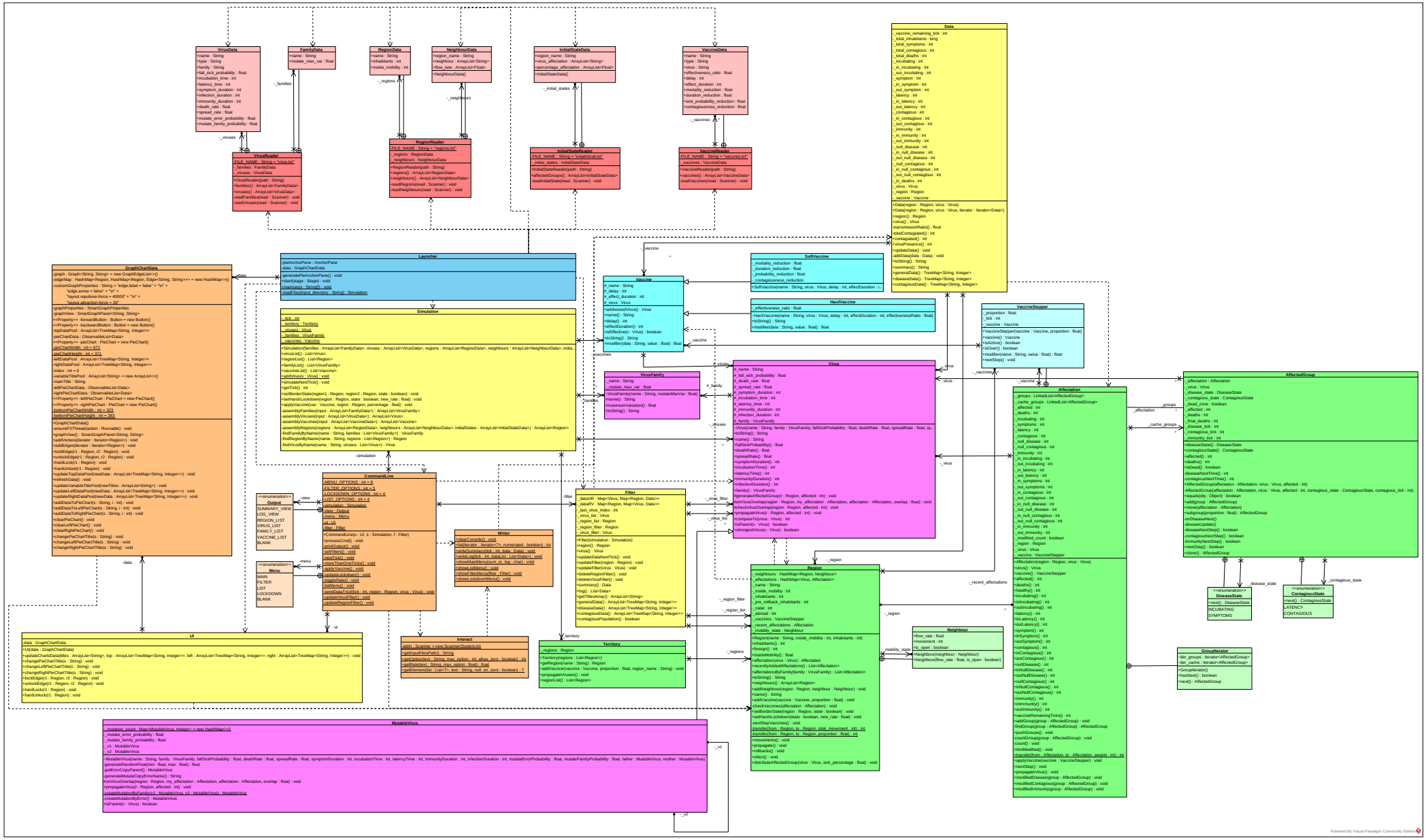
VirusData
+name : String
+type : String
+family : String
+fall_sick_probability : float
+incubation_time : int
+latency_time : int
+symptom_duration : int
+infection_duration : int
+immunity_duration : int
+death_rate : float
+spread_rate : float
+mutate_error_probability : float
+mutate_family_probability : float
FamilyData
+name : String
+mutate_max_var : float
RegionData
+name : String
+inhabitants : int
+inside_mobility : int
NeighbourData
+region_name : String
+neighbour : ArrayList<String>
+flow_rate : ArrayList<Float>
+NeighbourData()
InitialStateData
+region_name : String
+virus_affectation : ArrayList<String>
+percentage_affectation : ArrayList<Float>
+InitialStateData()
VaccineData
+name : String
+type : String
+virus : String
+effectiveness_ratio : float
+delay : int
+effect_duration : int
+mortality_reduction : float
+duration_reduction : float
+sick_probability_reduction : float
+contagiousness_reduction : float
Data
_vaccine_remaining_tick : int
_total_inhabitants : long
_total_symptoms : int
_total_contagious : int
_total_deaths : int
_incubating : int
_in_incubating : int
_out_incubating : int
_symptom : int
_in_symptom : int
_out_symptom : int
_latency : int
_in_latency : int
_out_latency : int
_contagious : int
_in_contagious : int
_out_contagious : int
_immunity : int
_in_immunity : int
_out_immunity : int
_null_disease : int
_in_null_disease : int
_out_null_disease : int
_null_contagious : int
_in_null_contagious : int
_out_null_contagious : int
_in_deaths : int
_virus : Virus
_region : Region
_vaccine : Vaccine
+Data(region : Region, virus : Virus)
+Data(region : Region, virus : Virus, iterator : Iterator<Data>)
+region() : Region
+virus() : Virus
+transmissionRatio() : float
+totalContagiated() : int
+contagiated() : int
+virusPresence() : int
+updateData() : void
-addData(data : Data) : void
+toString() : String
+summary() : String
+generalData() : TreeMap<String, Integer>
+diseaseData() : TreeMap<String, Integer>
+contagiousData() : TreeMap<String, Integer>
VirusReader
-FILE_NAME : String = "virus.txt"
_families : FamilyData
_viruses : VirusData
+VirusReader(path : String)
+families() : ArrayList<FamilyData>
+viruses() : ArrayList<VirusData>
-readFamilies(read : Scanner) : void
-readViruses(read : Scanner) : void
RegionReader
-FILE_NAME : String = "regions.txt"
