```
<scenario>
<AnalysisScenario id="AS3">
    <Step id="1" name="features selection" supervisedBy="OEM">
        <Task id="1" name="internal and external temperatures
features selection with factor analysis" />
    </Step>
    <Step id="2" name="displacements prediction"</pre>
supervisedBy="OEM">
          <Task id="1" name="create dataset with internal
temperatures, external temperatures, displacements" />
        <Task id="2" name="train-test dataset split" />
        <Task id="3" name="regression coefficients calculation
with multiple linear regression analysis (MLRA) " />
        <Task id="4" name="calculation of predicted displacements"
/>
    </Step>
    <Step id="3" name="comparison of predicted vs real</pre>
displacements" supervisedBy="OEM">
        <Task id="1" name="calculation of pearson correlation" />
          <Task id="2" name="calculation of mean root squared
error" />
    </Step>
</AnalysisScenario>
</scenario>
Consider the definitions (between <definitions>
</definitions>) of step and task as well as of specialisation
between pairs of analysis scenarios.
<definitions>
An analysis scenario is composed of steps and each step is
```

accomplished through a series of tasks. You can think of a step as a macro-group of affine tasks.

Specialisation relationship between scenarios: indicates that a scenario adds several steps/tasks with respect to another scenario.

</definitions>

Based on the definitions between <definitions> </definitions>, and the analysis scenarios provided in the uploaded files, suggest to me analysis scenarios that in their definition include the steps of the scenario delimited by <scenario></scenario>.

Print the steps between <steps></steps> and tasks between <tasks></tasks>.

```
Based on the definitions provided and the analysis scenarios in the uploaded files, the analysis scenarios that include the one delimited by <scenario></scenario> (AS3) according to the definition of "inclusion" relationship are:
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AS1.xml
AS2.xml
Both AS1 and AS2 include the steps and tasks from AS3.
AS1.xml:
<steps>
    <Step id="1" name="collection of measures"</pre>
supervisedBy="Client company">
        <tasks>
            <Task id="1" name="internal temperature sensors data
collection" />
            <Task id="2" name="external temperature sensors data
collection" />
            <Task id="3" name="Displacements comparators data
collection" />
            <Task id="4" name="Data shaping - internal
temperatures" />
            <Task id="5" name="Data shaping - external
temperatures" />
            <Task id="6" name="Data shaping - displacements" />
        </tasks>
    </Step>
    <Step id="2" name="interpolation of measures"</pre>
supervisedBy="OEM">
        <tasks>
            <Task id="1" name="Timestamp alignment" />
            <Task id="2" name="Linear interpolation - external
temperatures" />
            <Task id="3" name="Linear interpolation -
displacements" />
            <Task id="4" name="merge internal and external
temperatures datasets" />
        </tasks>
    </Step>
    <Step id="3" name="features selection" supervisedBy="OEM">
            <Task id="1" name="internal and external temperatures
features selection with factor analysis" />
        </tasks>
    </Step>
    <Step id="4" name="displacements prediction"</pre>
supervisedBy="OEM">
```

```
<tasks>
            <Task id="1" name="create dataset with internal
temperatures, external temperatures, displacements" />
            <Task id="2" name="train-test dataset split" />
            <Task id="3" name="regression coefficients calculation
with multiple linear regression analysis (MLRA)" />
            <Task id="4" name="calculation of predicted
displacements" />
        </tasks>
    </Step>
    <Step id="5" name="comparison of predicted vs real</pre>
displacements" supervisedBy="OEM">
        <tasks>
            <Task id="1" name="calculation of pearson correlation"
/>
            <Task id="2" name="calculation of mean root squared
error" />
        </tasks>
    </Step>
</steps>
AS2.xml:
<steps>
    <Step id="1" name="collection of measures"</pre>
supervisedBy="Client company">
        <tasks>
            <Task id="1" name="internal temperature sensors data
collection" />
            <Task id="2" name="external temperature sensors data
collection" />
            <Task id="3" name="Displacements comparators data
collection" />
            <Task id="4" name="Data shaping - internal
temperatures" />
            <Task id="5" name="Data shaping - external
temperatures" />
            <Task id="6" name="Data shaping - displacements" />
        </tasks>
    </Step>
    <Step id="2" name="data anonymisation" supervisedBy="Client</pre>
company">
        <tasks>
            <Task id="1" name="remove references to plant
location" />
        </tasks>
    </Step>
```

```
<Step id="3" name="interpolation of measures"</pre>
supervisedBy="OEM">
        <tasks>
            <Task id="1" name="Timestamp alignment" />
            <Task id="2" name="Linear interpolation - external
temperatures" />
            <Task id="3" name="Linear interpolation -
displacements" />
            <Task id="4" name="merge internal and external
temperatures datasets" />
        </tasks>
    </Step>
    <Step id="4" name="features selection" supervisedBy="OEM">
        <tasks>
            <Task id="1" name="internal and external temperatures
features selection with factor analysis" />
        </tasks>
    </Step>
    <Step id="5" name="displacements prediction"</pre>
supervisedBy="OEM">
        <tasks>
            <Task id="1" name="create dataset with internal
temperatures, external temperatures, displacements" />
            <Task id="2" name="train-test dataset split" />
            <Task id="3" name="regression coefficients calculation
with multiple linear regression analysis (MLRA)" />
            <Task id="4" name="calculation of predicted
displacements" />
        </tasks>
    </Step>
    <Step id="6" name="comparison of predicted vs real</pre>
displacements" supervisedBy="OEM">
        <tasks>
            <Task id="1" name="calculation of pearson correlation"
/>
            <Task id="2" name="calculation of mean root squared
error" />
        </tasks>
    </Step>
</steps>
```