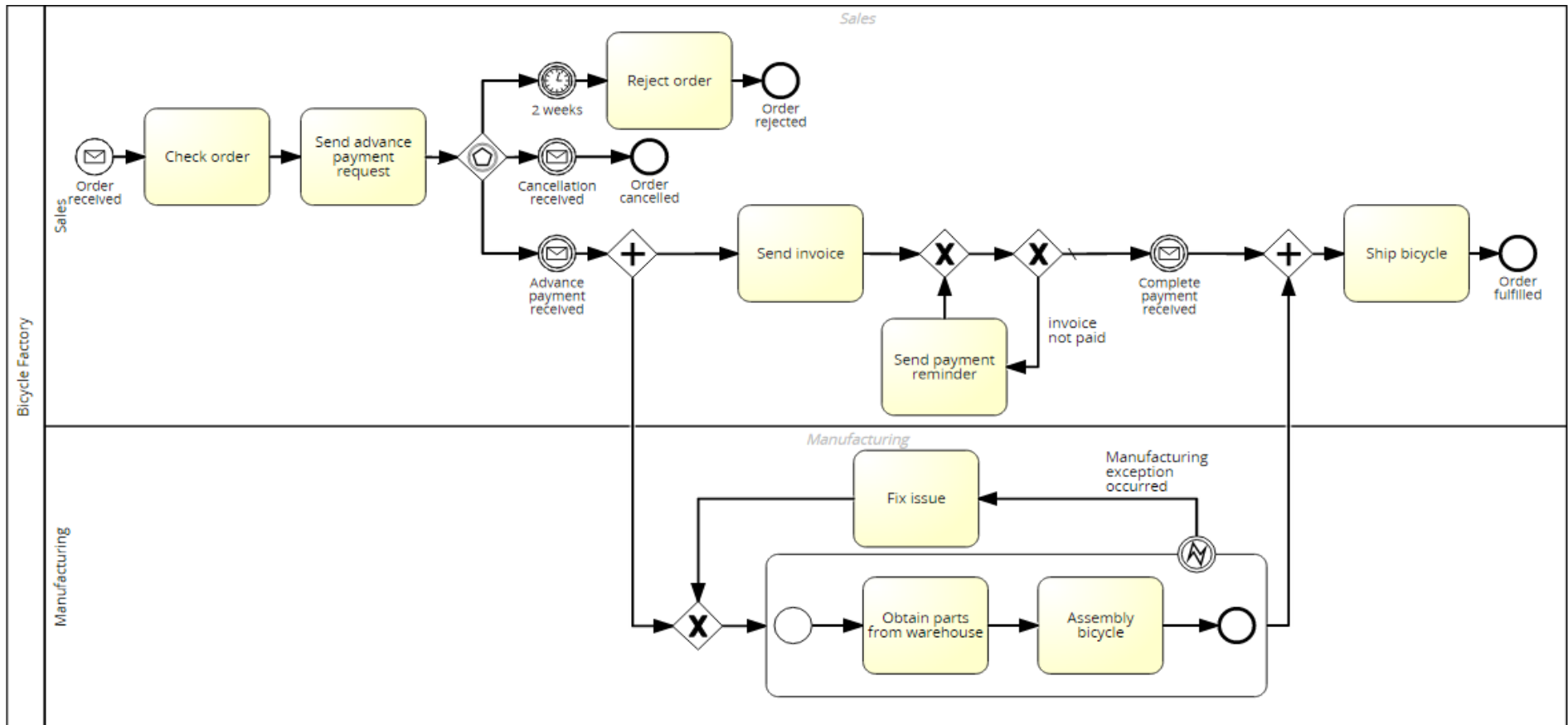# Assignment (5) solution: BPEL

Map this visualized business process (BPMN) to BPEL. Make sure to illustrate the solution steps.
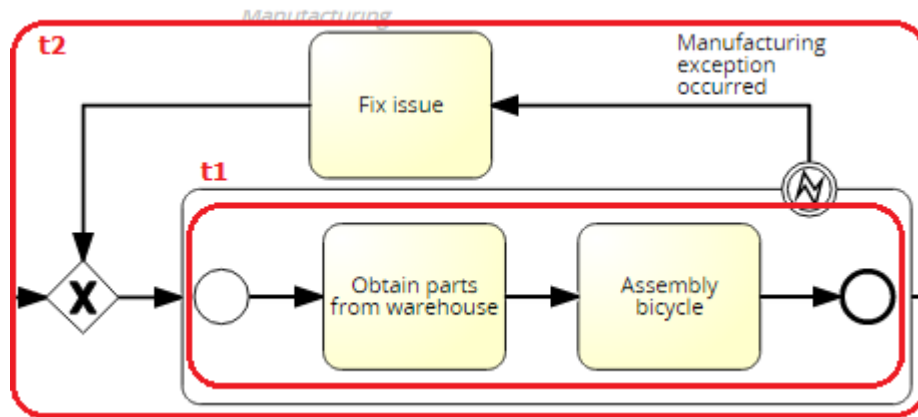

Notes:

- Assignments will be delivered in starting on **3rd May (According to your lab date)**.
- Assignment <u>Copies</u> will be given **ZERO,** and must be solved and handed <u>individually.</u>
- Assignments will be delivered as **printed** copy, **<u>no</u>** softcopies/handwritten will be accepted.

Solution

Step (1)

<!—Mapping t1-->
<sequence>
  <invoke name="obtain parts from warehouse"**/>**
  <invoke name ="assemble bicycle"**/>**
  <throw /> → some students may write it to be caught in fault handler, otherwise it is automatically mapped
</sequence>

<!—Mapping t2 = Exception-->
<faultHandlers>
  <catch faultName="exception" faultVariable= "Manufacturing exception occurred"**>**
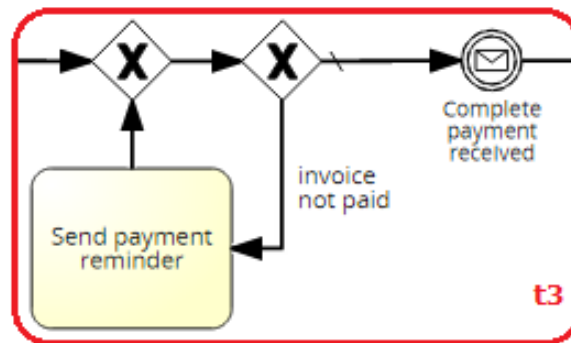   **<invoke** name= "Fix issue"**/>**
    Mapping t1
  </catch>
<faultHandlers>