_regions : RegionData
_neighbours : NeighbourData
+RegionReader(path : String)
+regions() : ArrayList<RegionData>
+neighbours() : ArrayList<NeighbourData>
-readRegions(read : Scanner) : void
-readNeighbours(read : Scanner) : void
InitialStateReader
-FILE_NAME : String = "initialstat.txt"
_initial_states : InitialStateData
+InitialStateReader(path : String)
+affectedGroups() : ArrayList<InitialStateData>
-readInitialState(read : Scanner) : void
VaccineReader
-FILE_NAME : String = "vaccines.txt"
_vaccines : VaccineData
+VaccineReader(path : String)
+vaccines() : ArrayList<VaccineData>
-readVaccines(read : Scanner) : void
Launcher
-pieAnchorPane : AnchorPane
-data : GraphChartData
+generatePieAnchorPane() : void
+initialStage(s : Stage) : void
+main(args : String[]) : void
-readFiles(input_directory : String) : Simulation
GraphChartData
-graph : Graph<String, String> = new GraphEdgeList<>()
-edgeMap : HashMap<Region, HashMap<Region, Edge<String, String>>> = new HashMap<>()
-customGraphProperties : String = "edge.label = false" + "\n" +
"edge.arrow = false" + "\n" +
"layout.repulsive-force = 40000" + "\n" +
"layout.attraction-force = 20"
-graphProperties : SmartGraphProperties
-graphView : SmartGraphPanel<String, String>
<<Property>> -forwardButton : Button = new Button()
<<Property>> -backwardButton : Button = new Button()
-topDataPool : ArrayList<TreeMap<String, Integer>>
-pieChartData : ObservableList<Data>
<<Property>> -pieChart : PieChart = new PieChart()
-pieChartWidth : int = 672
-pieChartHeight : int = 371
-leftDataPool : ArrayList<TreeMap<String, Integer>>
-rightDataPool : ArrayList<TreeMap<String, Integer>>
-index : int = 0
-variableTitlePool : ArrayList<String> = new ArrayList<>()
-mainTitle : String
-leftPieChartData : ObservableList<Data>
-rightPieChartData : ObservableList<Data>
<<Property>> -leftPieChart : PieChart = new PieChart()
<<Property>> -rightPieChart : PieChart = new PieChart()
-bottomPieChartWidth : int = 323
-bottomPieChartHeight : int = 283
+GraphChartData()
-ensureFXThread(action : Runnable) : void
+graphView() : SmartGraphPanel<String, String>
+addVertexIterator(iterator : Iterator<Region>) : void
+addEdgesIterator(iterator : Iterator<Region>) : void
+lockEdge(r1 : Region, r2 : Region) : void
+unlockEdge(r1 : Region, r2 : Region) : void
+hardLock(r1 : Region) : void
+hardUnlock(r1 : Region) : void
