

<b>Ambulance</b> <span>Vehicle, IRecoverable</span>	
none	
<ul style="list-style-type: none"> <li>• knows number of ambulances</li> <li>• knows its capacity</li> <li>• knows its velocity</li> <li>• transports sick Humans to Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Record</li> <li>• Human</li> <li>• IGPS</li> </ul>

<b>App</b> <span>none</span>	
none	
<ul style="list-style-type: none"> <li>• main class in application</li> <li>• has "main" method</li> </ul>	<ul style="list-style-type: none"> <li>• ExecutosService</li> <li>• Settings</li> <li>• inner class Program</li> </ul>

<b>Being</b> <span>Abstract</span> <span>IPrintable</span>	
Human, EmptySlot	
<ul style="list-style-type: none"> <li>• get identification</li> <li>• get representation</li> </ul>	

<b>BeingContainer</b> <span>none</span>	
Human	
<ul style="list-style-type: none"> <li>• get list of agents</li> <li>• add agents</li> <li>• get map</li> <li>• performs rounds of agent activities</li> </ul>	<ul style="list-style-type: none"> <li>• Map</li> <li>• Record</li> <li>• Dispatching</li> </ul>

<b>Building</b> <span>Abstract</span> <span>Being</span>	
Hospital	
<ul style="list-style-type: none"> <li>• knows its capacity</li> <li>• knows number of blocks</li> </ul>	

<div> <div>ChangeOutputPanel</div> <div>JPanel</div> <div>none</div> </div>	
<ul style="list-style-type: none"> <li>part of UI</li> <li>displaying current output file path</li> <li>changing output file path</li> </ul>	<ul style="list-style-type: none"> <li>Settings</li> </ul>

<div> <div>Coordinates</div> <div>none</div> <div>none</div> </div>	
<ul style="list-style-type: none"> <li>stores a pair of coordinates</li> <li>adds vector to stored coordinates</li> <li>returns neighbouring coordinates</li> </ul>	<ul style="list-style-type: none"> <li>none</li> </ul>

<div> <div>Dice</div> <div>none</div> <div>none</div> </div>	
<ul style="list-style-type: none"> <li>generate pseudorandom numbers</li> </ul>	<ul style="list-style-type: none"> <li>none</li> </ul>

<div> <div>Abstract Disease</div> <div>IDisease</div> <div>Virus</div> </div>	
<ul style="list-style-type: none"> <li>stores information about illness</li> </ul>	<ul style="list-style-type: none"> <li>Human</li> <li>DiseaseRecord</li> </ul>

<div> <div>DiseaseRecord</div> <div>none</div> <div>none</div> </div>	
<ul style="list-style-type: none"> <li>stores information about course of illness</li> <li>runs information flow between Human and disease</li> <li>runs illness progress</li> </ul>	<ul style="list-style-type: none"> <li>Disease</li> <li>Human</li> </ul>

<b>Dispatching</b>		none
		none
<ul style="list-style-type: none"> <li>• intakes calls about needed interventions</li> <li>• sends vehicles of a specific type for interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Record</li> <li>• Map</li> <li>• Vehicle</li> <li>• Queue</li> <li>• Simulation</li> <li>• Dispatching</li> </ul>	

<b>Doctor</b>		Human
		none
<ul style="list-style-type: none"> <li>• heal the patient</li> </ul>	<ul style="list-style-type: none"> <li>• Human</li> <li>• Dice</li> </ul>	

<b>EmptySlot</b>		Being
		none
<ul style="list-style-type: none"> <li>• is empty</li> </ul>	<ul style="list-style-type: none"> <li>• Map</li> </ul>	

<b>GPS1</b>		IGPS
		none
<ul style="list-style-type: none"> <li>• calculates route for a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Vehicle</li> <li>• Map</li> </ul>	

<b>Hospital</b>		Building, IRecoverable, IMovable
		none
<ul style="list-style-type: none"> <li>• stores ill Humans</li> <li>• cures its inhabitants</li> </ul>	<ul style="list-style-type: none"> <li>• Human</li> <li>• Record</li> <li>• Map</li> </ul>	

Human		Being, IMovable, IDiseaseSensitive
		Doctor
<ul style="list-style-type: none"> <li>• move</li> <li>• perform illness</li> <li>• get sex</li> <li>• get health points</li> <li>• get is infected</li> <li>• get age</li> </ul>		<ul style="list-style-type: none"> <li>• Dice</li> <li>• Coordinates</li> <li>• DiseaseRecord</li> </ul>

