

TRƯỜNG ĐẠI HỌC CẦN THƠ
KHOA CÔNG NGHỆ THÔNG TIN & TRUYỀN THÔNG
BỘ MÔN CÔNG NGHỆ THÔNG TIN



ĐỒ ÁN QUẢN LÝ NGHIỆP VỤ

Đề tài

Quy Trình Đặt Thức Uống

Cán bộ hướng dẫn:

TS. Nguyễn Công Danh

Nhóm: CT46001

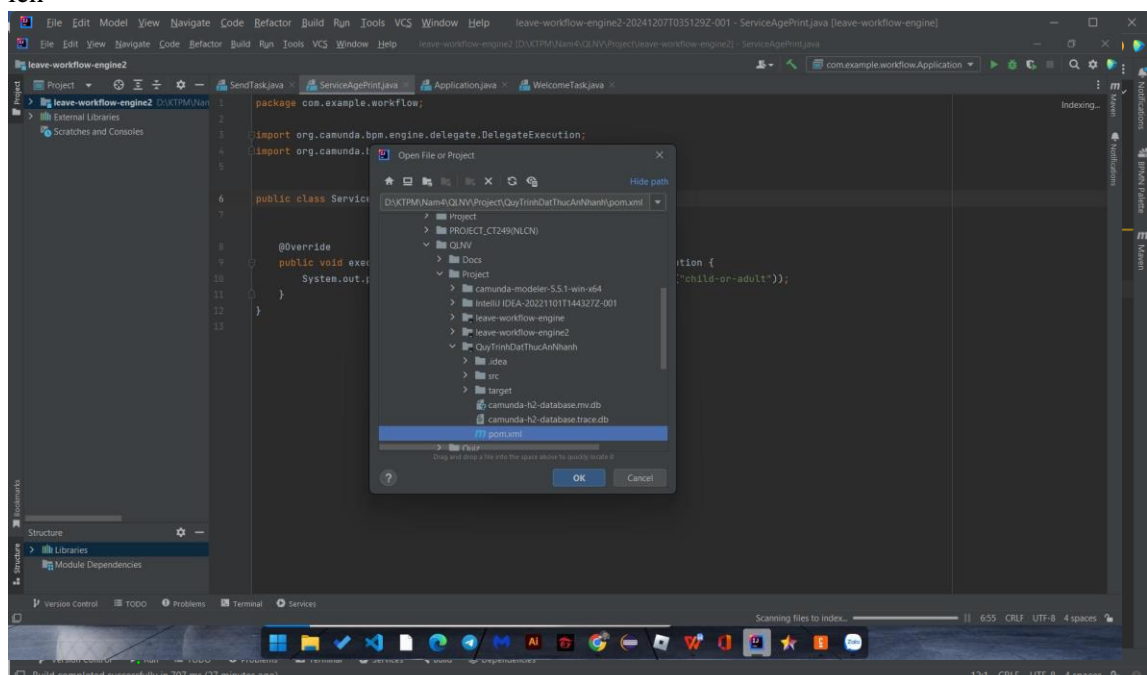
Sinh viên thực hiện:

