## **Business Knowledge Model Context**

A boxed context is a collection of context entries. Each context entry is a name-value pair or a result value. The icon on the top right corner of the Business Knowledge Model (BKM) element indicates that it is implemented as boxed context.

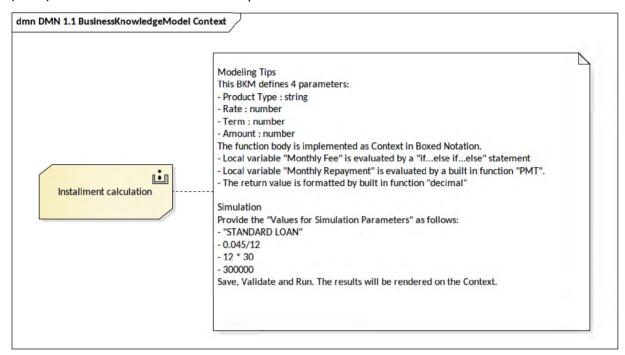


Figure 1. Business Knowledge Model implemented as Boxed Context

Open the BKM in DMN Expression view.

```
Installment calculation

Input Parameter Values for Simulation

(Product Type, Rate, Term, Amount)

if (Product Type, Rate, Term, Amount)

if (Product Type == "STANDARD LOAN")

{
    Monthly Fee = 20.00
}
else if (Product Type == "SPECIAL LOAN")

{
    Monthly Fee = 25.00
}
else
{
    Monthly Fee = null
}

Monthly Repayment

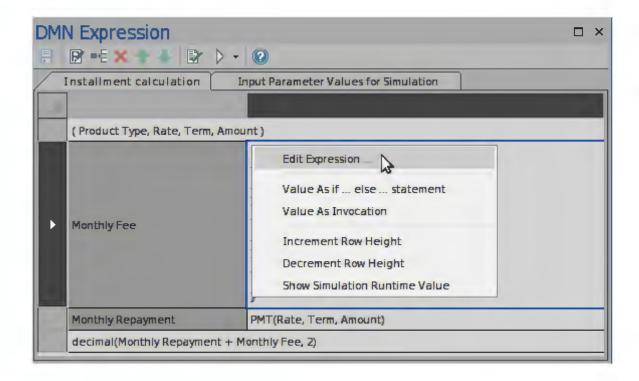
PMT(Rate, Term, Amount)

decimal (Monthly Repayment + Monthly Fee, 2)
```

The BKM defines four parameters and the body is implemented as Boxed Context, which contains three Context Entries:

- Local variable 'Monthly Fee' is evaluated by an 'if...else if...else' statement
- Local variable 'Monthly Repayment' is evaluated by a built in function 'PMT'
- The return value is formatted by the built in function 'decimal'

In order to edit the values for a Context Entry, the user can either type the entry in (if it is single line), or open the expression editor if multiple lines of code are required.



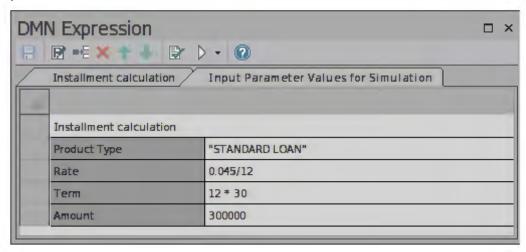
You can edit expressions for different languages.

Since some statements require different syntax for different languages, Enterprise Architect provides overloaded expressions for languages for code generation.

```
JavaScript Java C# C++ C
        1 if(Product Type == "STANDARD LOAN")
        2 [
        3
              Monthly Fee = 20.00
        5 else if(Product Type == "SPECIAL LOAN")
              Monthly Fee = 25.00
        8 }
        9 else
       10 [
              Monthly Fee = null
       11
       12 }
  d
    Copy Expression To All Languages
Display in Language:
                                                        Cancel
                                                                    Help
```

## **Simulation**

Switch to the 'Input Parameter Values for Simulation' tab and provide values for the parameters:



Validate and Run. The results will be rendered in the Context.

```
DMN Expression
                                                                                       \square \times
Installment calculation
                                Input Parameter Values for Simulation
     ( Product Type = 5TANDARD LOAN, Rate = 0.00375, Term = 360, Amount = 300000 ) return = 1540.06
                                if(Product Type == "STANDARD LOAN")
                                  Monthly Fee = 20.00
                                 else if(Product Type == "SPECIAL LOAN")
     Monthly Fee = 20
                                  Monthly Fee = 25.00
                                 else
                                  Monthly Fee = null
     Monthly Repayment = 1520....
                                PMT(Rate, Term, Amount)
     decimal(Monthly Repayment + Monthly Fee, 2)
```

The simulation result is 1540.

Note: This Boxed Context uses the 'PMT' function to calculate monthly repayments. This function is defined in the DMN Library, which can be opened and included via the 'Run' option menu:

