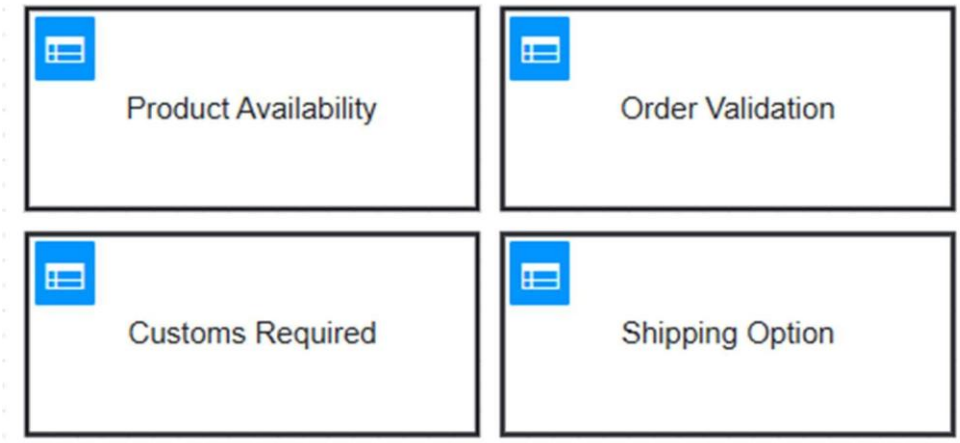
Claude

DRD



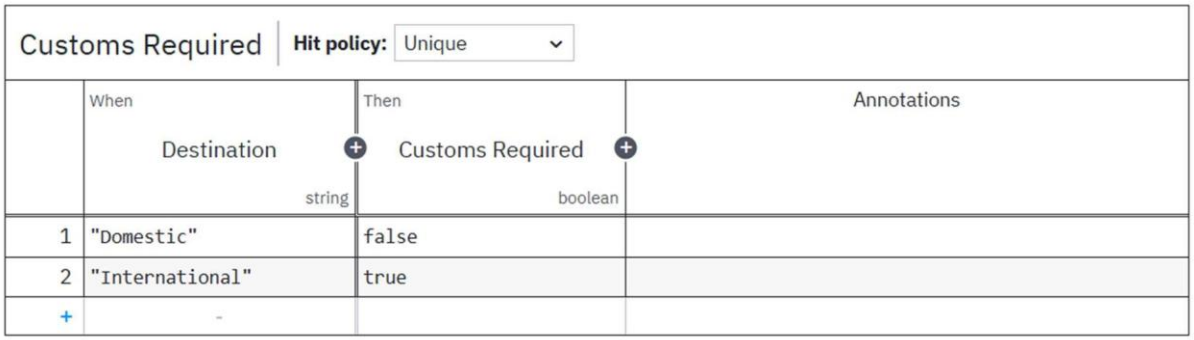
Decision Tables

Product Availability | **Hit policy:** Unique

	When	And	Then	Annotations
	Requested Quantity (number)	Stock Quantity (number)	Available (boolean)	
1	<= stockQuantity	-	true	
2	> stockQuantity	-	false	
+	-	-		

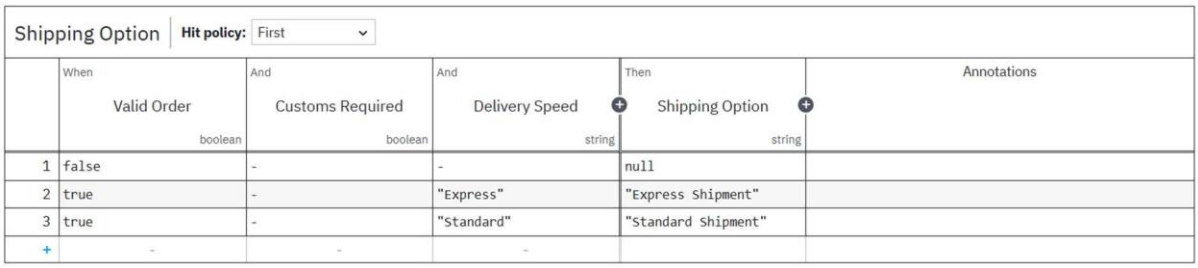
Order Validation | **Hit policy:** Unique

