```
Generation

-cellStates: boolean[]

+Generation(boolean... states)
+Generation(String states, char trueSymbol)
+getState(int idx): boolean
+getStates(): boolean[]
+getStates(char falseSymbol, char trueSymbol): String
+size(): int
```

Automaton -rule: Rule -generations: ArrayList<Generation> +falseSymbol = '0': char +trueSymbol = '1': char +Automaton(int ruleNum, Generation initial) +Automaton(String filename) +evolve(int numSteps): int +getGeneration(int stepNum): Generation +getCurrentGeneration(): Generation +getRuleNum(): int +getTotalSteps(): int +saveEvolution(String filename): void +toString(): String

```
Rule
...
+Rule(int ruleNum): ctor
+getRuleNum(): int
+getNeighborhood(int idx, Generation gen): boolean[]
+evolve(boolean[] neighborhood): boolean
+evolve(Generation gen): Generation
```

```
Driver
                          +main(String[] args): void
                                  ConsoleApp
-DEFAULT GENERATION =
   new Generation(false, false, false, true, false, false, false): Generation
-DEFAULT RULE = 22: int
-automaton: Automaton
-input: Scanner
+ConsoleApp()
+run(): void
-processOption(Option option): void
-printOptions(): void
-printRule(): void
-reinitAutomaton(): void
-setRuleAndGeneration(): void
-setTrueSymbol(): void
-setFalseSymbol(): void
-evolve(): void
-printCurrentGeneration(): void
-printFullEvolution(): void
-printOuitMessage(): void
```

```
#Option

PRINT_RULE("Show the current Rule")
REINIT_AUTOMATON("Reinitialize Automaton")
EVOLVE("Evolve the Automaton a given number of steps")
SET_TRUE_SYMBOL("Set the true symbol represention")
SET_FALSE_SYMBOL("Set the false symbol represention")
PRINT_CURRENT_GENERATION("Show the current Generation of the Automaton")
PRINT_FULL_EVOLUTION("Show the full evolution of the Automaton")
QUIT("Quit")
-option: String
#Option(option: String)
+index(): int
+toString(): String
+fromInt(x: int): Option
```