Trần Phi Nhựt

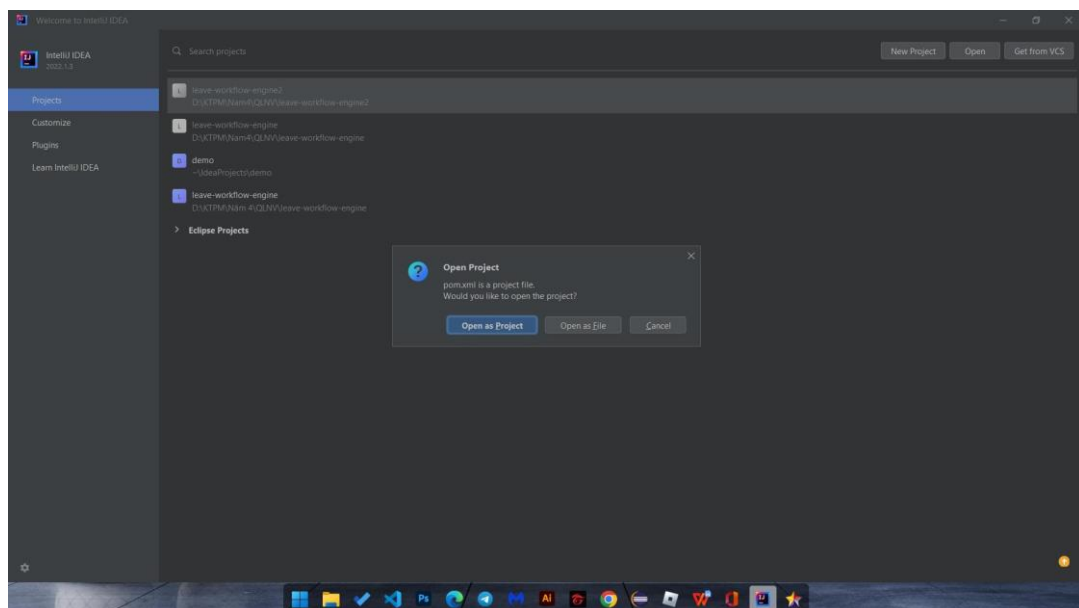
B2110092

Cần Thơ 10/2022

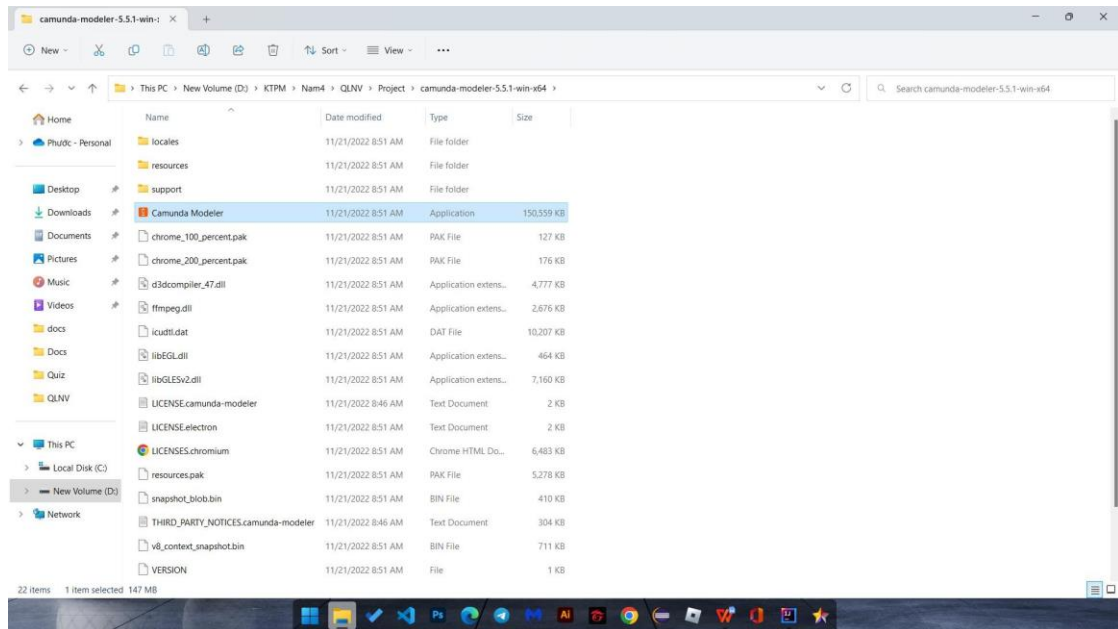
1. Mở IntelliJ IDEA được sao chép từ thư mục “leave-workflow-engine2” rồi mở pom.xml lên



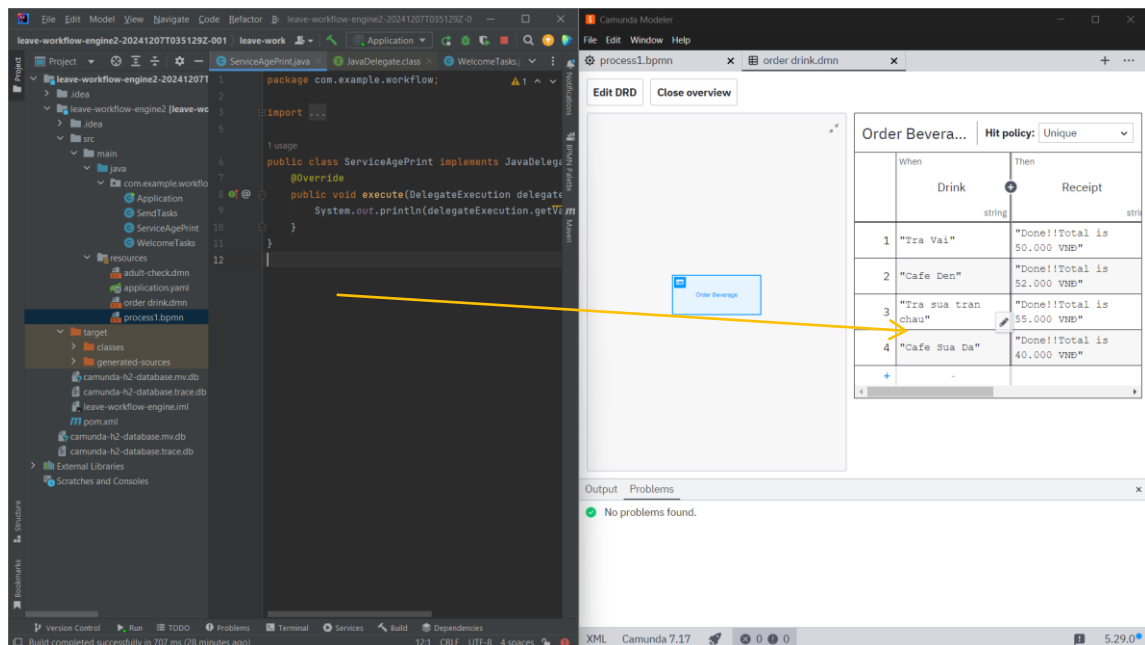
2.