+updateTopDataPool(newData : ArrayList<TreeMap<String, Integer>>) : void
+refreshData() : void
+updateVariableTitlePool(newTitles : ArrayList<String>) : void
+updateLeftDataPool(newData : ArrayList<TreeMap<String, Integer>>) : void
+updateRightDataPool(newData : ArrayList<TreeMap<String, Integer>>) : void
+addDataToPieChart(s : String, i : int) : void
+addDataToLeftPieChart(s : String, i : int) : void
+addDataToRightPieChart(s : String, i : int) : void
+clearPieChart() : void
+clearLeftPieChart() : void
+clearRightPieChart() : void
+changePieChartTitle(s : String) : void
+changeLeftPieChartTitle(s : String) : void
+changeRightPieChartTitle(s : String) : void
Simulation
_tick : int
_territory : Territory
_viruses : Virus
_families : VirusFamily
_vaccines : Vaccine
+Simulation(families : ArrayList<FamilyData>, viruses : ArrayList<VirusData>, regions : ArrayList<RegionData>, neighbours : ArrayList<NeighbourData>, initia...
+virusList() : List<Virus>
+regionList() : List<Region>
+familyList() : List<VirusFamily>
+vaccineList() : List<Vaccine>
+addVirus(v : Virus) : void
+simulateNextTick() : void
+getTick() : int
+setBorderState(region1 : Region, region2 : Region, state : boolean) : void
+setHarshLockdown(region : Region, state : boolean, new_rate : float) : void
+applyVaccine(vac : Vaccine, region : Region, percentage : float) : void
-assemblyFamilies(input : ArrayList<FamilyData>) : ArrayList<VirusFamily>
-assemblyViruses(input : ArrayList<VirusData>) : ArrayList<Virus>
-assemblyVaccines(input : ArrayList<VaccineData>) : ArrayList<Vaccine>
-assemblyRegions(regions : ArrayList<RegionData>, neighbours : ArrayList<NeighbourData>, initialStates : ArrayList<InitialStateData>) : ArrayList<Region>
-findFamilyByName(name : String, families : List<VirusFamily>) : VirusFamily
-findRegionByName(name : String, regions : List<Region>) : Region
-findVirusByName(name : String, viruses : List<Virus>) : Virus
Vaccine
#_name : String
#_delay : int
#_effect_duration : int
#_virus : Virus
+addInfectedVirus() : Virus
+name() : String
+delay() : int
+effectDuration() : int
+isEffectively(v : Virus) : boolean
+toString() : String
+modifier(data : String, value : float) : float
SoftVaccine
_mortality_reduction : float
_duration_reduction : float
_probability_reduction : float
_contagiousness_reduction
+SoftVaccine(name : String, virus : Virus, delay : int, effectDuration : i...
