Model of Models
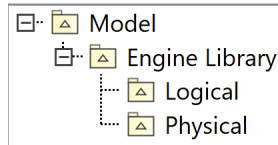
Part 1 - Initial Structure:

Create a Engine Library project with the following package structure.

```
□· ⊿ Model
   □· ⊿ Engine Library
       ·· ⊿ Logical
       ·· ⊿ Physical
```

Part 2 - Taxonomy Layout:

Create the following taxonomic package structure, with blocks embedded, within the Logical Model.

```
□·· ⊿ Model
    □·· ⊿ Engine Library
        □·· ⊿ Logical
            □·· ☐ Taxonomy
                □·· ☐ Heat Engine
                    □·· ☐ Taxonomy
                        □·· ☐ Combustion Engine
                            □·· ☐ Internal Combustion Engine
                                □·· ☐ Taxonomy
                                    □·· ☐ Continuous Combustion Engine
                                        □·· ☐ Taxonomy
                                            □·· ☐ Rocket Engine
                                                ·· ▤ Rocket Engine
                                        ·· ▤ Continuous Combustinon Engine
                                ·· ▤ Internal Combustion Engine
                        ·· ▤ Combusion Engine
                    ·· ▤ Heat Engine
            ·· ▤ Engine
        ·· ⊿ Physical
```
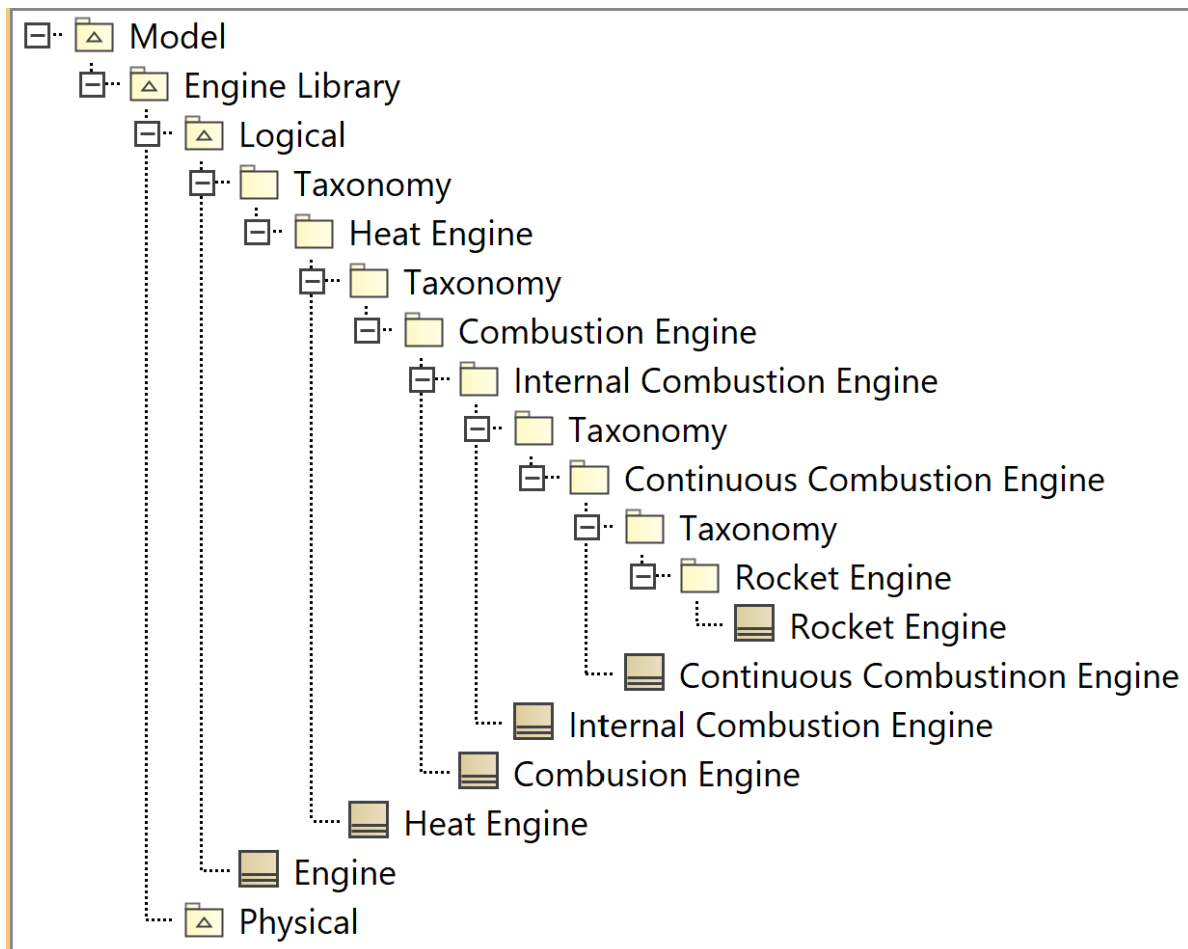
Next, create the following Taxonomy Diagram, yes it is straight right now as I'm purposefully not wanting to create undue busy work, as the library fleshes out over time, the standard tree shape will likely be obtained.
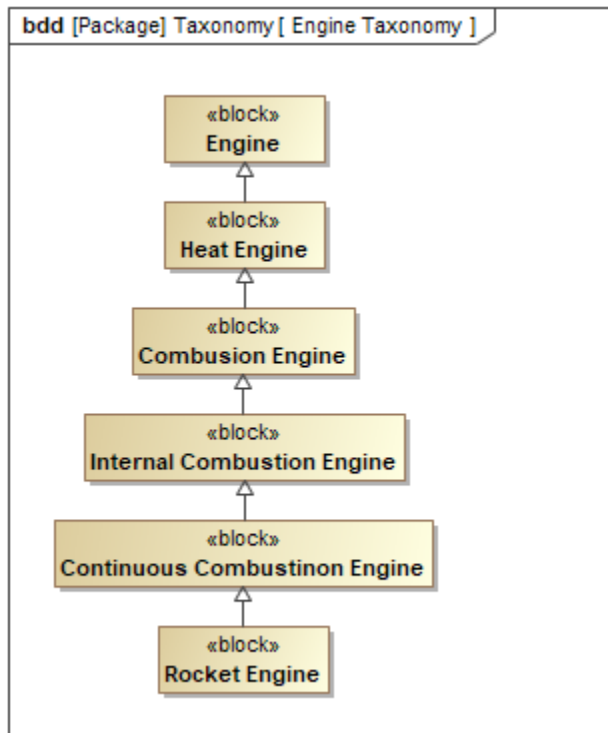
Part 3 – Value Definition/Redefinition