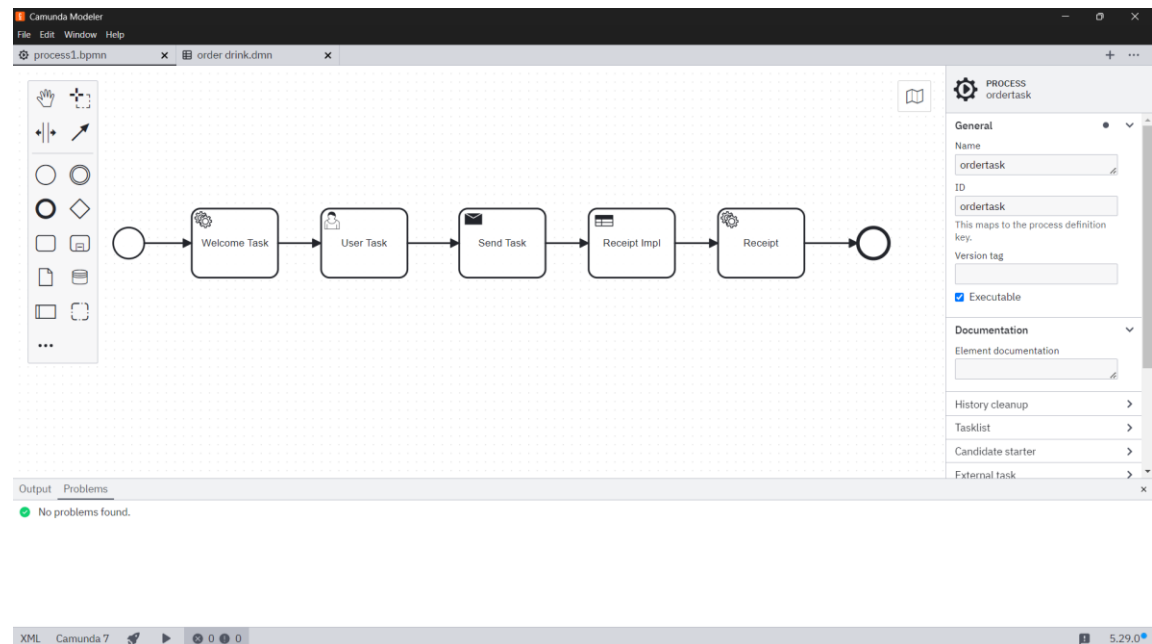


Mở Camunda Modeler lên để thiết kế quy trình



Vào chọn file process.bpmn kéo đến ứng dụng Camunda Modeler