HardVaccine
_effectiveness_ratio : float
+HardVaccine(name : String, virus : Virus, delay : int, effectDuration : int, effectivenessRatio : float)
+toString() : String
+modifier(data : String, value : float) : float
VaccineStepper
_proportion : float
_tick : int
_vaccine : Vaccine
+VaccineStepper(vaccine : Vaccine, proportion : float)
+vaccine() : Vaccine
+isActive() : boolean
+isOver() : boolean
+modifier(name : String, value : float) : float
+nextStep() : void
VirusFamily
_name : String
_mutate_max_var : float
+VirusFamily(name : String, mutateMaxVar : float)
+name() : String
+maximumVariation() : float
+toString() : String
Virus
#_name : String
#_fall_sick_probability : float
#_death_rate : float
#_spread_rate : float
#_symptom_duration : int
#_incubation_time : int
#_latency_time : int
#_immunity_duration : int
#_infection_duration : int
#_family : VirusFamily
-Virus(name : String, family : VirusFamily, fallSickProbability : float, deathRate : float, spreadRate : float, sy...
+toString() : String
+name() : String
+fallSickProbability() : float
+deathRate() : float
+spreadRate() : float
+symptomDuration() : int
+incubationTime() : int
+latencyTime() : int
+immunityDuration() : int
+infectionDuration() : int
+family() : VirusFamily
+generateAffectedGroup(r : Region, affected : int) : void
#inVirusOverlap(region : Region, my_affectation : Affectation, affectation : Affectation, overlap : float) : void
#checkVirusOverlaps(region : Region, affected : int) : void
#propagateVirus(r : Region, affected : int) : void
+compareToVirus(v : Virus) : int
+isParent(v : Virus) : boolean
+strongestVirus(v : Virus) : boolean
Affectation
_groups : LinkedList<AffectedGroup>
_cache_groups : LinkedList<AffectedGroup>
_affected : int
_deaths : int
_incubating : int
_symptoms : int
_latency : int
_contagious : int
_null_disease : int
_null_contagious : int
_immunity : int
_in_incubating : int
_out_incubating : int
_in_latency : int
_out_latency : int
_in_symptoms : int
_out_symptoms : int
_in_contagious : int
_out_contagious : int
_in_null_disease : int
_out_null_disease : int
_in_null_contagious : int
_out_null_contagious : int
_in_immunity : int
_out_immunity : int
_modified_count : boolean
_region : Region
_virus : Virus
_vaccine : VaccineStepper
+Affectation(region : Region, virus : Virus)
+virus() : Virus
+vaccine() : VaccineStepper
+affected() : int
+deaths() : int
+healthy() : int
+incubating() : int
+inincubating() : int
+outincubating() : int
+latency() : int
+inLatency() : int
+outLatency() : int
+symptom() : int
+inSymptom() : int
+outSymptom() : int
+contagious() : int
+inContagious() : int
+outContagious() : int
+nullDisease() : int
+inNullDisease() : int
+outNullDisease() : int
+nullContagious() : int
+inNullContagious() : int
+outNullContagious() : int
+immunity() : int
+inimmunity() : int
+outimmunity() : int
+vaccineRemainingTicks() : int
+addGroup(group : AffectedGroup) : void
-findGroup(group : AffectedGroup) : AffectedGroup
+pushGroups() : void
-countGroup(group : AffectedGroup) : void
+count() : void
+hintModified() : void
-transferFrom(a : Affectation, to : Affectation, people : int) : int
+applyVaccine(vaccine : VaccineStepper) : void
+nextStep() : void
+propagateVirus() : void
+modifiedDisease(group : AffectedGroup) : void