This second part (fault handler) t2 is not embedded inside set of activities, but as a child node of the whole process.
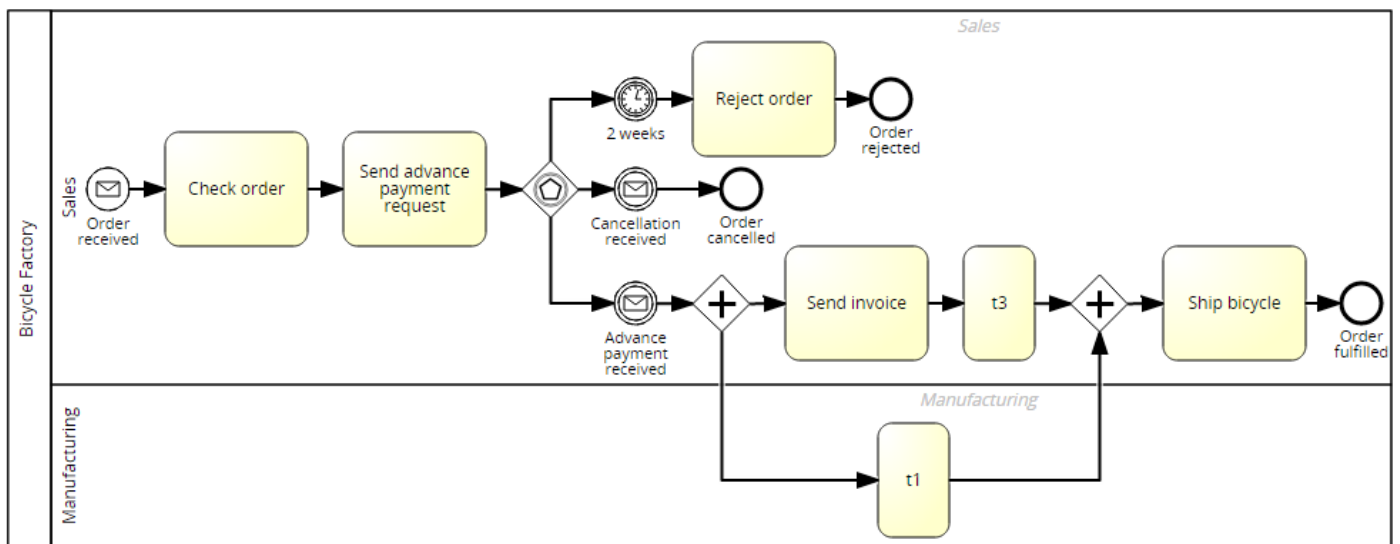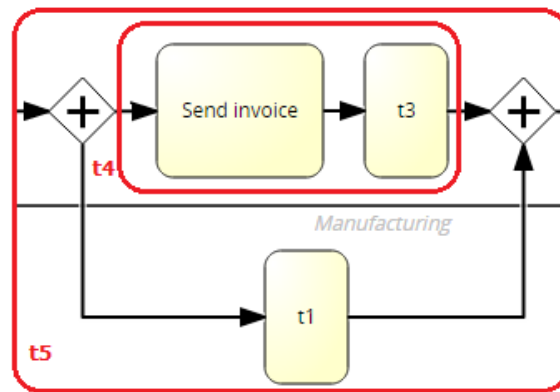
Step (2)

<!—Mapping c3-- >
<while condition= "invoice not paid"**>**
    ****
</while>
<receive name= "Complete payment received"**/>**

OR

<!—Mapping c3-- >
<while condition= "invoice not paid"**>**
    ****
</while>
<onMessage name= "Complete payment received"**>**
    <empty />
</onMessage>

Current status:

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Step (3)

<!— Mapping t4 -->
<sequence>
        ****
        Mapping t3
</sequence>

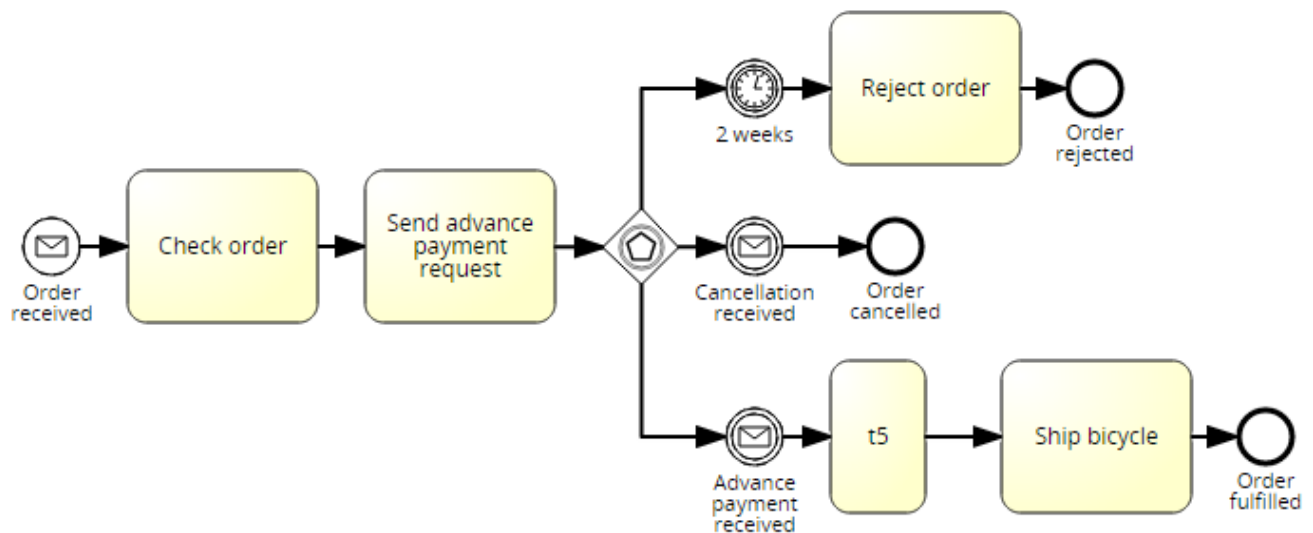**<!— Mapping t5 -->**
<flow>
        Mapping t4
        Mapping t1
</flow>

