

CENTRE FOR
CONCEPTUAL MODELLING
AND IMPLEMENTATIONS

OPENPONK MODELING PLATFORM

(FORMERLY DYNACASE)

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OPENPONK?





OPENPONK AS A TOOL

3 editors with several extensions

FINITE STATE AUTOMATA

The image displays a software interface for creating and simulating a Finite State Automaton (FSA). The main window, titled "FSM Example - OpenPonk", shows a state transition diagram for a "Divisibility By Three" automaton. The diagram consists of three states: %3=0 (the initial and final state, highlighted in green), %3=1, and %3=2. Transitions are labeled with binary digits 0 and 1. The transitions are: %3=0 to %3=0 on 1, %3=0 to %3=1 on 0, %3=1 to %3=1 on 1, %3=1 to %3=2 on 0, %3=2 to %3=2 on 1, and %3=2 to %3=0 on 0.

On the left, a tree view shows the hierarchy of the diagram elements:

- Divisibility By Three (Diagram)
 - (Initial State) → (Transition)
 - %3=0 (Final State)
 - 0 (Transition)
 - 1 (Transition)
 - %3=1 (State)
 - 1 (Transition)
 - 0 (Transition)
 - %3=2 (State)
 - 0 (Transition)
 - 1 (Transition)

On the right, a properties panel for the selected state (%3=0) shows options for "Select", "Initial state", "State", "Final state" (checked), and "Transition".

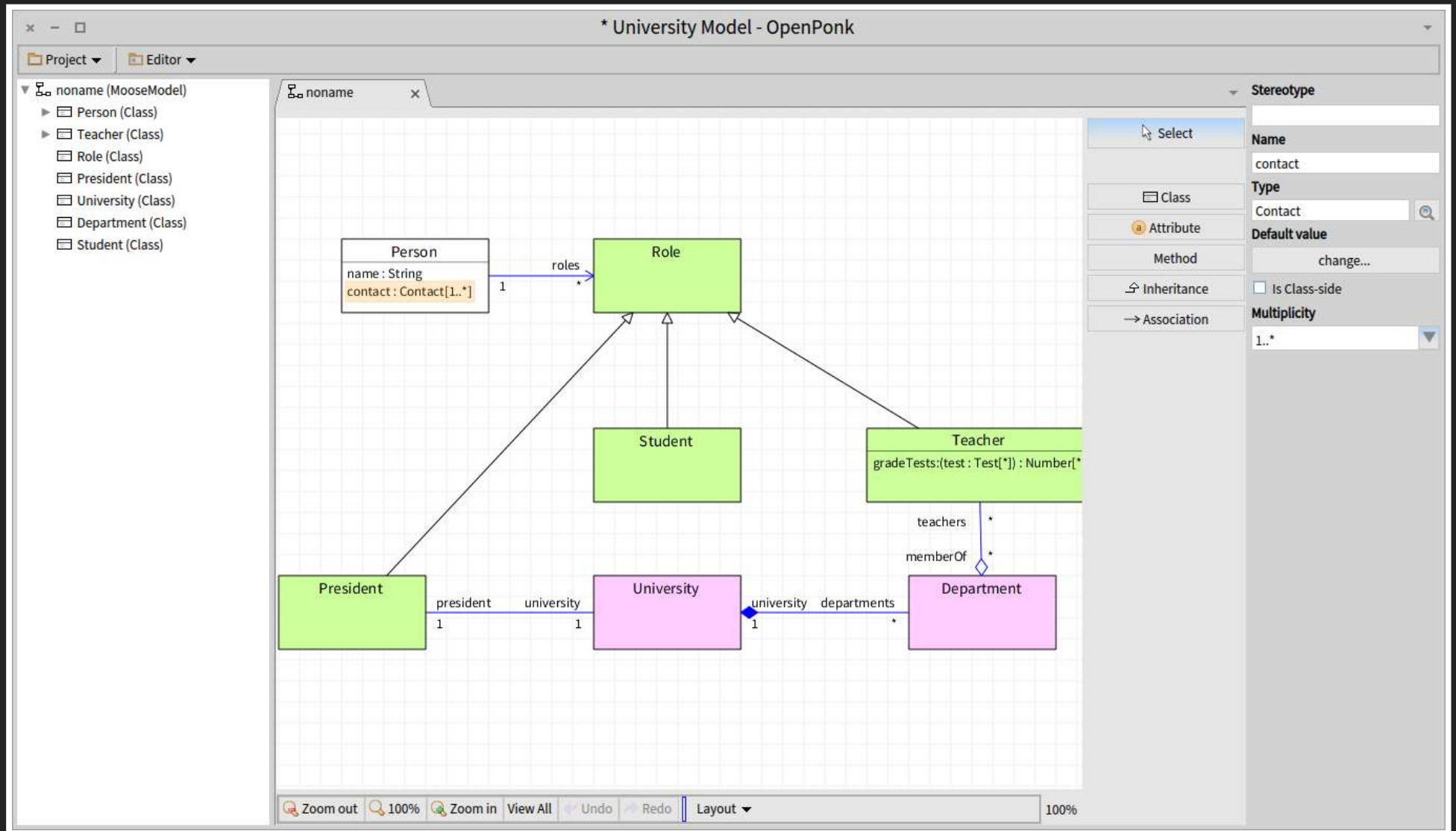
A "Finite State Machine Simulator" window is open in the foreground, showing the input sequence "11010101001011" and buttons for "Start", "Stop", "Reset", "Back", "Next", and "Run".

