### Body

- int refCount\_
- + Body()
- + void attach()
- + void detach()
- + int refCount()
- + virtual ~Body()
- Body(const Body &)
- Body & operator=(const Body &)

## Flowimpl

- # string name
- # double value
- # System \* origin
- # System \* destination
- + Flowimpl()
- + Flowimpl(Flow &flow)
- + Flowimpl(string name, double value, System \*origin, System \*destination)
- + virtual ~Flowimpl()
- + virtual double run()=0
- + bool setOrigin(System
   \*system)
- + bool setDestination (System \*system)
- + System \* getOrigin () const
- + System \* getDestination () const
- + bool setName(string name)
- + bool setValue(double value)
- + string getName() const
- + double getValue() const
- + bool operator==(const Flow &other) const

## Modelimpl

- # vector< System \* >
   systemVector
- # vector< Flow \* > flowVector
- # string name
- # static vector< Model
   \* > modelVector
- + System & createSystem (string name, double value)
- + System & createSystem()
- + System & createSystem (string name)
- + System & createSystem (double value)
- + System & createSystem (System &system)
- + Modelimpl()
- + Modelimpl(Model &model)
- + Modelimpl(string name)
- + Modelimpl(System \*systems)
- + Modelimpl(Flow \*flows) and 16 more...
- + static Model & createModel()
- + static Model & createModel (string name)
- + static Model & createModel (System \*systems)
- + static Model & createModel (Flow \*flows)
- + static Model & createModel (string name, System \*systems, Flow \*flows)
- + static Model & createModel (Model &copiedModel)
- # Modelimpl & operator =(const Modelimpl &other)

# Systemimpl

- # double value
- # string name
- + Systemimpl()
- + Systemimpl(System &system)
- + Systemimpl(double value)
- + Systemimpl(string name)
- + Systemimpl(double value, string name)
- + virtual ~Systemimpl()
- + double getValue() const
- + bool setValue(double value)
- + const string getName
  () const
- + bool setName(string name)
- + Systemimpl & operator =(const Systemimpl &other)
- + bool operator==(const System &other) const

## ComplexFlow

- + ComplexFlow()
- + ComplexFlow(string name, double value, System \*origin, System \*destination)
- + ComplexFlow(Flow &flow)
- + double run()

### ExponentialFlow

- + ExponentialFlow()
- + ExponentialFlow(string name, double value, System \*origin, System \*Destination)
- + ExponentialFlow(Flow &flow)
- + double run()

### LogisticalFlow

- + LogisticalFlow()
- + LogisticalFlow(string name, double value, System \*origin, System \*Destination)
- + LogisticalFlow(Flow &flow)
- + double run()