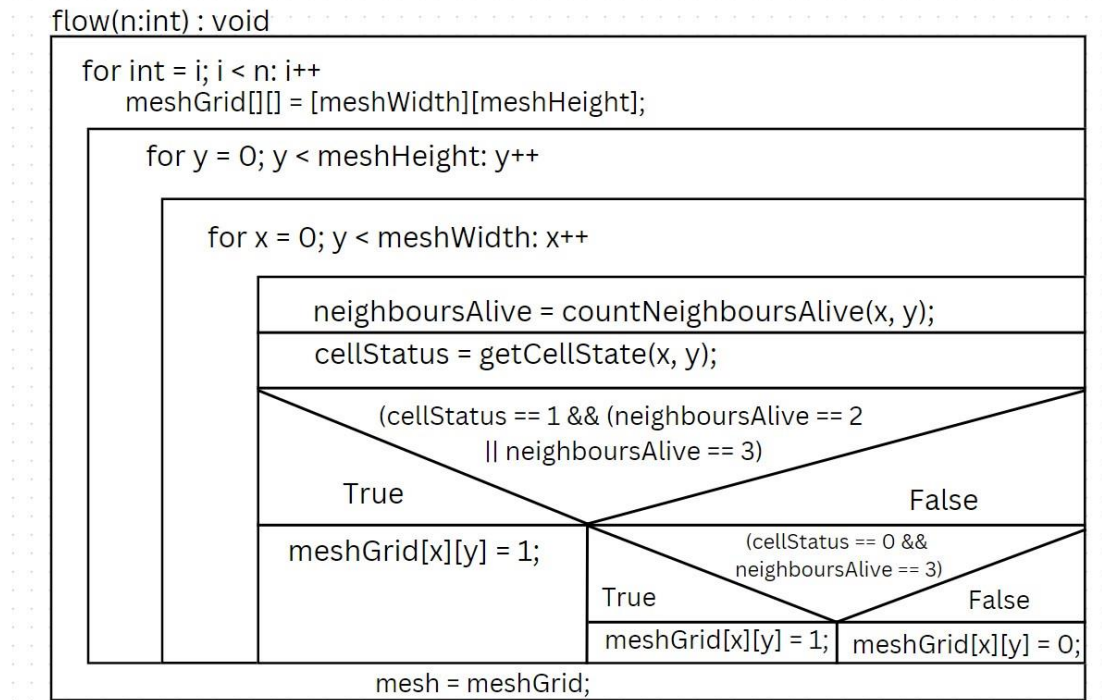


## Object-oriented Modeling and Programming in Engineering

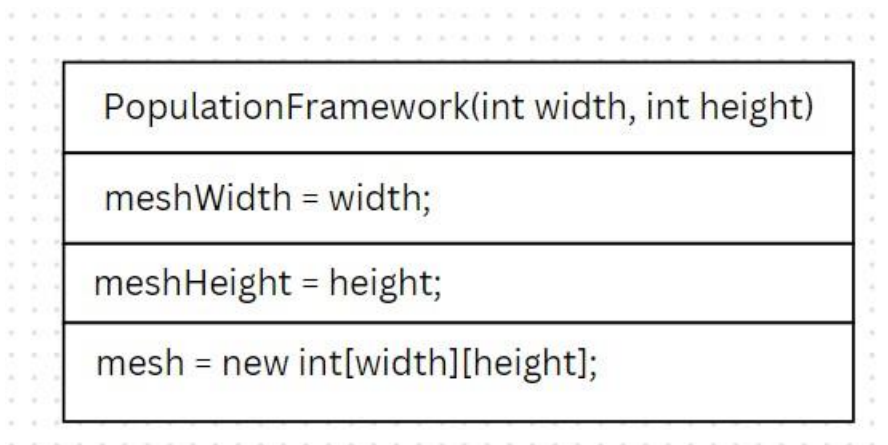
Shravani Kumari Pariseka (119483)