At the bottom, a toolbar includes "Zoom out", "100%", "Zoom in", "View All", "Undo", "Redo", "Layout", and a zoom level of "156%".

FINITE STATE AUTOMATA

- editor
- simulation
- GraphML

UML CLASS DIAGRAM



UML CLASS DIAGRAM

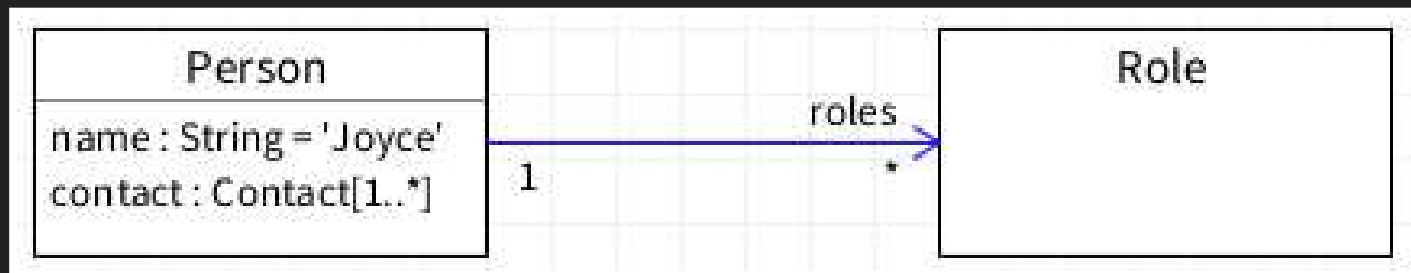
- editor
- DSL
- code generation
- reverse-engineering
- XMI interchange-ish

DSL

```
Person {  
    name : String = 'Joyce'  
    contact : Contact[1..*]  
}  
  
Role { }  
  
Person --> roles Role[*];
```



