Install Simantics

1 **Download Simantics from:**

No permanent link yet.
Ask guidance from Sami Majaniemi (sami.majaniemi@vtt.fi).

2 **Install Simantics from downloaded file**

- Installation program guides you through the installation process.

Simupedia.com

Bring shared libraries into use

1 **Required libraries**

- SimupediaStandardLibrary
- SimupediaSimulation
- SimupediaRSimulation

2 **Download shared libraries from:**

https://some.address.com/download

**3** **Launch Simantic Desktop**

Simupedia.com

Bring shared libraries into use

🧩**4** **Import shared libraries in following order:**

    1. SimupediaStandardLibrary
    2. SimupediaSimulation
    3. SimupediaRSimulation

File → Import → Generic Modeling → Shared Library → Next → Browse → Finnish

Install R (windows)

1 **Download R:**

https://cran.r-project.org/
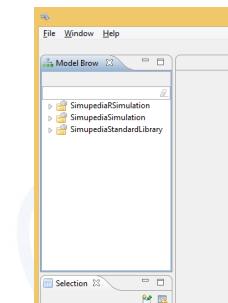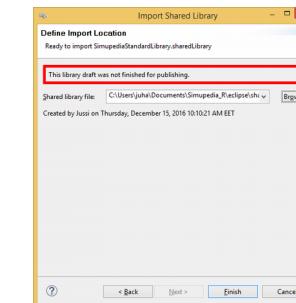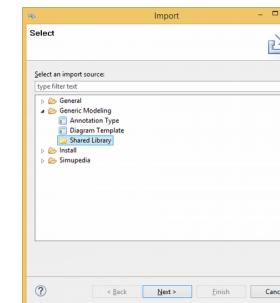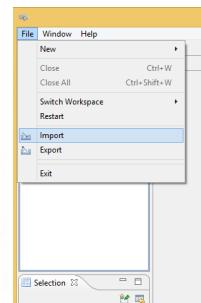
→ Choose <u>Download R for windows</u>
→ from next page: choose <u>install R for the first time</u>
→ from next page: choose <u>Download R 3.4.0. for Windows</u>

2 **Install R from downloaded file R-3.4.0-win (.exe)**

- Installation program guides you through the installation process.

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Install and run Rserve

1 **Start R**

**2** **Get and install Rserve packages**

   - In R type: *> install.packages("Rserve")*

   - During Rserve installation you might need to choose folder for Rserve and CRAN mirror.

3 **Run Rserve**

   - In R type: *> library(Rserve)*
                   > Rserve()

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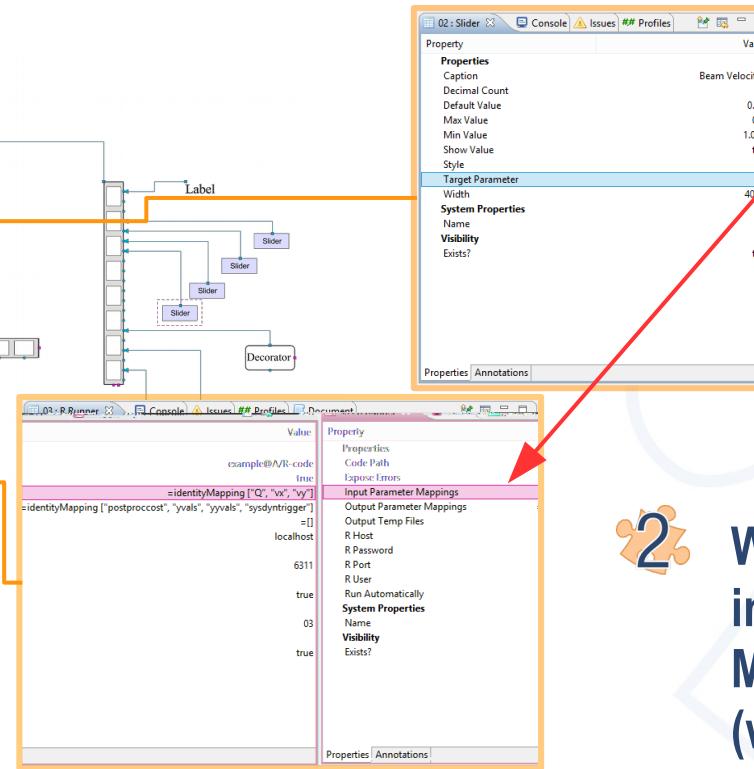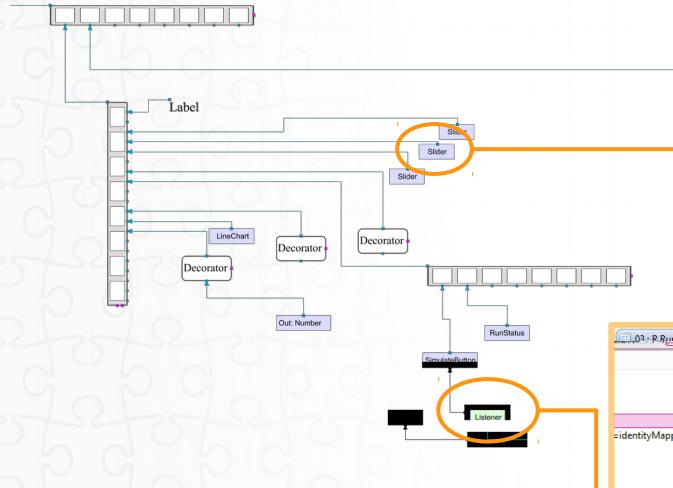
Input parameters

