

BoSDL: An Approach to Describe the Business Logic of Software Services in Domain-Specific Terms

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Appendix (available online via <http://link.springer.com>)

A Appendix

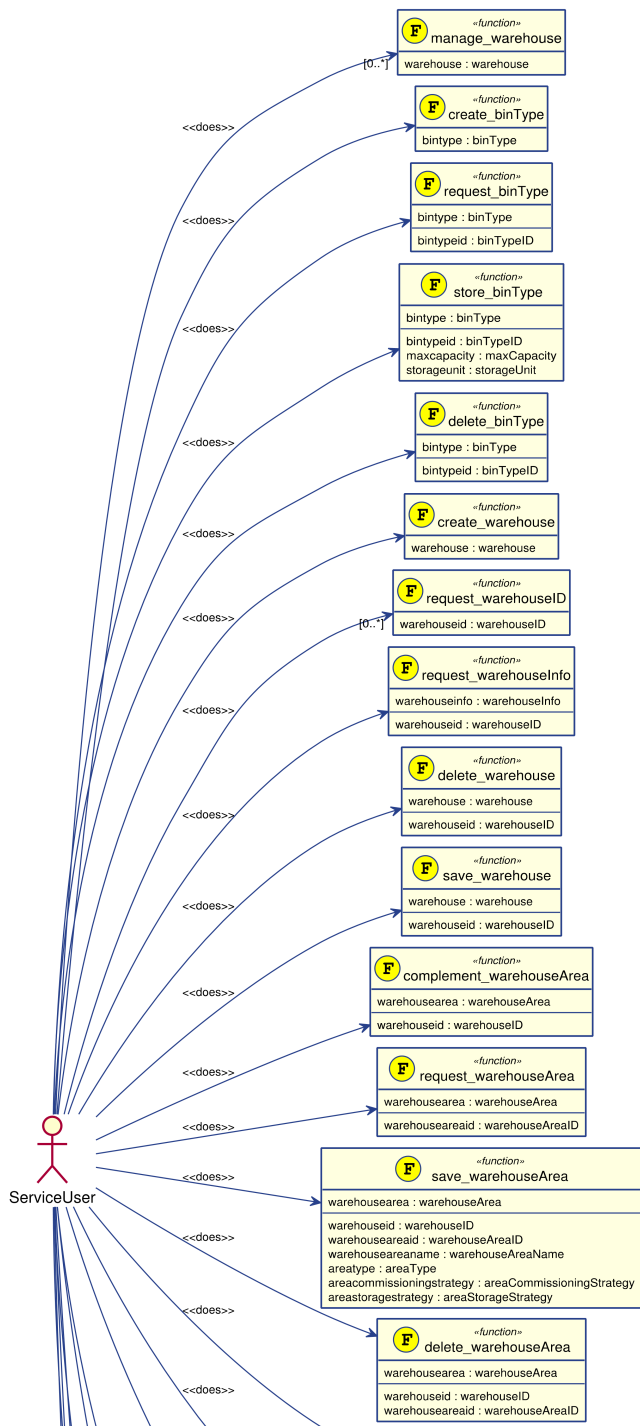


Fig. A1 Excerpt of the exemplary case depicted in the graphical format (functions)

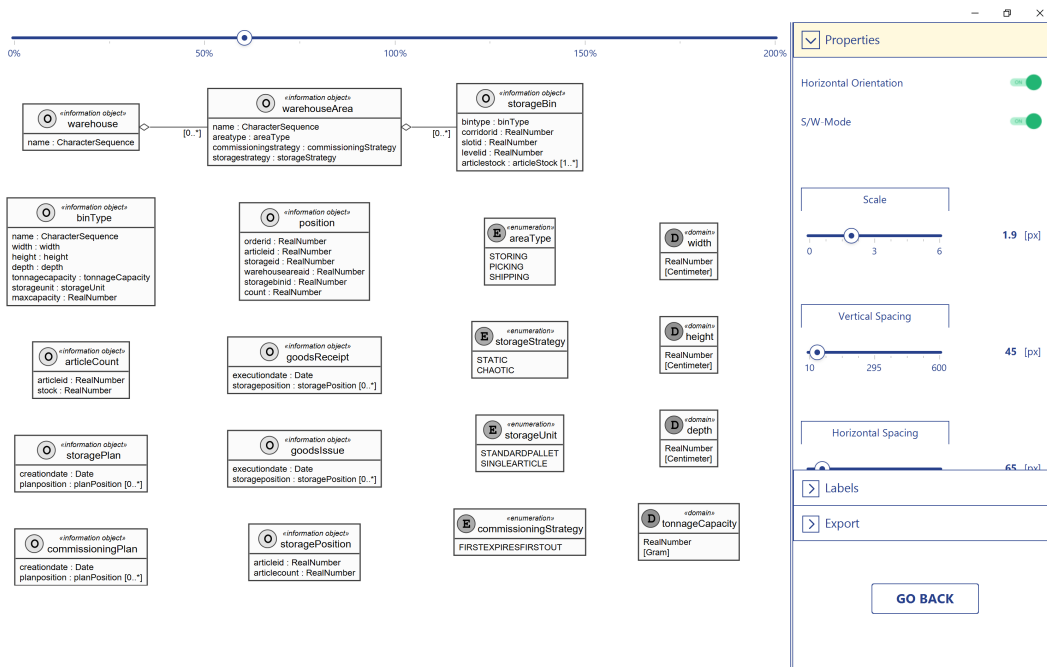


Fig. A2 Excerpt of the exemplary case depicted in the graphical format (information objects)

Select the element type to be shown in the diagram

Objects Functions Processes

State Information

CURRENT STATE

A warehouse has name.

CATEGORY

Property Declaration (Items)

SENTENCE STRUCTURE

(A | An) <Item1> has (a | an | [<Min1> to | <Max1> | many])
 <PropertyItem1> (and (a | an | [<Min2> to | <Max2> | many])
 <PropertyItem2>)*.

OK

State	Expression
✓	A warehouse is composed of 0 to many warehouseArea.
✗	A warehouse has name.
✓	A warehouseArea has a name and an areaType and a commissioningStrategy.
✓	A warehouseArea is composed of 0 to many storageBin.
✓	An areaType is storing or picking or shipping.
✓	A commissioningStrategy is static or chaotic.

Fig. A3 Screenshot of the developed compiler tool

Select an input mode for expressions

Direct input Filechooser

ADD EDIT GENERATE

Enter expressions - Separate expressions through word-wrap (ENTER-Key).

Add at the end of the list
 Insert at current position in the list

RUN

State	Expression
✓	A warehouse is composed of 0 to many warehouseArea.
✓	A warehouse has a name.
✓	A warehouseArea has a name and an areaType and a commissioningStrategy and a storageStrategy.
✓	A warehouseArea is composed of 0 to many storageBin.
✓	An areaType is storing or picking or shipping.
✓	A storageStrategy is static or chaotic.
✓	A storageBin has a binType and a corridorID and a slotID and a levelID and 1 to many articleStock.
✓	A binType is made up of a name and a width and a height and a depth and a tonnageCapacity and a storageUnit and a maxCapacity.
✓	A storageUnit is standardPallet or singleArticle.
✓	An articleCount is made up of an articleID and a stock.
✓	A storagePlan has a creationDate and 0 to many planPosition.
✓	A commissioningPlan has a creationDate and 0 to many planPosition.
✓	A position has an orderID and an articleID and a storagelD and a warehouseAreaID and a storageBinID and a count.

Fig. A4 Screenshot of the exemplary case depicted in the textual format (excerpt)