<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>