	When	And	Then	Annotations
	Available (boolean)	Payment Status (string)	Valid Order (boolean)	
1	true	"Valid"	true	
2	false	-	false	
3	true	"Invalid", "Pending", "Failed"	false	
+	-	-		



Customs Required | Hit policy: Unique

	When	Then	Annotations
	Destination (string)	Customs Required (boolean)	
1	"Domestic"	false	
2	"International"	true	
+	-		



Shipping Option | Hit policy: First

	When	And	And	Then	Annotations
	Valid Order (boolean)	Customs Required (boolean)	Delivery Speed (string)	Shipping Option (string)	
1	false	-	-	null	
2	true	-	"Express"	"Express Shipment"	
3	true	-	"Standard"	"Standard Shipment"	
+	-	-	-		

XML

```
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns="https://www.omg.org/spec/DMN/20191111/MODEL/"
xmlns:dmndi="https://www.omg.org/spec/DMN/20191111/DMNDI/"
xmlns:dc="http://www.omg.org/spec/DMN/20180521/DC/" id="order-fulfillment-dmn"
name="Order Fulfillment Decision Model" namespace="http://example.org/order-
fulfillment">

 <!-- Input Data -->
 <inputData id="input_order" name="Order">
  <variable name="order" typeRef="Order"/>
 </inputData>

 <inputData id="input_payment_status" name="Payment Status">
  <variable name="paymentStatus" typeRef="string"/>
 </inputData>

 <inputData id="input_destination" name="Destination">
  <variable name="destination" typeRef="string"/>
 </inputData>

 <inputData id="input_delivery_speed" name="Delivery Speed">
```

```
  <variable name="deliverySpeed" typeRef="string"/>
</inputData>

<!-- Decision 1: Product Availability -->
<decision id="decision_availability" name="Product Availability">
  <variable name="available" typeRef="boolean"/>
  <informationRequirement>
    <requiredInput href="#input_order"/>
  </informationRequirement>
  <decisionTable id="dt_availability" hitPolicy="UNIQUE">
    <input id="input_requested_qty" label="Requested Quantity">
      <inputExpression typeRef="number">
        <text>order.requestedQuantity</text>
      </inputExpression>
    </input>
    <input id="input_stock_qty" label="Stock Quantity">
      <inputExpression typeRef="number">
        <text>order.stockQuantity</text>
      </inputExpression>
    </input>
    <output id="output_available" label="Available" typeRef="boolean"/>
    <rule id="rule_available_1">
      <inputEntry>
        <text>&lt;= stockQuantity</text>
      </inputEntry>
      <inputEntry>
        <text>-</text>
      </inputEntry>
      <outputEntry>
        <text>true</text>
      </outputEntry>
    </rule>
    <rule id="rule_available_2">
      <inputEntry>
        <text>&gt; stockQuantity</text>
      </inputEntry>
      <inputEntry>
        <text>-</text>
      </inputEntry>
      <outputEntry>
```

```
      <text>false</text>
     </outputEntry>
    </rule>
  </decisionTable>
</decision>

<!-- Decision 2: Order Validation -->
<decision id="decision_validation" name="Order Validation">
  <variable name="validOrder" typeRef="boolean"/>
  <informationRequirement>
    <requiredDecision href="#decision_availability"/>
  </informationRequirement>
  <informationRequirement>
    <requiredInput href="#input_payment_status"/>
  </informationRequirement>
  <decisionTable id="dt_validation" hitPolicy="UNIQUE">
    <input id="input_available" label="Available">
      <inputExpression typeRef="boolean">
        <text>available</text>
      </inputExpression>
    </input>
    <input id="input_payment" label="Payment Status">
      <inputExpression typeRef="string">
        <text>paymentStatus</text>
      </inputExpression>
    </input>
    <output id="output_valid" label="Valid Order" typeRef="boolean"/>
    <rule id="rule_valid_1">
      <inputEntry>
        <text>true</text>
      </inputEntry>
      <inputEntry>
