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| **Airplane** |
| + createAirplane (int totalRows, int totalColumns ) : Passenger[][] |

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| **AirplaneSimulatorGUI** |
| + planeConfigs : String[] |
| + methods : String[] |
| + passengerOrderOptions : String[] |
| + debugOptions : String[] |
| + animationOptions : String[] |
| + planeLayout : JComboBox<String> |
| + boardingMethods : JComboBox<String> |
| + passengerOrder : JComboBox<String> |
| + debug : JComboBox<String> |
| + animation : JComboBox<String> |
| + percentFilled : JTextField |
| + percentBags : JTextField |
| + percentCompanions : JTextField |
| + main ( String[] args ) : void |
| - getCapacityInput ( String planeCapacity ) : int |
| - getTotalColumns ( int capacity, String planceCapacity ) : int |
| - createInputPanel() : int |
| - createResultsPanel ( double totalBoardTime, int totalPassengers, double avgPassengerTime, int intInput, String percentBagInput ) : int |
| - saveResults ( double totalBoardTime, int totalPassengers, int capacity, int intInput, Passenger[][] plane, int totalRows, int totalColumns ) : void |
| - printAirplaneToFile ( Passenger[][] plane, int totalRows, int totalColumns, PrintWriter file ) : void |

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| **CalculateTimeDisplaySim** |
| + calculateBoardTime (int boardingMethod, Passenger[] passengerList, int totalRows, int totalColumns, double totalBoardTime, int moveToRow, int moveToBack, int windowSitTime, int middleSitTime, int aisleSitTime, int debugSelection, Passenger[][] plane, int animationSelection) : double |
| + deletePassengerAtPosition ( Passenger[] activePassengers, int i ) : Passenger[] |
| + printAirplaneToWindow ( Passenger[][] plane, Passenger[] activePassengers, int totalRows, int totalColumns, JTable dataTable ) : void |
| + initializeAnimationWindow ( int totalColumns, int totalRows ) : JTable |
| - addBackToFrontTime ( Passenger[] passengerList, String curPassengerColumn, int curPassengerRow, int moveToBack, double totalBoardTIme, int windowSitTime, int middleSitTime, int aisleSitTime, int i ) : double |
| - addFrontToBackTIme ( Passenger[] passengerList, String curPassengerColumn, int curPassengerRow, int moveToBack, int moveToRow, double totalBoardTime, int windowSitTime, int middleSitTime, int aisleSitTime ) : double |
| - addAlternatingWMATime ( Passenger[] passengerList, double totalBoardTime, final int totalRows, final int totalColumns, int debugSelection, Passenger[][] palne, int animationSelection ) : double |
| - getPassengerRow ( Passenger[] passengerList, int i ) : int |
| - passengerStandUpTime ( int targetRow, String targetColumn, Passenger[][] plane ) : int |
| - checkPassengerSeats ( Passenger currentPassenger, Passenger[][] plane ) : int |

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| **PassengerList** | |
| + createPassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, double percentBags ) : Passenger[] | |
| + createRandomPassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, double percentBags ) : Passenger[] | |
| + createZoneRandomPassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, int totalZones, double percentBags ) : Passenger[] | |
| + createReversePassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, double percentBags ) : Passenger[] | |
| + createWMAPassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, double percentBags ) : Passenger[] | |
| + createWMARandomPassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, double percentBags, int totalRows, int totalColumns ) : Passenger[] | |
| + createAlternateRowsPassengerList (int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, int totalColumns, double percentBags ) : Passenger[] | |
| + createPyramidPassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, int totalColumns, double percentBags ) : Passenger[] | |
| + createRandomCompanionsPassengerList ( int totalPassengers, String[] seatList, int aisleSitTime, int middleSitTime, int windowSitTime, int totalColumns, double percentBags, double percentCompanions ) : Passenger[] | |
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| **Passenger** |
| + walkspeed : int |
| + bags : int |
| + destination : String |
| + boardTIme : double |
| + personalSpace : Boolean |
| + cDT : int |
| + sitTime : int |
| + targetRow : int |
| + currentRow : int |
| + listPosition : int |
| + targetColumn : String |
| + seated : Boolean |
| + passengerID : int |
| + companionID : int |
| + Passenger ( int curWalkSpeed, int curBags, String curDestination, Boolean animationToggle, Boolean personalSpaceToggle, int aisleSitTime, int middleSitTime, int windowSitTime, int passengerListPosition, int ID ) : Passenger |
| + getBags() : int |
| + setBags ( int newBags ) : int |
| + getDestination() : String |
| + setDestination ( String newDestination ) : String |
| + getBoardTime() : double |
| + setCompanionID ( int newCompanionID ) : void |
| - getTargetColumn ( String destination ) : String |
| - getPassengerRow ( String destination ) : int |

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| **SeatList** |
| + createSeatList ( int totalPassengers, int totalRows, int totalColumns ) : String[] |
| + createReverseList ( int totalPassengers, int totalRows, int totalColumns ) : String[] |
| + createWMASeatList ( int totalPassengers, int totalRows, int totalColumns ) : String[] |