Part 3.1 – Create the Initial Value Properties

Create a package named "Value Definitions" under the Logical model. Within the new package add the following Block Definition Diagram.
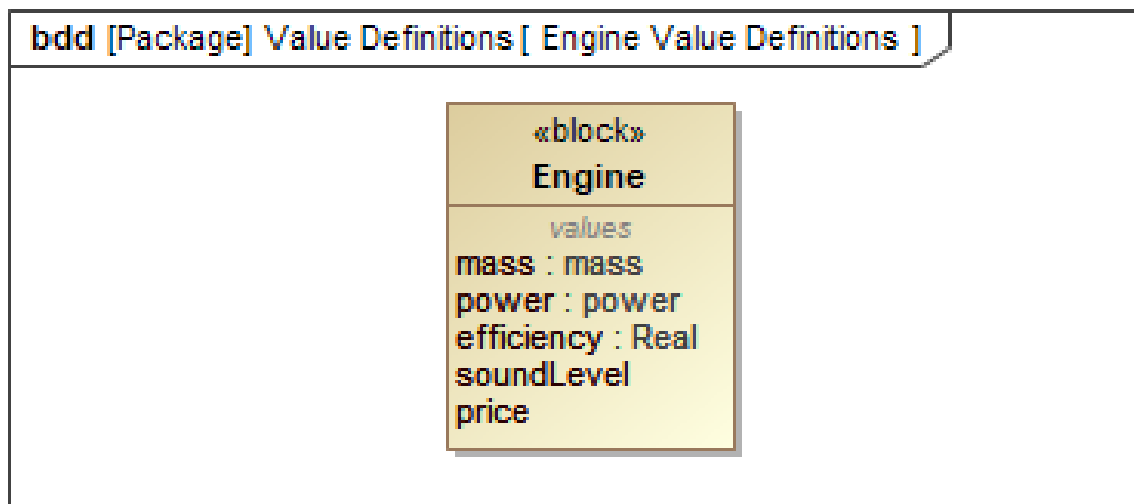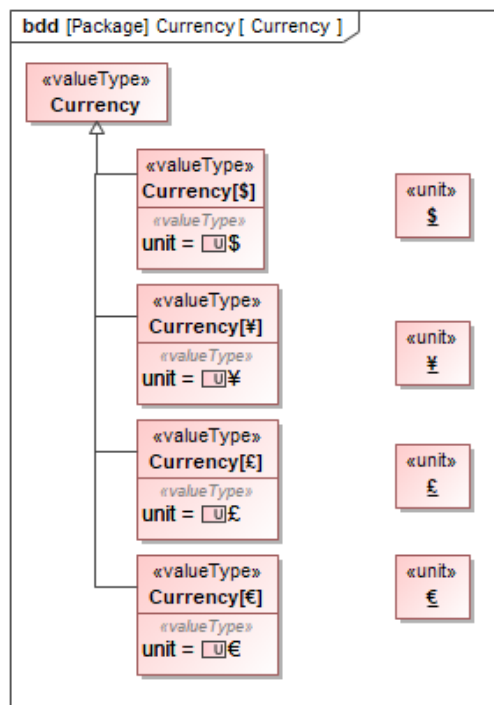
Part 3.2 – Create the Following Value Types Project