        <text>"Valid"</text>
      </inputEntry>
      <outputEntry>
        <text>true</text>
      </outputEntry>
    </rule>
    <rule id="rule_valid_2">
      <inputEntry>
```

```
      <text>false</text>
    </inputEntry>
    <inputEntry>
      <text>-</text>
    </inputEntry>
    <outputEntry>
      <text>false</text>
    </outputEntry>
  </rule>
  <rule id="rule_valid_3">
    <inputEntry>
      <text>true</text>
    </inputEntry>
    <inputEntry>
      <text>"Invalid", "Pending", "Failed"</text>
    </inputEntry>
    <outputEntry>
      <text>false</text>
    </outputEntry>
  </rule>
 </decisionTable>
</decision>

<!-- Decision 3: Customs Required -->
<decision id="decision_customs" name="Customs Required">
 <variable name="customsRequired" typeRef="boolean"/>
 <informationRequirement>
  <requiredInput href="#input_destination"/>
 </informationRequirement>
 <decisionTable id="dt_customs" hitPolicy="UNIQUE">
  <input id="input_dest_type" label="Destination">
   <inputExpression typeRef="string">
    <text>destination</text>
   </inputExpression>
  </input>
  <output id="output_customs" label="Customs Required" typeRef="boolean"/>
  <rule id="rule_customs_1">
   <inputEntry>
    <text>"Domestic"</text>
   </inputEntry>
```

```
      <outputEntry>
        <text>false</text>
      </outputEntry>
    </rule>
    <rule id="rule_customs_2">
      <inputEntry>
        <text>"International"</text>
      </inputEntry>
      <outputEntry>
        <text>true</text>
      </outputEntry>
    </rule>
  </decisionTable>
</decision>

<!-- Decision 4: Shipping Option -->
<decision id="decision_shipping" name="Shipping Option">
  <variable name="shippingOption" typeRef="string"/>
  <informationRequirement>
    <requiredDecision href="#decision_validation"/>
  </informationRequirement>
  <informationRequirement>
    <requiredDecision href="#decision_customs"/>
  </informationRequirement>
  <informationRequirement>
    <requiredInput href="#input_delivery_speed"/>
  </informationRequirement>
  <decisionTable id="dt_shipping" hitPolicy="FIRST">
    <input id="input_valid_order" label="Valid Order">
      <inputExpression typeRef="boolean">
        <text>validOrder</text>
      </inputExpression>
    </input>
    <input id="input_customs_req" label="Customs Required">
      <inputExpression typeRef="boolean">
        <text>customsRequired</text>
      </inputExpression>
    </input>
    <input id="input_speed" label="Delivery Speed">
      <inputExpression typeRef="string">
```

```
    <text>deliverySpeed</text>
  </inputExpression>
</input>
<output id="output_shipping" label="Shipping Option" typeRef="string"/>

<!-- Invalid order - no shipping -->
<rule id="rule_shipping_1">
  <inputEntry>
    <text>false</text>
  </inputEntry>
  <inputEntry>
    <text>-</text>
  </inputEntry>
  <inputEntry>
    <text>-</text>
  </inputEntry>
  <outputEntry>
    <text>null</text>
  </outputEntry>
</rule>

<!-- Valid order with Express delivery -->
<rule id="rule_shipping_2">
  <inputEntry>
    <text>true</text>
  </inputEntry>
  <inputEntry>
    <text>-</text>
  </inputEntry>
  <inputEntry>
    <text>"Express"</text>
  </inputEntry>
  <outputEntry>
    <text>"Express Shipment"</text>
  </outputEntry>
</rule>

<!-- Valid order with Standard delivery -->
<rule id="rule_shipping_3">
```

```
        <inputEntry>
          <text>true</text>
        </inputEntry>
        <inputEntry>
          <text>-</text>
        </inputEntry>
        <inputEntry>
          <text>"Standard"</text>
        </inputEntry>
        <outputEntry>
          <text>"Standard Shipment"</text>
        </outputEntry>
      </rule>
    </decisionTable>
  </decision>
</definitions>
```