### Homework 2

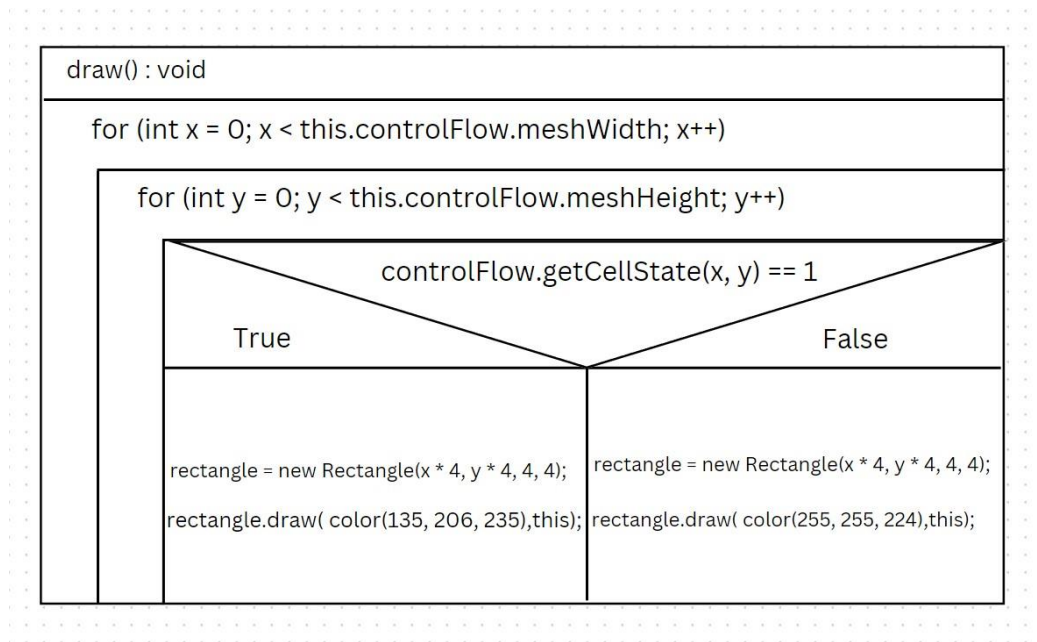
- Graph to represent the behavior of a single automat via Nassi-Shneiderman



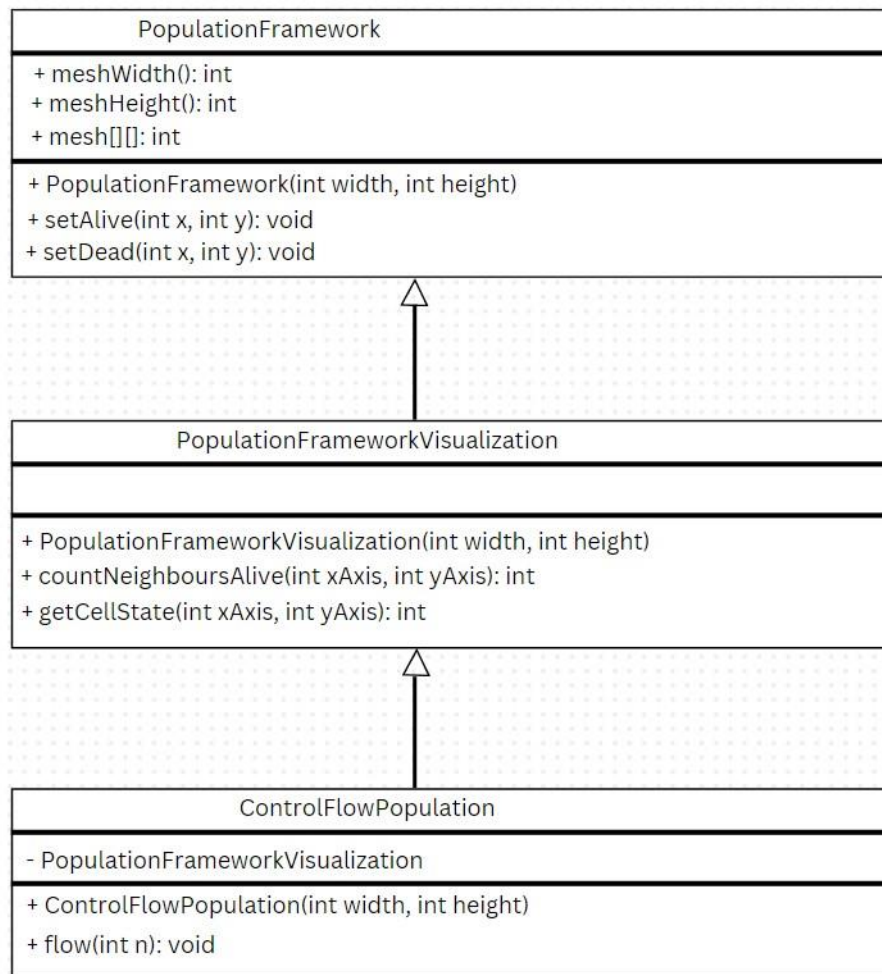
- The Nassi-Shneiderman diagram for the calculation of the whole field



