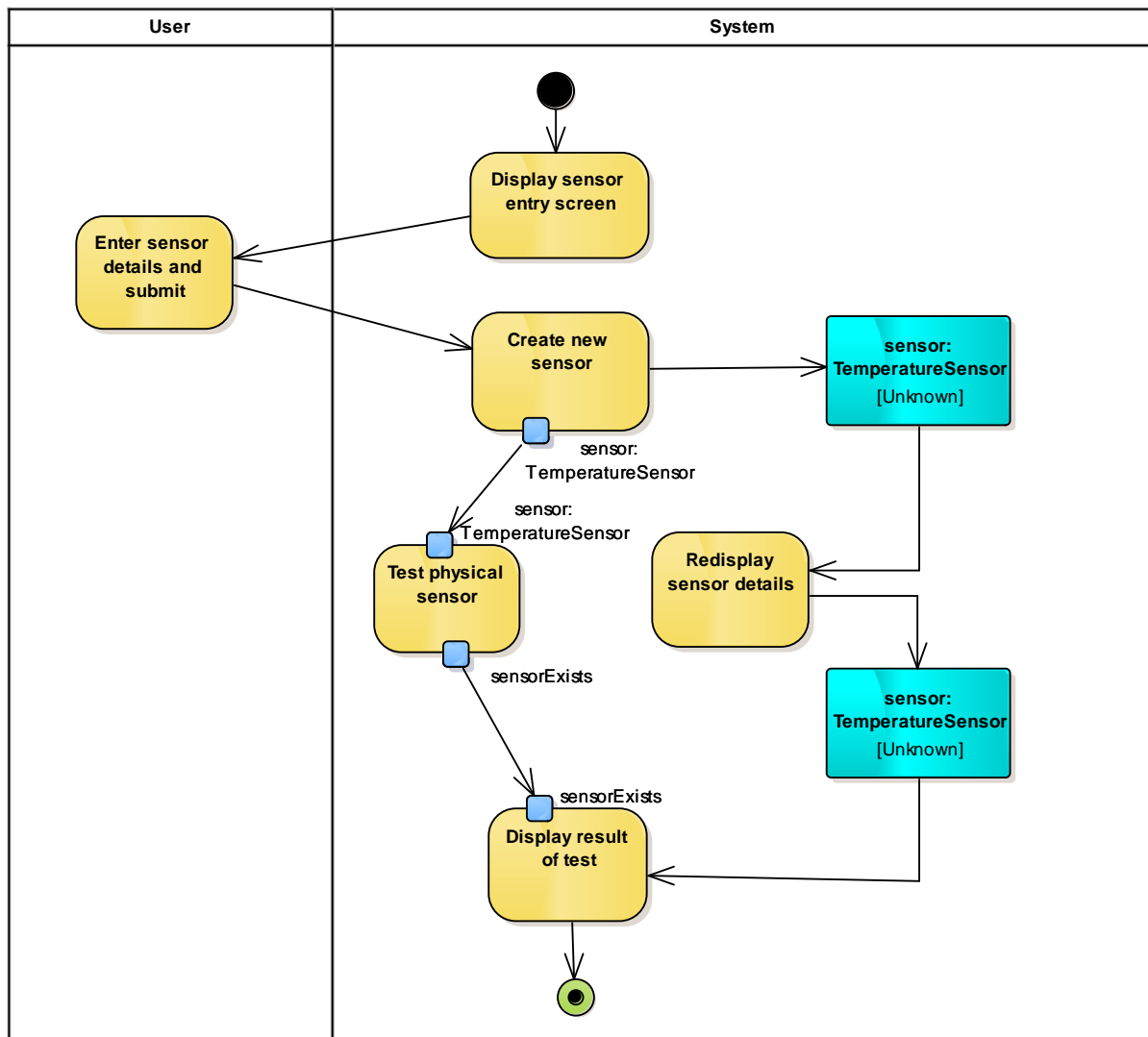


Learning UML

O'Reilly

Exercises – Structured Activities

If you have followed along, you should have an activity diagram called *Add a sensor (Swimlanes)*.



Now you are going to add a lower level activity diagram for the activity *Test physical sensor*.

Change the input pin of *Test physical sensor* to be *sensorAddress* and remove the classifier.

Create a composite structure diagram within *Test physical sensor*.

In that diagram add the activity *Test physical sensor* from the project browser. Do not add the pins to it.

Add two activity parameters to the activity:

sensorAddress: String

sensorExists: Boolean

Make sure that the second of these is an output type.

Add the following actions and connect the first from the input activity parameter and the second from the first:

Start timer

Send message to sensor

Add appropriate names and types to the pins as required.

Now add a fork followed by the following actions in one flow:

Receive response

Cancel timer

sensorExists=true (this should be a Write Variable Action)

and the following actions in the other flow

Wait for timeout

sensorExists=false (this should be a Write Variable Action)

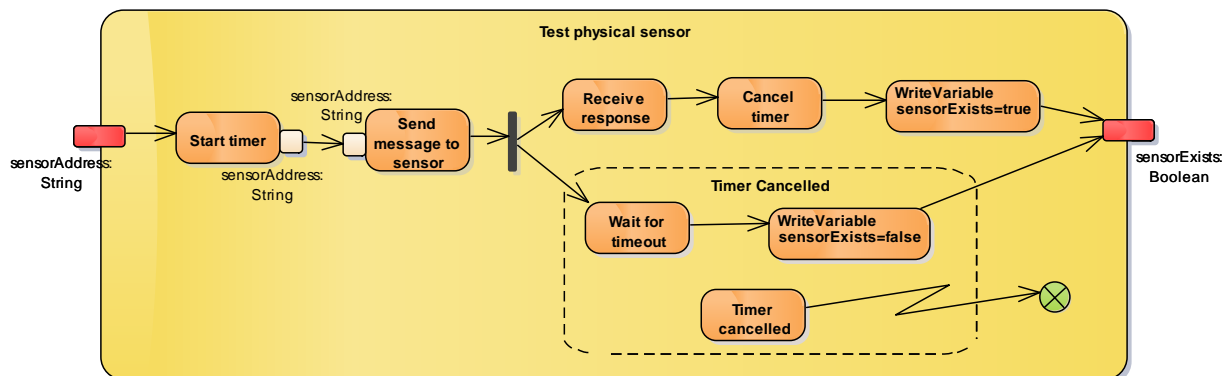
Connect these with control flows apart from the last two flows to the output activity parameter, which should be object flows.

Add an interruptible region called *Timer cancelled* to the diagram. (Note that EA is a bit quirky ere. It is best to add it to the background of the diagram, resize it there and then drag it into the activity. Otherwise it seems to go behind the activity.)

Add an action called *Timer cancelled* inside the region and a flow final node outside it.

Connect the action to the flow final node with an interrupt flow.

Your diagram should look something like this.



Your diagram should look something like this.