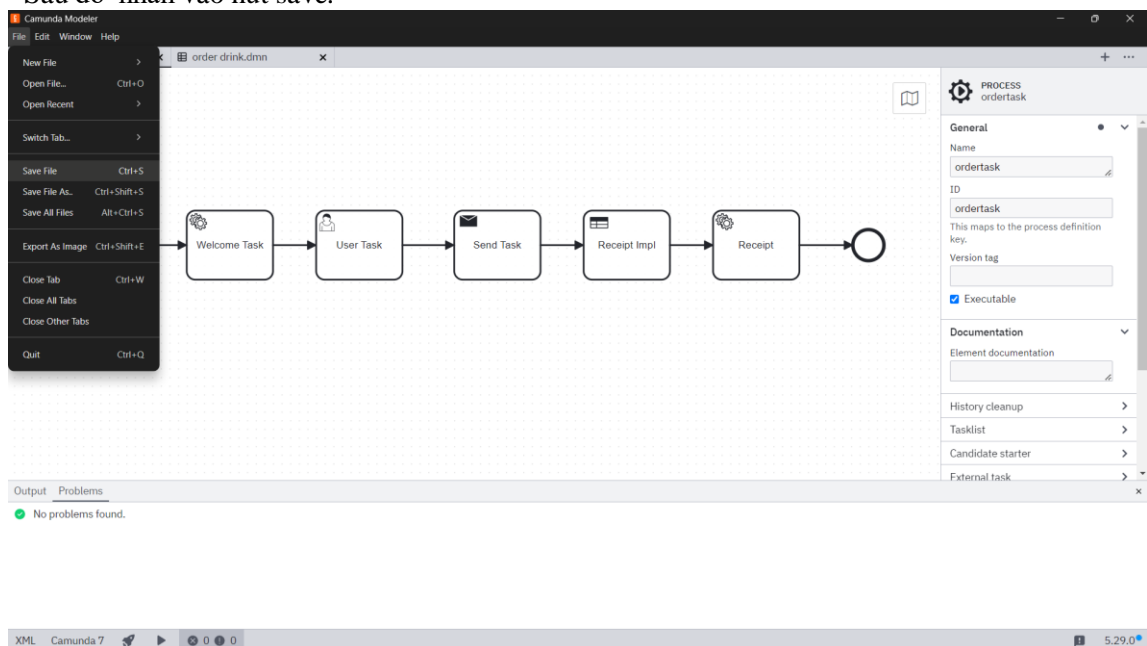


Thay đổi tên và ID như sau:

Name = “ordertask”

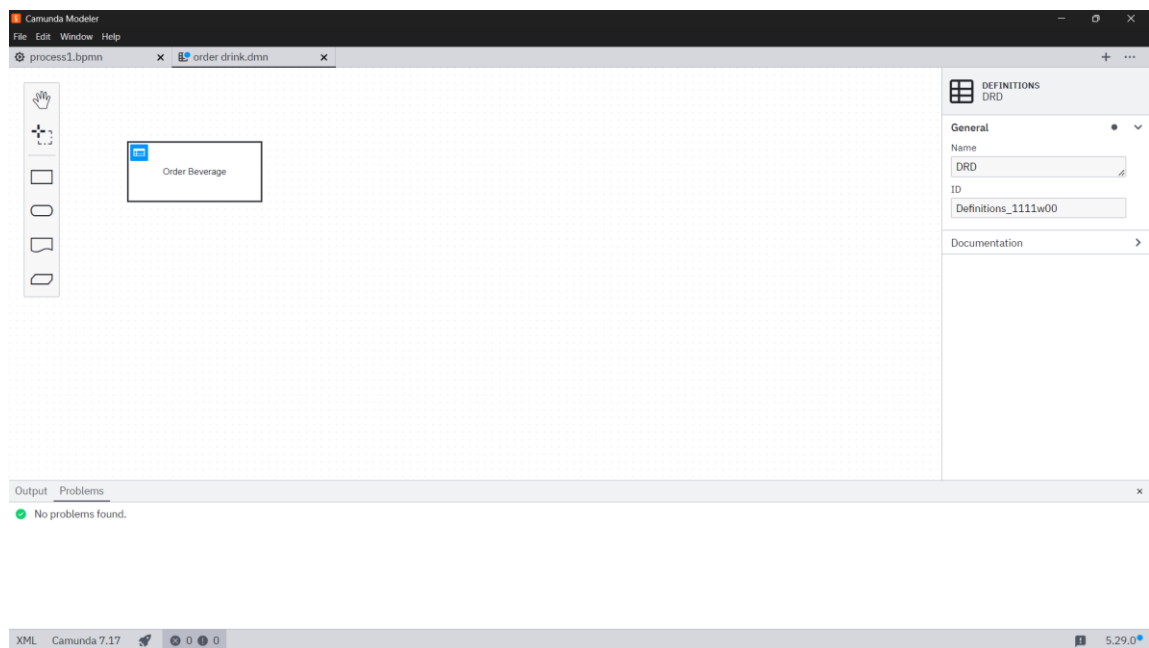
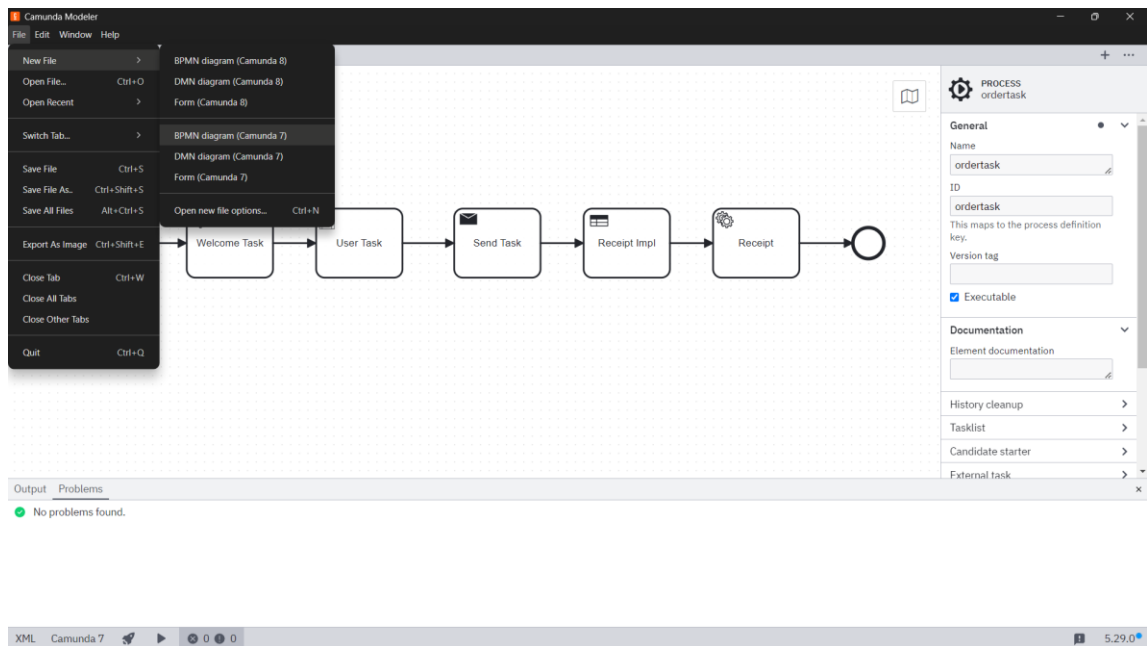
ID = “odertask”