Current status:

Step (4)

<!— Mapping t6 -->
<pick>
      <onAlarm name= "2weeks"**/>**
            ****
            <reply name= "Order rejected"**/> OR <exit name=** "Order rejected"**/>**
      </onAlarm>
      <onMessage name= "Cancellation received">
            <reply name= "Order cancelled"**/> OR <exit name=** "Order cancelled"**/>**
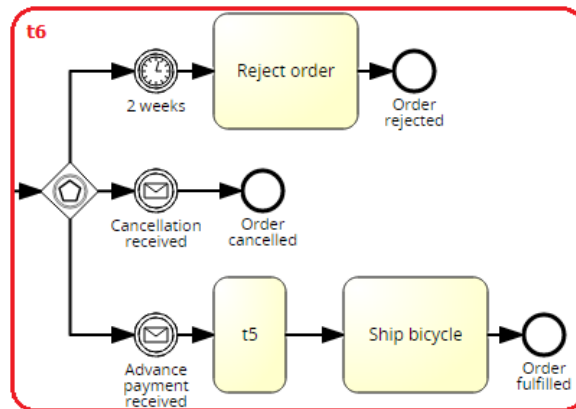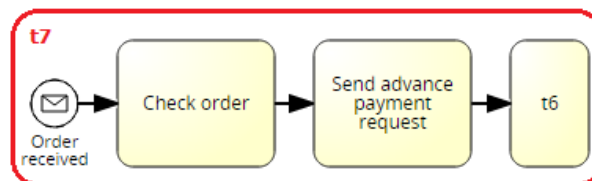   **<onMessage>**
      <onMessage name= "Advance payment received" **/>**
            Mapping t5
            ****
            <reply name= "Order fulfilled"**/> OR <exit name=** "Order fulfilled"**/>**
      </onMessage>
</pick>

Step (5):

<!— Mapping t7 -->
<sequence name= "t7">
      <receive name= "Order received"**/>**
      ****
      ****
      Mapping t6
</sequence>

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Step (6):

<!— Mapping the whole process -->
<process>
    <faultHandlers>
        <catch faultName= "exception" **faultVariable=** "Manufacturing exception occurred"**>**
            ****
            Mapping t1
        </catch>
    <faultHandlers>
    <sequence name= "t7"**>**
        <receive name= "Order received"**/>**
        ****
        ****
        Mapping t6
    </sequence>
</process>

Grading Schema:
- Event-based gateway – 2 grades
- XOR gateway – 2 grade (while loop)
- AND gateway – 1 grade
- Receive – 1 grade
- Reply – 1 grade
- Exception Handling – 1 grade
- Usage of invoke – 1 grade
- Steps – 1 grade
- Whole correct – 2 grades
- **Total 12 grades**