

# ISO/IEC 11179-35:2023-01 (E)

## Information technology - Metadata registries (MDR) - Part 35: Metamodel for model registration

---

<b>Contents</b>	<b>Page</b>
<b>Foreword</b> .....	<b>vii</b>
<b>Introduction</b> .....	<b>viii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Abbreviated terms</b> .....	<b>2</b>
<b>5 Conformance</b> .....	<b>3</b>
5.1 Overview of conformance.....	3
5.2 Degree of conformance.....	3
5.2.1 General.....	3
5.2.2 Strictly conforming implementations.....	3
5.2.3 Conforming implementations.....	3
5.3 Conformance by feature.....	4
5.4 Standard profiles for edition 4 registries.....	4
5.5 Implementation conformance statement (ICS).....	4
5.6 Obligation.....	4
<b>6 Relationship to ISO/IEC 11179-3</b> .....	<b>5</b>
6.1 Metamodel for a metadata registry.....	5
6.2 Specification of the metamodel.....	5
6.3 Use of UML Class diagrams and textual description.....	5
6.4 Package dependencies.....	6
<b>7 Model package</b> .....	<b>6</b>
7.1 Overview of the Model package.....	6
7.2 Model metamodel region.....	6
7.2.1 Overview of the Model metamodel region.....	6
7.2.2 Classes in the Model metamodel region.....	7
7.2.3 Associations in the Model metamodel region.....	16
<b>Annex A (informative) Consolidated Class Hierarchy</b> .....	<b>20</b>
<b>Annex B (informative) Use of the model registration facilities</b> .....	<b>21</b>
<b>Annex C (informative) Examples of model registration</b> .....	<b>23</b>
<b>Annex D (informative) Relationship to ISO/IEC 19763</b> .....	<b>64</b>
<b>Bibliography</b> .....	<b>66</b>

## List of Figures

<b>Figure 1 — Package dependencies</b> .....	<b>6</b>
<b>Figure 2 — Model metamodel region</b> .....	<b>7</b>
<b>Figure A.1 — Consolidated Class Hierarchy</b> .....	<b>20</b>
<b>Figure B.1 — Registration of models and metamodels</b> .....	<b>21</b>

<b>Figure C.1 — Create Repair Order example in BPMN</b> .....	<b>23</b>
<b>Figure C.2 — Sales order processing example expressed as a UML Class Diagram</b> .....	<b>27</b>
<b>Figure C.3 — Example form design</b> .....	<b>35</b>
<b>Figure C.4 — Form design metamodel (from ISO/IEC TS 19763-13:2016)</b> .....	<b>36</b>
<b>Figure C.5 — UML class diagram for the student registration scenario</b> .....	<b>46</b>
<b>Figure C.6 — JSON schema for the student registration scenario (3 of 3)</b> .....	<b>48</b>
<b>Figure C.7 — Metamodel for the Ellis-Barker entity-relationship notation</b> .....	<b>53</b>