- The Nassi-Shneiderman diagram for the visualization of the field



- Class diagrams for the implemented classes

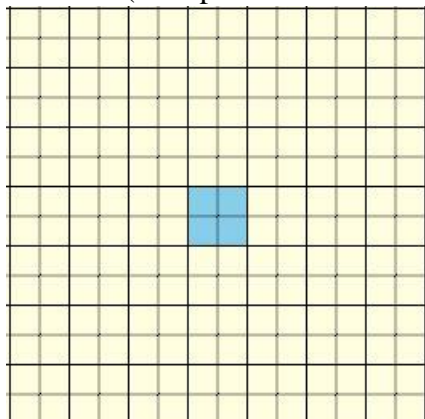


CellAutomatPrototype
<ul style="list-style-type: none"> <li>- controlFlow: ControlFlowPopulation</li> <li>+ camera: Peasycam</li> <li>+ rectangle: Rectangle</li> <li>+ rows: int</li> <li>+ columns: int</li> <li>+ grid: int [][]</li> </ul>
<ul style="list-style-type: none"> <li>+ main(String[] args) : void</li> <li>+ settings(): void</li> <li>+ onMouseClick(): void</li> <li>+ setup(): void</li> <li>+ inputGenerationsFromUser(): int</li> <li>+ draw(): void</li> </ul>

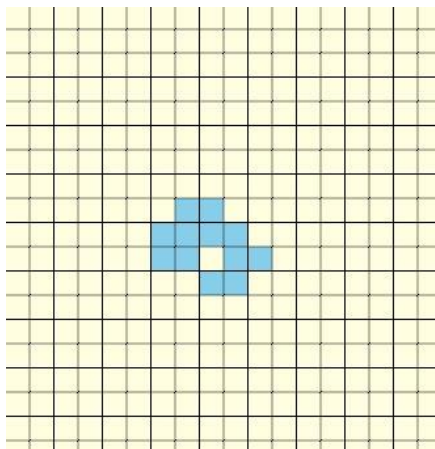
Rectangle
<ul style="list-style-type: none"> <li>- p: double</li> <li>- q: double</li> <li>- width: double</li> <li>- height: double</li> </ul>
<ul style="list-style-type: none"> <li>+ Rectangle(double p, double q, double width, double height)</li> <li>+ draw(int color, PApplet app): void</li> </ul>

- Screenshots of the evolution results

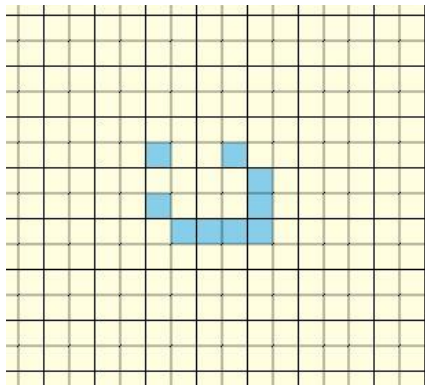
Pattern 1 (This pattern remains same for all generations)



