











Figure 4: Java programming framework for Eclipse IDE

```

4 PREFIX dc: <http://purl.org/dc/elements/1.1/>
5 PREFIX home-dataset: <http://sensormeasurement.
  appspot.com/dataset/home-dataset/>
6
7 SELECT DISTINCT ?name ?value ?unit ?inferType ?
  deduce ?suggest ?suggest_comment WHERE{
8   ?measurement m3:hasName ?name.
9   ?measurement m3:hasValue ?value.
10  ?measurement m3:hasDateTimeValue ?time.
11  ?measurement m3:hasUnit ?unit.
12
13  # inferTypeUri = m3:RoomTemperature
14  ?measurement rdf:type ?inferTypeUri.
15  ?inferTypeUri rdfs:label ?inferType.
16
17  ?inferTypeUri m3:isRelatedTo ?deduceUri.
18  #deduceUri = home-dataset:LowTemperature
19  ?deduceUri rdfs:label ?deduce.
20
21  ?deduceUri m3:hasRecommendation ?suggestUri .
22  ?suggestUri rdfs:label ?suggest.
23  ?suggestUri dc:description ?suggest_comment.
24 }

```

Listing 3: Query to retrieve temperature data with enriched value

**Step 6: Showing results.** This step of the demonstration is to show final suggestions to a client application. The suggestions could be an actionable information such as sending alerts to a mobile application and/or controlling actuators. For our scenario described in Section 3.1, the actionable information is triggering an actuator at home with a notification to user, shown in Figure 3.

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<sup>2</sup><http://opensensingcity.emse.fr>

<sup>3</sup><http://www.ict-citypulse.eu>

<sup>4</sup><http://www.agence-nationale-recherche.fr/?Projet=ANR-13-INFR-0008>