CODE GENERATION

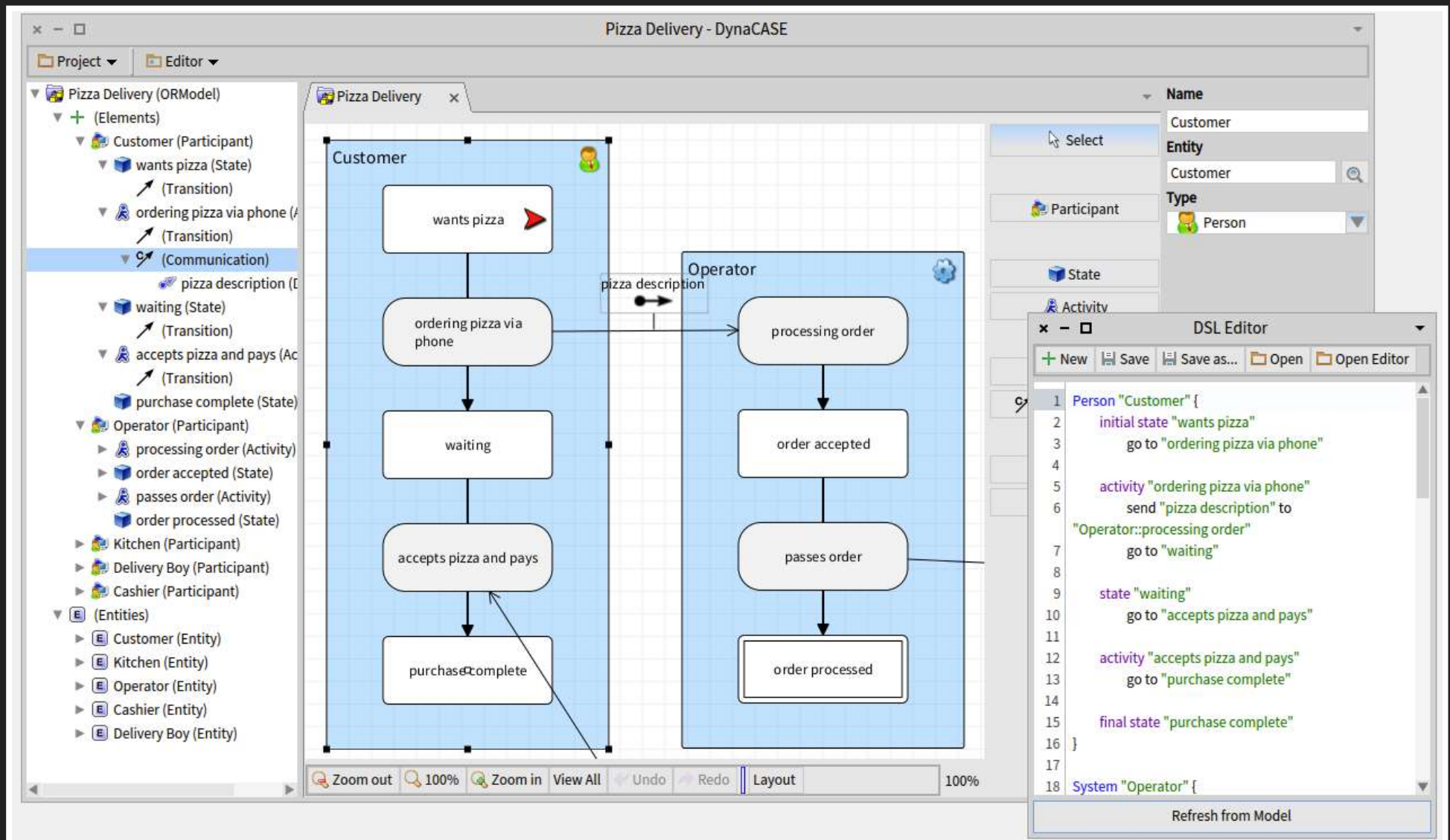


```
Person>>roles
  <DCAssociation: 'Person --> roles Role[*] '>
  ^ roles
```

```
Person>>name
  <DCType: 'String' multiplicity: #(1)>
  ^ name ifNil: [ name := 'Joyce' ]
```