## List of Tables

<b>Table 1 — Attributes of the Model_Element_Characteristic class</b> .....	<b>11</b>
<b>Table 2 — Attribute of the Concept_Annotation class</b> .....	<b>13</b>
<b>Table C.1 — Modelling_Language class for the BPMN example</b> .....	<b>24</b>
<b>Table C.2 — Model class for the BPMN example</b> .....	<b>24</b>
<b>Table C.3 — Model_Element_Type class for the BPMN example</b> .....	<b>24</b>
<b>Table C.4 — Model_Element class for the BPMN example</b> .....	<b>24</b>
<b>Table C.5 — Model_Element_Characteristic_Type class for the BPMN example</b> .....	<b>25</b>
<b>Table C.6 — Model_Element_Characteristic class for the BPMN example</b> .....	<b>25</b>
<b>Table C.7 — Model_Element_Model_Relationship_Type class for the BPMN example</b> .....	<b>26</b>
<b>Table C.8 — Model_Element_Model_Relationship class for the BPMN example</b> .....	<b>26</b>
<b>Table C.9 — Model_Element_Relationship_Type class for the BPMN example</b> .....	<b>26</b>
<b>Table C.10 — Model_Element_Relationship class for the BPMN example</b> .....	<b>26</b>
<b>Table C.11 — Modelling_Language class for the UML Class Diagram example</b> .....	<b>27</b>
<b>Table C.12 — Model class for the UML Class Diagram example</b> .....	<b>28</b>
<b>Table C.13 — Concept class for the UML Class Diagram example</b> .....	<b>28</b>
<b>Table C.14 — Concept_Annotation class for the UML Class Diagram example</b> .....	<b>28</b>
<b>Table C.15 — Model_Element_Type class for the UML Class Diagram example</b> .....	<b>28</b>
<b>Table C.16 — Model_Element class for the UML Class Diagram example</b> .....	<b>28</b>
<b>Table C.17 — Model_Element_Characteristic_Type class for the UML Class Diagram example</b> .....	<b>29</b>
<b>Table C.18 — Model_Element_Characteristic class for the UML Class Diagram example</b> .....	<b>30</b>
<b>Table C.19 — Model_Element_Relationship_Type class for the UML Class Diagram example</b> .....	<b>33</b>
<b>Table C.20 — Model_Element_Relationship class for the UML Class Diagram example</b> .....	<b>33</b>
<b>Table C.21 — Model class for the Form Design example</b> .....	<b>36</b>
<b>Table C.22 — Model_Element_Type class for the Form Design example</b> .....	<b>37</b>
<b>Table C.23 — Model_Element class for the Form Design example</b> .....	<b>37</b>
<b>Table C.24 — Model_Element_Characteristic_Type class for the Form Design example</b> .....	<b>39</b>
<b>Table C.25 — Model_Element_Characteristic_Type_Acceptability class for the Form Design example</b> .....	<b>40</b>

<b>Table C.26 — Model_Element_Characteristic class for the Form Design example .....</b>	<b>40</b>
<b>Table C.27 — Model_Element_Relationship_Type class for the Form Design example .....</b>	<b>43</b>
<b>Table C.28 — Model_Element_Relationship class for the Form Design example.....</b>	<b>44</b>
<b>Table C.29 — Modelling_Language class for the JSON Schema example.....</b>	<b>48</b>
<b>Table C.30 — Model class for the JSON Schema example.....</b>	<b>48</b>
<b>Table C.31 — Model_Element_Type class for the JSON Schema example.....</b>	<b>49</b>
<b>Table C.32 — Model_Element class for the JSON Schema example.....</b>	<b>49</b>
<b>Table C.33 — Model_Element_Characteristic_Type class for the JSON Schema example.....</b>	<b>50</b>
<b>Table C.34 — Model_Element_Characteristic class for the JSON Schema example.....</b>	<b>50</b>
<b>Table C.35 — Model_Element_Relationship_Type class for the JSON Schema example .....</b>	<b>51</b>
<b>Table C.36 — Model_Element_Relationship class for the JSON Schema example.....</b>	<b>52</b>
<b>Table C.37 — Modelling_Language class for the Ellis-Barker metamodel example .....</b>	<b>54</b>
<b>Table C.38 — Model class for the Ellis-Barker metamodel example .....</b>	<b>54</b>
<b>Table C.39 — Model_Element_Type class the Ellis-Barker metamodel example.....</b>	<b>54</b>
<b>Table C.40 — Model_Element class for the Ellis-Barker metamodel example .....</b>	<b>54</b>
<b>Table C.41 — Model_Element_Characteristic_Type class for the Ellis-Barker metamodel example.....</b>	<b>56</b>
<b>Table C.42 — Model_Element_Characteristic class for the Ellis-Barker metamodel example.....</b>	<b>57</b>
<b>Table C.43 — Model_Element_Relationship_Type class for the Ellis-Barker metamodel example.....</b>	<b>61</b>
<b>Table C.44 — Model_Element_Relationship class for the Ellis-Barker metamodel example .....</b>	<b>62</b>