

```

<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"
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
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 inclusion, extension and 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.

Extension relationship between scenarios: to emphasise that a scenario presents a list of steps/tasks that is a variation of the steps/tasks of another scenario.

Inclusion relationship between scenarios: indicates that a scenario is included in other scenarios by specifying that the steps/tasks within one scenario are inclusive of the steps/tasks in other ones.

</definitions>

Based on the definitions between <definitions> </definitions>, and the analysis scenarios provided in the uploaded files, suggest me

analysis scenarios that include the one delimited by `<scenario></scenario>` according to the definition of "inclusion" relationship.

If you are not able to answer say "I don't know". For each suggested scenario, print its 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:

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"
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"
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">
      <tasks>
        <Task id="1" name="internal and external temperatures
features selection with factor analysis" />
      </tasks>
    </Step>
    <Step id="4" name="displacements prediction"
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
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"
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
company">
    <tasks>
        <Task id="1" name="remove references to plant
location" />
    </tasks>
</Step>
    <Step id="3" name="interpolation of measures"
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"
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
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>

```