+modifiedContagious(group : AffectedGroup) : void
+modifiedImmunity(group : AffectedGroup) : void
AffectedGroup
_affectation : Affectation
_virus : Virus
_disease_state : DiseaseState
_contagious_state : ContagiousState
_dead_zone : boolean
_affected : int
_deaths : int
_final_deaths : int
_disease_tick : int
_contagious_tick : int
_immunity_tick : int
+diseaseState() : DiseaseState
+contagiousState() : ContagiousState
+affected() : int
+deaths() : int
+isDead() : boolean
-diseaseNextTime() : int
-contagiousNextTime() : int
+AffectedGroup(affectation : Affectation, virus : Virus, affected : int)
-affectedGroup(affectation : Affectation, virus : Virus, affected : int, contagious_state : ContagiousState, contagious_tick : int)
+equals(obj : Object) : boolean
+add(group : AffectedGroup)
+move(affectation : Affectation)
+subgroup(proportion : float) : AffectedGroup
-prDiseaseNext()
-diseaseUpdate()
-diseaseNextStep() : boolean
-contagiousNextStep() : boolean
-immunityNextStep() : boolean
+nextStep() : boolean
+clone() : AffectedGroup
<<enumeration>>
DiseaseState
+next() : DiseaseState
INCUBATING
SYMPTOMS
<<enumeration>>
ContagiousState
+next() : ContagiousState
LATENCY
CONTAGIOUS
GroupIterator
-iter_groups : Iterator<AffectedGroup>
-iter_cache : Iterator<AffectedGroup>
+GroupIterator()
+hasNext() : boolean
+next() : AffectedGroup
CommandLine
-MENU_OPTIONS : int = 8
-FILTER_OPTIONS : int = 3
-LOCKDOWN_OPTIONS : int = 4
-LIST_OPTIONS : int = 4
-simulation : Simulation
-view : Output
-menu : Menu
-ui : UI
-filter : Filter
+CommandLine(u : UI, s : Simulation, f : Filter)
+processCmd() : void
-printOutput() : void
-setFilters() : void
-nextTick() : void
-manyTimeOneTick(i) : void
-applyVaccine() : void
-updateLockdown() : void
-toggleData() : void
-toMenu() : void
-saveDataToFile(k : int, region : Region, virus : Virus) : void
-updateVirusFilter() : void
-updateRegionFilter() : void
<<enumeration>>
Output
SUMMARY_VIEW
LOG_VIEW
REGION_LIST
VIRUS_LIST
FAMILY_LIST
VACCINE_LIST
BLANK
<<enumeration>>
Menu
MAIN
FILTER
LIST
LOCKDOWN
BLANK
Writer
+clearConsole() : void
+list(iterator : Iterator<?>, numerated : boolean) : int
-partialSummary(k : int, data : Data) : void
-writeLog(k : int, data[.list : List<Data>) : void
+showMainMenu(sum or log : char) : void
+showListMenu() : void
+showFilterMenu(filter : Filter) : void
+showLockdownMenu() : void
Filter
_dataVR : Map<Virus, Map<Region, Data>>
_dataRV : Map<Region, Map<Virus, Data>>
_last_virus_index : int
_virus_list : Virus
_region_list : Region
_region_filter : Region
_virus_filter : Virus
+Filter(simulation : Simulation)
+region() : Region
+virus() : Virus
+updateDataNextTick() : void
+updateFilter(region : Region) : void
+updateFilter(virus : Virus) : void
+deleteRegionFilter() : void
+deleteVirusFilter() : void
+summary() : Data
+log() : List<Data>
+getTitlesArray() : ArrayList<String>
+generalData() : ArrayList<TreeMap<String, Integer>>
+diseaseData() : ArrayList<TreeMap<String, Integer>>
+contagiousData() : ArrayList<TreeMap<String, Integer>>
+contagiousPopulation() : boolean
Region
_neighbours : HashMap<Region, Neighbour>
_affectations : HashMap<Virus, Affectation>
_name : String
_inside_mobility : int
_inhabitants : int
_pre_lockback_inhabitants : int