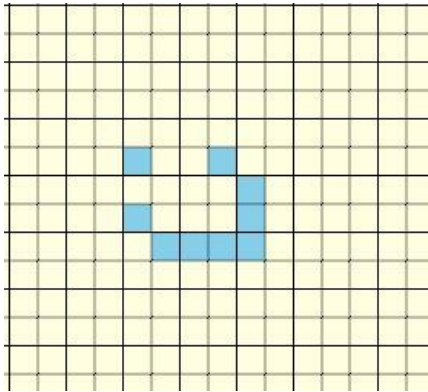
Pattern 2



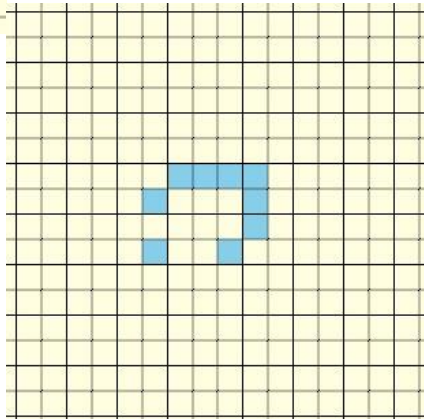
1<sup>st</sup> generation



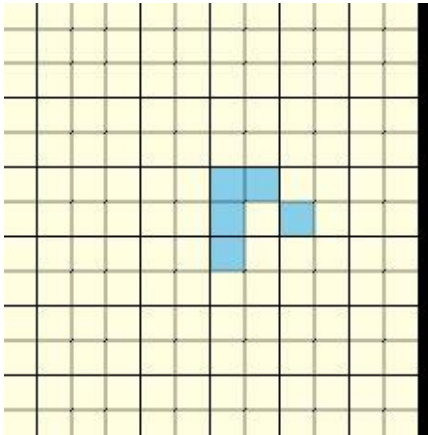
5<sup>th</sup> generation



10<sup>th</sup> generation

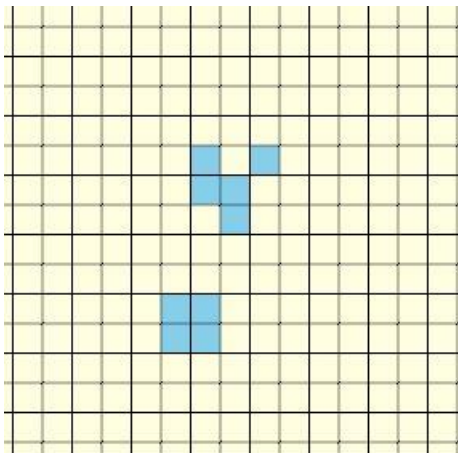


20<sup>th</sup> generation

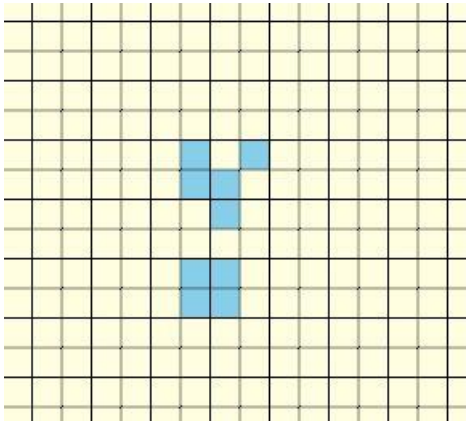


50<sup>th</sup> generation

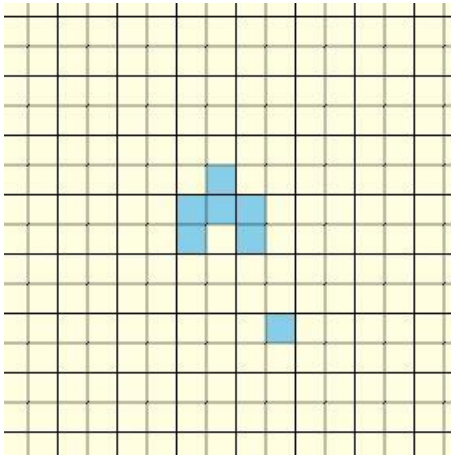