BORM

Business Objects Relations Modeling



BORM

- editor
- DSL
- entities
- models interlinking

LIVE MODELING

model

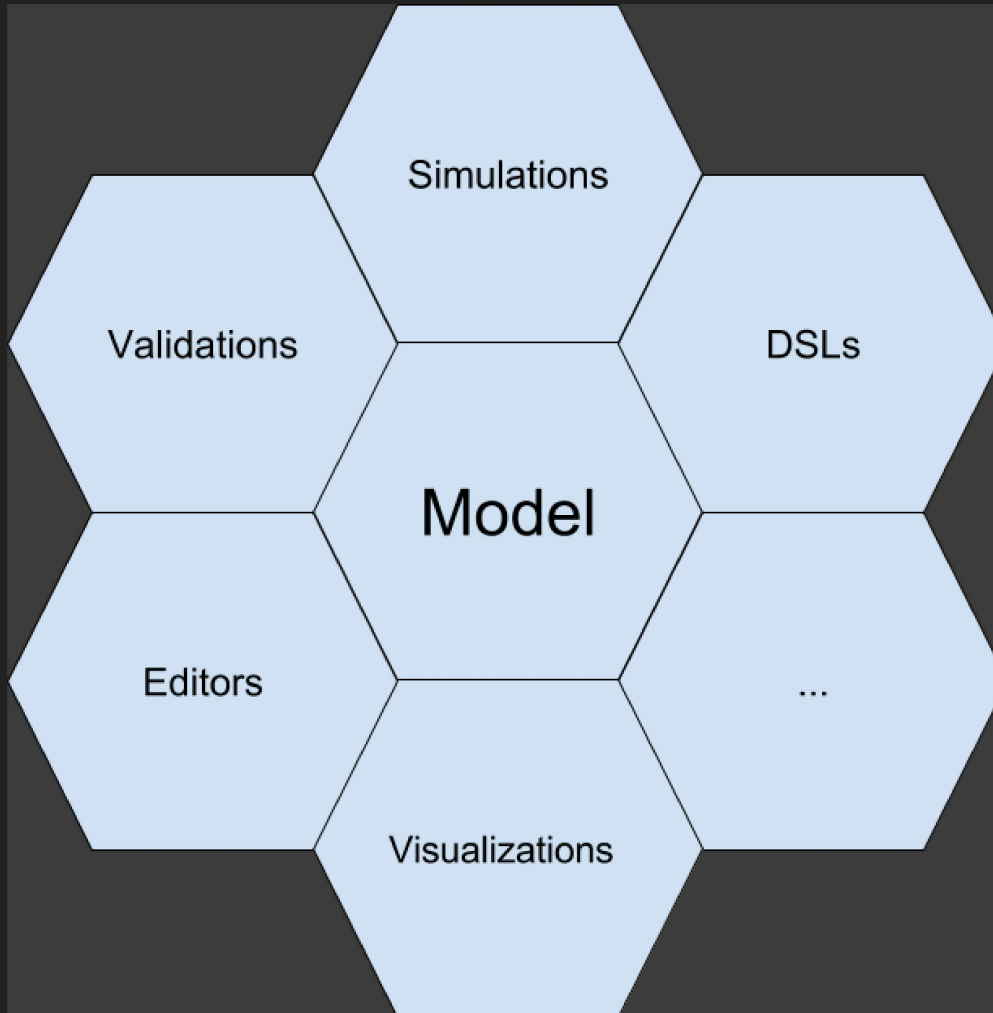
view

OPENPONK AS A PLATFORM

Build custom tools
for custom needs

building editors is hard,
we want to ease that burden
myriad of little things

BRING YOUR OWN ~~BEER~~ MODEL



Pizza Delivery - DynaCASE Workbench

Project Editor

Pizza Delivery (ORMode)

- Customer (Participant)
 - wants pizza (State) (Transition)
 - ordering pizza via phone (Transition)
 - waiting (State) (Communication) pizza de:
 - purchase complete
- Operator (Participant)
 - processing order
 - order accepted
 - passes order (Activity)
 - order processed
- Kitchen (Participant)
- Delivery Boy (Participant)

Model Navigator

64 %

Roassal View

```
graph TD
    subgraph Customer
        W[wants pizza] --> OP[ordering pizza via phone]
        OP --> Wait[waiting]
        Wait --> AP[accepts pizza and pays]
        AP --> PC[purchase complete]
    end
    subgraph Operator
        PO[processing order] --> OA[order accepted]
        OA --> POO[passes order]
    end
    subgraph Kitchen
        OPK[order processed]
    end
    OP -- pizza description --> PO
    PO -- order --> OPK
    OPK --> AP
    style OP fill:none,stroke:none
    style OPK fill:none,stroke:none
```

Tools Palette

- Select
- Participant
- State
- Activity
- Transition
- Communication
- Data Flow
- Constraint

Name: Customer
Type: Person

Form Editor

Zoom out 100% Zoom in View All Undo Redo

RAPID DEMO

OPENPONK

MODELING PLATFORM

free

open-source (MIT)

openponk.github.io