Interface		IDisease	none
			Disease
<ul style="list-style-type: none"> <li>• gives information about disease</li> <li>• gives disease methods (infect, progress)</li> </ul>		<ul style="list-style-type: none"> <li>• Human, DiseaseRecord</li> </ul>	

Interface		IDiseaseSensitive	IRrecoverable
			Human
<ul style="list-style-type: none"> <li>• performs actions related to being ill and infecting</li> </ul>		<ul style="list-style-type: none"> <li>• DiseaseRecord</li> </ul>	

Interface		IGPS	none
			GPS1
<ul style="list-style-type: none"> <li>• calculates route for vehicle</li> </ul>		<ul style="list-style-type: none"> <li>• Vehicle</li> <li>• Map</li> </ul>	

		Exception
IncorrectParametersException		none
<ul style="list-style-type: none"> <li>• thrown, when attempt is made to run simulation with too small map according to number of people</li> </ul>		<ul style="list-style-type: none"> <li>• Simulation</li> </ul>

<b>Infector</b>		none
		none
<ul style="list-style-type: none"> <li>• runs infection</li> </ul>	<ul style="list-style-type: none"> <li>• Human</li> <li>• Disease</li> </ul>	

Interface	<b>IMovable</b>	none
		Human, Vehicle
<ul style="list-style-type: none"> <li>• moves</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinates</li> </ul>	

<b>InputParamPanel</b>		JPanel
		none
<ul style="list-style-type: none"> <li>• part of IU</li> <li>• manual change of simulation parameters</li> </ul>	<ul style="list-style-type: none"> <li>• Settings</li> <li>• SimulationParameters</li> <li>• SidekickFrame</li> </ul>	

<b>InputPathPanel</b>		JPanel
		none
<ul style="list-style-type: none"> <li>• part of UI</li> <li>• displaying current path to configuration file</li> <li>• changing path to configuration file</li> </ul>	<ul style="list-style-type: none"> <li>• SidekickFrame</li> <li>• Settings</li> </ul>	

Interface	<b>IPrintable</b>	none
		Being
<ul style="list-style-type: none"> <li>• can be printed on the map</li> </ul>	<ul style="list-style-type: none"> <li>• none</li> </ul>	

Interface		none
<b>IRecord</b>		Record
<ul style="list-style-type: none"> <li>• moves its agent</li> <li>• infects its neighbours</li> <li>• progresses illness and recovers</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinates</li> <li>• Map</li> </ul>	

		none
<b>IRecoverable</b>		IDiseaseSensitive, Ambulance
<ul style="list-style-type: none"> <li>• can recover</li> </ul>		

		JFrame
<b>LastFrame</b>		none
<ul style="list-style-type: none"> <li>• window to show last simulation output</li> </ul>	<ul style="list-style-type: none"> <li>• LastPanel</li> <li>• MainFrame</li> </ul>	

		JFrame
<b>MainFrame</b>		none
<ul style="list-style-type: none"> <li>• main window of the program</li> <li>• displays main menu panel</li> </ul>	<ul style="list-style-type: none"> <li>• MainMenu</li> </ul>	

MainMenu		JPanel
		none
<ul style="list-style-type: none"> <li>• core of the UI</li> <li>• provides access to all functionalities</li> </ul>	<ul style="list-style-type: none"> <li>• Settings</li> <li>• MainFrame</li> <li>• SidekickFrame</li> <li>• ShowParamsPanel</li> <li>• InputParamPanel</li> <li>• InputPathPanel</li> <li>• ShowLastPanel</li> <li>• LastFrame</li> <li>• inner class SimulationDoer</li> </ul>	

Map		none
		none
<ul style="list-style-type: none"> <li>• display map measurments</li> <li>• display map</li> <li>• get field</li> <li>• set field</li> </ul>	<ul style="list-style-type: none"> <li>• IPrintable</li> <li>• EmptySlot</li> <li>• BeingContainer</li> </ul>	

PanelMap		JPanel
		none
<ul style="list-style-type: none"> <li>• displays current graphical representation of simulation state</li> </ul>	<ul style="list-style-type: none"> <li>• Map</li> <li>• Coordinates</li> </ul>	

Program		Runnable
		none
<ul style="list-style-type: none"> <li>• inner class of the App</li> <li>• task of opening MainFrame that is sent to thread</li> </ul>	<ul style="list-style-type: none"> <li>• MainFrame</li> <li>• Settings</li> <li>• App</li> </ul>	

<b>Queue</b>		none
		none
<ul style="list-style-type: none"> <li>• stores calls about interventions needed</li> </ul>	<ul style="list-style-type: none"> <li>• Record</li> <li>• Coordinates</li> </ul>	