Pattern 3



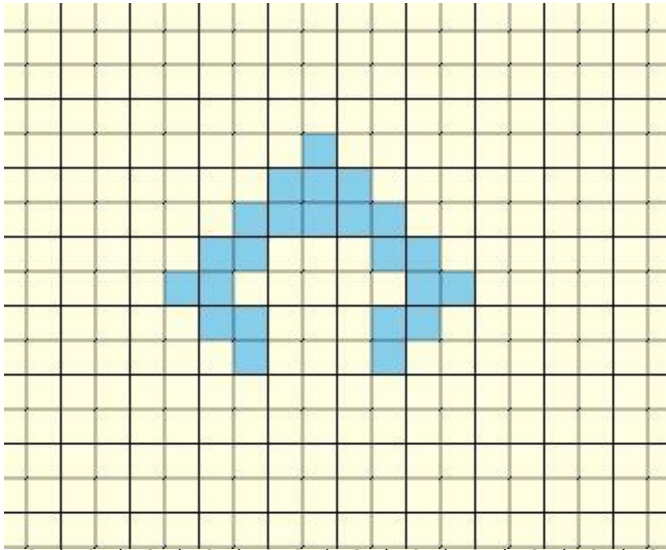
1<sup>st</sup> generation



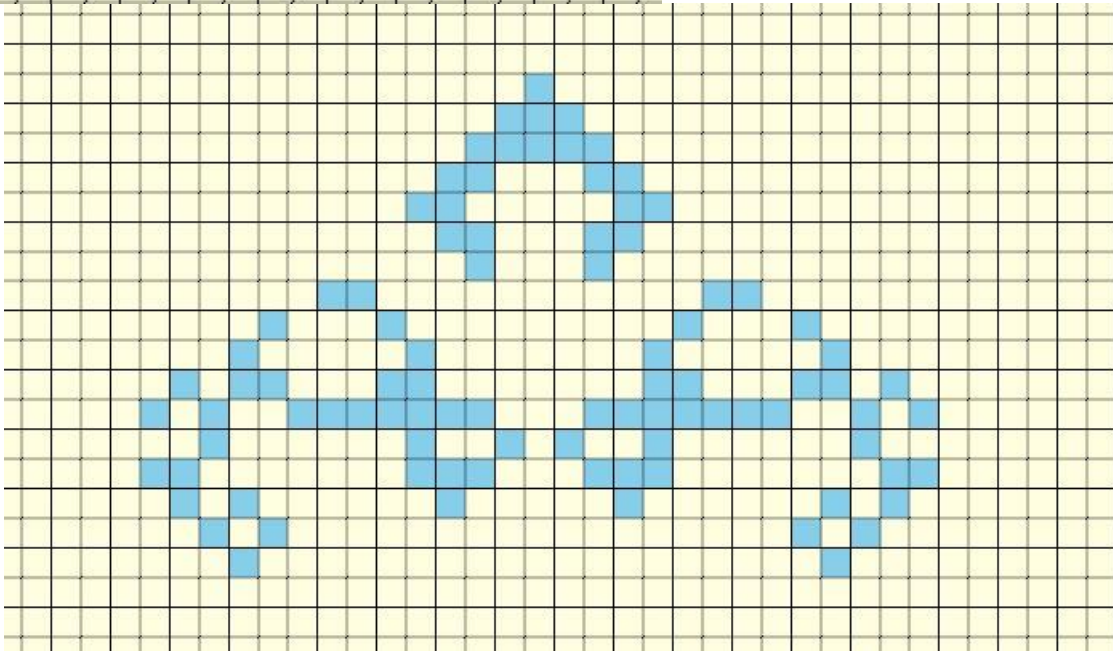
5<sup>th</sup> generation



10<sup>th</sup> generation



20<sup>th</sup> generation



50<sup>th</sup> generation

- Online code reference

<https://github.com/Tyjoh/GameOfLifeSimulator/blob/7c8249b6532483de9325ed09aff7b4ba2f01bba3/src/main/java/com/tyjohtech/Simulation.java>