

## Main Timer timer GameLogic gameLogic GUIFrame guiFrame 1 1 1 Timer GameLogic - Aircraft aircraft - GUIFrame guiFrame - ArrayList<Aircraft> aircrafts - GameLogic gameLogic - int scheduleClock - long timeA - ArrayDeque<int[]> schedule - int timeLength - int timeOfNextScheduleEntry - int clockA - int scheduleScope - int clockATop - int scheduleScopeTop - int clockB - int averageFrequency - int clockBTop - CommandParser commandParser - int clockC - int zoom - int clockCTop - int∏ runwayPosition - Boolean gameOn - int landed - int lost + stop() - Random random - timeLoop() - RadarPanel radarPanel - tick() - GUIFrame guiFrame - ArrayList<String> allIdentifiers - ArrayList<Aircraft> removeList - HashMap<Integer, Aircraft> positionMap - Aircraft∏ tooClose - Timer timer + setTimer(Timer t) + getLost() + getLanded() + getIdentifier(int i) + getSchedule() + setGUIFrame(GUIFrame gf) + getScheduleClock() + setRadarPanel(RadarPanel rp) + updateScheduleClock() + landed(Aircraft a) + getZoom() + getRunwayPosition() + getCommandParser() + update() + getAircrafts() - gameOver() addNewAircraft()

scheduleNewFlight()updateSchedule()

- updateAircrafts()

- AircraftsTooClose(Aircraft a)- checkIfOutside(Aircraft a)

- checkIfGoodForLanding(Aircraft a)

## GUIFrame

- RadarPanel radarPanel
- ContainerPanel containerPanel
- CommandPanel commandPanel
- InfoPanel1 infoPanel1
- InfoPanel2 infoPanel2
- KeyboardListener keyboardListener
- int panelHeight
- Aircraft[] aircraftsTooClose
- + gameOver(String[] s)
- + updateInfoPanel2()
- + updateInfoPanel1()
- + updateRadarPanel()

## GameLogic Values - Aircraft aircraft + static createIdentifier(GameLogic gl) - ArrayList<Aircraft> aircrafts + static getHeadingXYValues() - int scheduleClock - ArrayDeque<int[]> schedule- int timeOfNextScheduleEntry CommandParser - int scheduleScope - int scheduleScopeTop 1 1 - ArrayDeque<Character> input - int averageFrequency - ArrayDeque<ArrayDeque<Character>> temp - CommandParser commandParser - CommandPanel commandPanel - int zoom - String identifier - int[] runwayPosition - Boolean invalidCommand - int landed - GameLogic gameLogic - int lost - Aircraft aircraft - Random random - char[] twoChar - char[] threeChar - RadarPanel radarPanel - GUIFrame guiFrame - char four Char - char five Char - ArrayList<String> allIdentifiers - ArrayList<Aircraft> removeList - HashMap<Integer, Aircraft> positionMap + getAircraft() - Aircraft[] tooClose + setCommandPanel(CommandPanel cp) - Timer timer + keybEnter() + keybBackspace() + setTimer(Timer t) + keybCharacter(char c) + getLost() + getLanded() - parseCommands() - parseldentifier() + getIdentifier(int i) - initiateCommandParsing() + getSchedule() - parseInput() + setGUIFrame (GUIFrame gf) + getScheduleClock() + setRadarPanel(RadarPanel rp) + updateScheduleClock() Aircrat + landed(Aircraft a) + getZoom() - Random random + getRunwayPosition() - String identifier + getCommandParser() 1 - int x + update() - int y + getAircrafts() - int altitude - gameOver() - int heading - addNewAircraft() - int speed - scheduleNewFlight() - int altitudeCommand - updateSchedule() - int headingCommand - boolean Aircrafts Too Close (Aircraft a) - int speedCommand - checkIfOutside(Aircraft a) - int slowDescendValue - checkIfGoodForLanding(Aircraft a) - int[][] headingXYValues - updateAircrafts() - int[][] history - int historyLength - int mode - GameLogic gl + getMode() + setMode( m) + setAltitudeCommand(char[] c) + setHeadingCommand(char[] c) + setSpeedCommand(char[] c) + getHistory() + getIdentifier() + getX() + getY() + getZ() + getSpeed() + getHeading() + getZCommand() + getSpeedCommand() + getHeadingCommand() + update() landingCommands()updateHistory() - updatePosition() - updateAltitude() - updateSpeed() - updateHeading() - headingCommandIsSmallerThanHeading(int turningSpeed) - headingCommandIsBiggerThanHeading( turningSpeed)