<b>Record</b>		IRecord
		none
<ul style="list-style-type: none"> <li>• get position</li> <li>• get being (agent binded to this record)</li> <li>• runs information flow between agent and simulation</li> </ul>	<ul style="list-style-type: none"> <li>• IMovable</li> <li>• IDiseaseSensitive</li> <li>• IRecoverable</li> </ul>	

<b>Settings</b>		Serializable
		none
<ul style="list-style-type: none"> <li>• stores parameters and other settings of the program</li> <li>• recalls settings after restarting application</li> </ul>	<ul style="list-style-type: none"> <li>• SimulationParameters</li> <li>• App</li> <li>• ChangeOutputPanel</li> <li>• InputParamPanel</li> <li>• InputPathPanel</li> <li>• ShowParamsPanel</li> </ul>	

<b>ShowLastPanel</b>		JPanel
		none
<ul style="list-style-type: none"> <li>• part of the UI</li> <li>• displays output of the last run simulation</li> </ul>	<ul style="list-style-type: none"> <li>• none</li> </ul>	

<b>ShowParamsPanel</b>		JPanel
		none
<ul style="list-style-type: none"> <li>• part of the UI</li> <li>• displays current simulation parameters</li> </ul>	<ul style="list-style-type: none"> <li>• Settings</li> </ul>	



<b>SideKickFrame</b>		JFrame
		none
<ul style="list-style-type: none"> <li>used to create modal windows, e.g. input parameters window</li> </ul>	<ul style="list-style-type: none"> <li>ChangeOutputPanel</li> <li>InputParamPanel</li> <li>InputPathPanel</li> <li>ShowParamsPanel</li> </ul>	

<b>Simulation</b>		none
		none
<ul style="list-style-type: none"> <li>creates simulation using current parameters</li> <li>runs simulation</li> <li>works as a facade for logic of the simulation</li> </ul>	<ul style="list-style-type: none"> <li>Dispatching</li> <li>Map</li> <li>BeingContainer</li> <li>Virus</li> <li>SimulationParameters</li> <li>SimulationLog</li> <li>SimulationRuntimeWindow</li> <li>IncorrectParametersException</li> </ul>	

<b>SimulationDoer</b>		Runnable
<ul style="list-style-type: none"> <li>inner class from MainMenu</li> <li>task given to thread so simulation is calculated outside EventDispatchingThread</li> <li>calculate simulation and save output</li> </ul>	<ul style="list-style-type: none"> <li>Settings</li> <li>Simulation</li> <li>WriteToFile</li> <li>SimulationLog</li> </ul>	

<b>SimulationLog</b>		none
		none
<ul style="list-style-type: none"> <li>stores information about simulation run</li> </ul>	<ul style="list-style-type: none"> <li>SimulationParameters</li> <li>SimulationState</li> <li>Simulation</li> </ul>	

<b>SimulationParameters</b>		Serializable none
<ul style="list-style-type: none"> <li>• stores parameters to run simulation</li> <li>• reads parameters from Config.txt file</li> </ul>	<ul style="list-style-type: none"> <li>• Simulation</li> </ul>	

<b>SimulationRuntimeWindow</b>		JFrame none
<ul style="list-style-type: none"> <li>• displays window with map and current situation during simulation runtime</li> </ul>	<ul style="list-style-type: none"> <li>• PanelMap</li> </ul>	

<b>SimulationState</b>		none none
<ul style="list-style-type: none"> <li>• stores information about single iteration of the simulation</li> </ul>	<ul style="list-style-type: none"> <li>• SimulationLog</li> </ul>	

<b>Vehicle</b>		Being, IMovable Ambulance, Hearse
<ul style="list-style-type: none"> <li>• knows number of vehicles</li> <li>• stores passengers (Humans)</li> <li>• moves</li> </ul>	<ul style="list-style-type: none"> <li>• IGPS</li> <li>• Human</li> <li>• Dispatching</li> </ul>	

<b>Virus</b>		Disease none
<ul style="list-style-type: none"> <li>• stores and gives information about specific disease - THE Virus</li> <li>• performs Virus-illness</li> <li>• KILLS!</li> </ul>	<ul style="list-style-type: none"> <li>• Human</li> <li>• DiseaseRecord</li> </ul>	

<b>WiteToFile</b>		none
		none
<ul style="list-style-type: none"><li>• writes simulation output to proper file</li></ul>	<ul style="list-style-type: none"><li>• inner class SimulationDoer from MainMenu public class</li></ul>	