_natal : int
_abroad : int
_vaccines : VaccineStepper
_recent_affectations : Affectation
_mobility_state : Neighbour
+Region(name : String, inside_mobility : int, inhabitants : int)
+inhabitants() : int
+foreign() : int
+insideMobility() : float
+affectation(virus : Virus) : Affectation
+recentlyAddedAffectations() : List<Affectation>
+affectationsByFamily(family : VirusFamily) : List<Affectation>
+toString() : String
+neighbours() : ArrayList<Region>
+addNeighbour(region : Region, neighbour : Neighbour) : void
+name() : String
+addVaccine(vaccine : Vaccine, proportion : float) : void
-checkVaccines(affectation : Affectation) : void
+setBorderState(region : Region, state : boolean) : void
+setHarshLockdown(state : boolean, new_rate : float) : void
-nextStepVaccines() : void
-transferFrom(a : Region, to : Region, total_movement : int) : int
-transferFrom(a : Region, to : Region, proportion : float) : int
+movements() : void
+propagate() : void
+rollbacks() : void
+infect() : void
-distributeAffectedGroup(virus : Virus, sick_percentage : float) : void
Neighbour
+flow_rate : float
+movement : int
+is_open : boolean
+Neighbour(neighbour : Neighbour)
+Neighbour(flow_rate : float, is_open : boolean)
Interact
-stdin : Scanner = new Scanner(System.in)
+getInputFilePath() : String
-getOptional(text : String, max_option : int, allow_zero : boolean) : int
+getFloat(text : String, max_option : float) : float
+getElement(list : List<?>, text : String, null_on_zero : boolean) : T
Territory
_regions : Region
+Territory(regions : List<Region>)
+getRegion(name : String) : Region
+addVaccine(vaccine : Vaccine, proportion : float, region_name : String) : void
+propagateViruses() : void
+regionList() : List<Region>
UI
-data : GraphChartData
+UI(data : GraphChartData)
+updateCharts(dataTitles : ArrayList<String>, top : ArrayList<TreeMap<String, Integer>>, left : ArrayList<TreeMap<String, Integer>>, right : ArrayList<TreeMap<String, Integer>>) : void
+changePieChartTitle(s : String) : void
+changeLeftPieChartTitle(s : String) : void
+changeRightPieChartTitle(s : String) : void
+lockEdge(r1 : Region, r2 : Region) : void
+unlockEdge(r1 : Region, r2 : Region) : void
+hardLock(r1 : Region) : void
+hardUnlock(r1 : Region) : void
MutableVirus
_mutation_count : Map<MutableVirus, Integer> = new HashMap<>()
_mutate_error_probability : float
_mutate_family_probability : float
_v1 : MutableVirus
_v2 : MutableVirus
+MutableVirus(name : String, family : VirusFamily, fallSickProbability : float, deathRate : float, spreadRate : float, symptomDuration : int, incubationTime : int, latencyTime : int, immunityDuration : int, infectionDuration : int, mutateErrorProbability : float, mutateFamilyProbability : float, father : MutableVirus, mother : MutableVirus)
-generateRandomFloat(min : float, max : float) : float
-getErrorCopyParent() : MutableVirus
-generateMutateCopyErrorName() : String
#inVirusOverlap(region : Region, my_affectation : Affectation, affectation : Affectation, overlap : float) : void
#propagateVirus(r : Region, affected : int) : void
-createMutationByFamily(v1 : MutableVirus, v2 : MutableVirus) : MutableVirus
-createMutationByError() : MutableVirus
+isParent(v : Virus) : boolean
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