cases: Message Board |
| Preconditions: | - messageBoard was initialized |
| Postconditions: | - a reference to the corresponding message was returned if that |

message was there

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| Operation:  Cross References: | checkFor(message: MessageHeader)  Use Cases: Message Board |
| Preconditions: | - messageBoard was initialized |
| Postconditions: | - true was returned if the corresponding message was there, false otherwise |
| Operation: | getHeaders() |
| Cross References: | Use Cases: Message Board |
| Preconditions: | - messageBoard was initialized |
| Postconditions: | - a NavigableSet of the MessageHeaders was constructed and a reference was returned |
| Operation: | fromUser(UUID: String) |
| Cross References: | Use Cases: Message Board |
| Preconditions: | - messageBoard was initialized |
| Postconditions: | - a Collection of the MessageHeaders of Messages with UUID |

was returned

# C.D. User Table

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| Operations:  Cross References: | UserTable()  Use Cases: User Table |
| Preconditions: | - Void |
| Postconditions: | - a new UserTable instance was initialized |
| Operation: | login(UUID: String, password: String) |
| Cross References: | Use Cases: User Table |
| Preconditions: | - void |
| Postconditions: | - a User object was returned if there was such a UUID and password was correct |
| Operation: | insert(user: User) |
| Cross References: | Use Cases: User Table |
| Preconditions: | - user was initialized |
| Postconditions: | - user was inserted into the UserTable if it was not already there |
| Operation: | remove(UUID: String) |
| Cross References: | Use Cases: User Table |
| Preconditions: | - UserTable was initialized |
| Postconditions: | - A User with UUID was removed from the UserTable |

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| --- | --- |
| Operation: | checkFor(UUID: String) |
| Cross References: | Use Cases: User Table |
| Preconditions: | - UserTable was initialized |
| Postconditions: | - If User with UUID was in UserTable true was returned |

otherwise false

C.D UserTableInterface

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| --- | --- |
| Operation:  Cross References: | Login(table: UserTable)  Use Cases: UserTableInterface |
| Preconditions: | - Table was initialized |
| Postconditions: | - UserTableInterface was initialized |
| Operation: | register(table: UserTable) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - UserTable was initialized |
| Postconditions: | - A User was Registered with a UUID, email, password, and profile  Picture into the UserTable |
| Operation: | remove(table: UserTable, user: User) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - UserTable was initialized |
| Postconditions: | - A User with a UUID was removed from the UserTable |
| Operation: | recoverPassword(table: UserTable, user: User) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - UserTable was initialized |
| Postconditions: | - A User with a UUID was sent a recover password email |

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| Operation:  Cross References: | reverifyAll(table: UserTable)  Use Cases: UserTableInterface |
| Preconditions: | - UserTable was initialized |
| Postconditions: | - Verification emails were sent to all existing Users |
| Operation: | drawProfile(table: UserTable. UUID: String) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - UserTable is was initialized |
| Postconditions: | - User Profile of a User with a UUID was loaded onto the screen |

C.D. MessageBoardInterface

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| Operation:  Cross References: | drawBoard(board: MessageBoard)  Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - MessageBoard was drawn onto screen |
| Operation: | drawReview(board: MessageBoard, header: MessageHeader) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Review was drawn onto screen |
| Operation: | drawReminder(board: MessageBoard, header: MessageHeader) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Reminder was drawn onto screen |
| Operation: | drawRequest(board: MessageBoard, header: MessageHeader) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Request was drawn onto screen |

drawOffer(board: MessageBoard, header: MessageHeader)

Use Cases: UserTableInterface

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| --- | --- |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Offer was drawn onto screen |
| Operation: | drawService(board: MessageBoard, header: MessageHeader) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Service was drawn onto screen |
| Operation: | postReview(board: MessageBoard) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - Review was stored into MessageBoard |
| Operation: | postRequest(board: MessageBoard) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - Request was stored into MessageBoard |
| Operation: | postOffer(board: MessageBoard) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - Offer was stored into MessageBoard |

postService(board: MessageBoard)

Use Cases: UserTableInterface

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| --- | --- |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - Service was stored into MessageBoard |
| Operation: | acceptRequest(board: MessageBoard, header: MessageHeader) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Request of MessageHeader was accepted and stored into  MessageBoard |
| Operation: | acceptOffer(board: MessageBoard, header: MessageHeader) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Offer of MessageHeader was accepted and stored into  MessageBoard |
| Operation: | acceptService(board: MessageBoard, header: MessageHeader) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard and MessageHeader were initialized |
| Postconditions: | - Service of MessageHeader was accepted and stored into |

MessageBoard

pushReminders()

Use Cases: UserTableInterface

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| --- | --- |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - For each person attending a Trip, a Reminder is sent to their email |
| Operation: | filterByUser(board: MessageBoard, UUID: String) |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - MessageBoard is filtered by UUID of all existing Users |
| Operation: | removeFinished() |
| Cross References: | Use Cases: UserTableInterface |
| Preconditions: | - MessageBoard was initialized |
| Postconditions: | - If a Trip is completed the trip is removed from the MessageBoard |