1 Write parameter name in objects "Target Parameter" (without quatations)

2 Write every input parameter in R Runner "Input Parameter Mappings" as list. (with quatations)

→ Window/Show View/Other…/Modeling/Properties

Output parameters
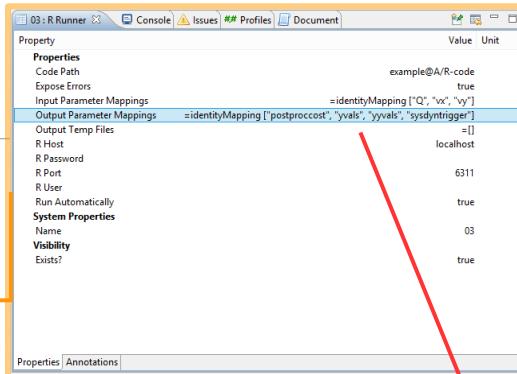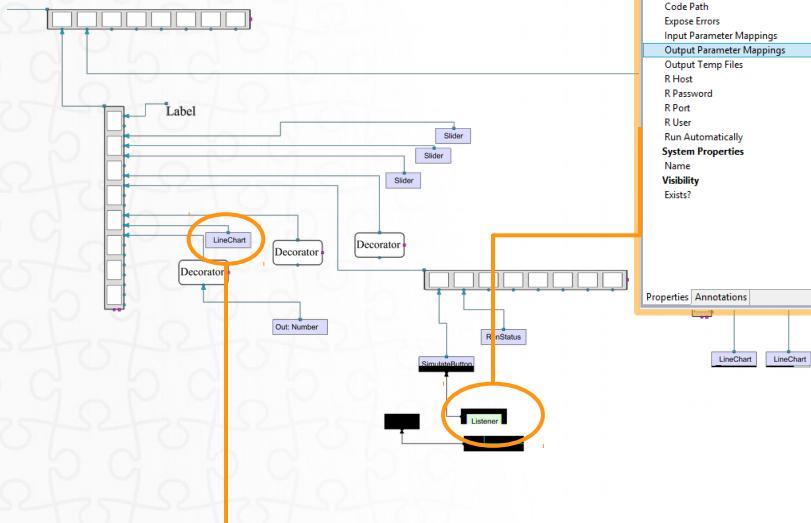
1 Write every input parameter in R Runner "Output Parameter Mappings" as list. (with quatations)
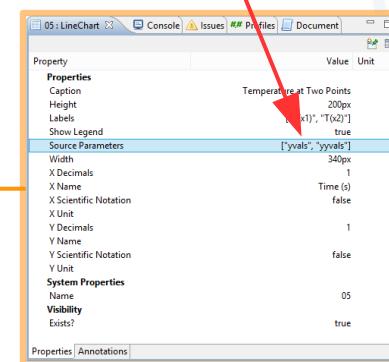
2 Write parameter name in objects "Source Parameters" (without quatations)

→ Window/Show View/Other.../Modeling/Properties

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Parameterlist syntax

1 **Identity mapping**

- Can be used when simupedia share same parameter names with model.

$$=identityMapping["param1", "param2",..]$$

2 **List of tuples**

- Need to be used when simupedia document and model have different parameter names.

- Simupedia → Model   (input parameters in runner) :

$$=[("simuped1", "model1"),("simuped2", "model2"),..]$$

- Model → Simupedia   (output parameters in runner) :

$$=[("model1", "simuped1"),("model2", "simuped2"),..]$$

Simupedia objects datatypes

1 Input (read)

- Slider:	*float*
- TextBoxDouble:	*float*
- ComboBox:	*List of string tuples [("param1","text1"),("param2","text2"),..]*
- RadioButton:	*List of string tuples [("param1","text1"),("param2","text2"),..]*

2 Output (write)

- Out Text:	*string*
- Out Number:	*float*
- LineChart:	*List of strings: ["graph1", "graph2", ..]]*

→ *Where single graph is 2d-list of floats: [[x1,y1],[x2,y2],[x3,y3],..]*