As we create reusable value types that may be reusable across many different components, here is where we will define them in order to enable their reuse.
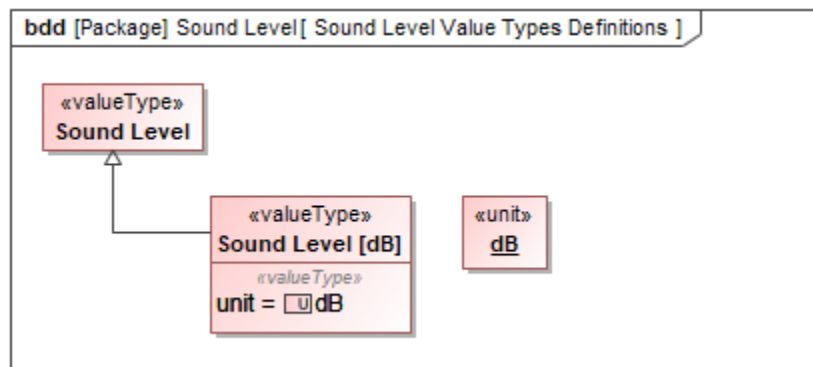
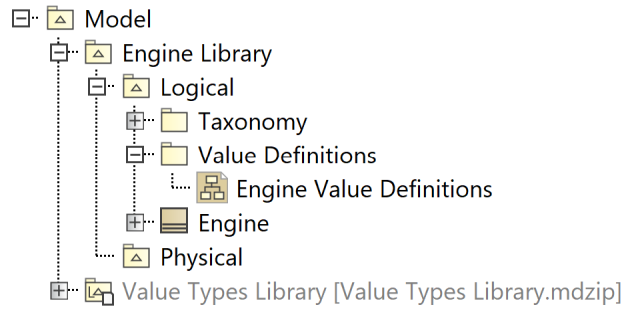Create the following initial package structure.
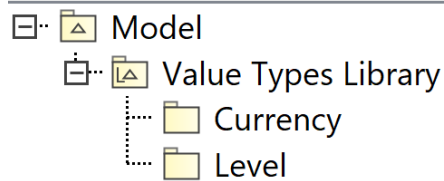
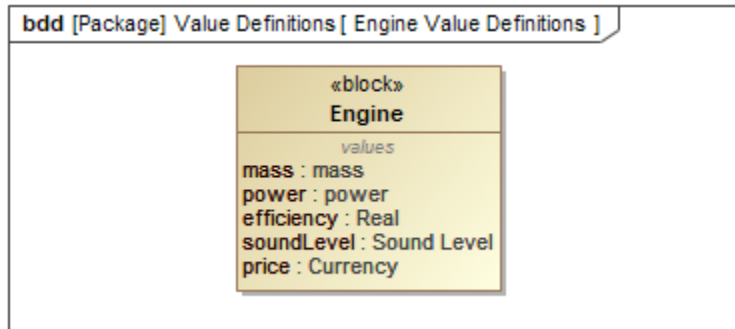Within the Currency Package, produce the following BDD.

Within the Level package, create a Sound Level package. In the Sound Level package, produce the following BDD.

Share the Value Types Library model and save the project. Use the Value Types Library project within our Engine Library project.

```
⊟·· 🔺 Model
        ⊟·· 🔺 Engine Library
                ⊟·· 🔺 Logical
                        ⊞·· 🗀 Taxonomy
                        ⊟·· 🗀 Value Definitions
                                ⋮···· 🔠 Engine Value Definitions
                        ⊞·· 🔲 Engine
                        ⋮···· 🔺 Physical
                ⊞·· 🔺 Value Types Library [Value Types Library.mdzip]
```

Update the Engine Value Definitions BDD to type the "price" value property with the generic "Currency" Value Type and the "soundLevel" value property with the generic "Sound Level" value property.

```
bdd [Package] Value Definitions [ Engine Value Definitions ]

                        «block»
                        Engine

                         values
        mass : mass
        power : power
        efficiency : Real
        soundLevel : Sound Level
        price : Currency
```

Recursively, create Value Definitions packaged within each Taxonomy package and the corresponding BDDs within.