Sau đó nhấn vào nút save.



3. Thiết kế DMN tron Camunda Modeler

Tạo file DMN mới bằng cách: **File > New File > DMN diagram (Camunda Platform 7).**

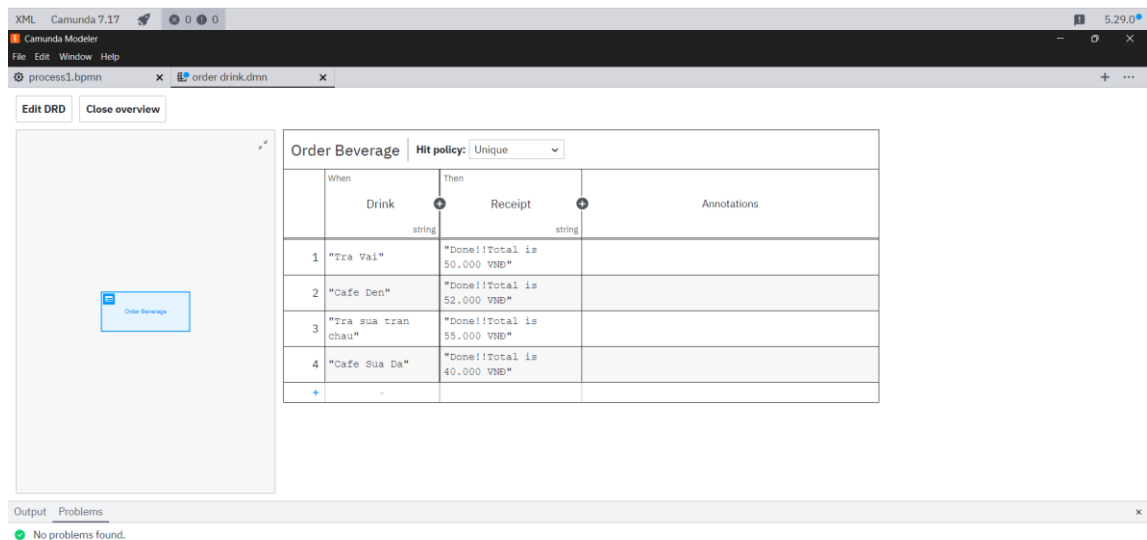
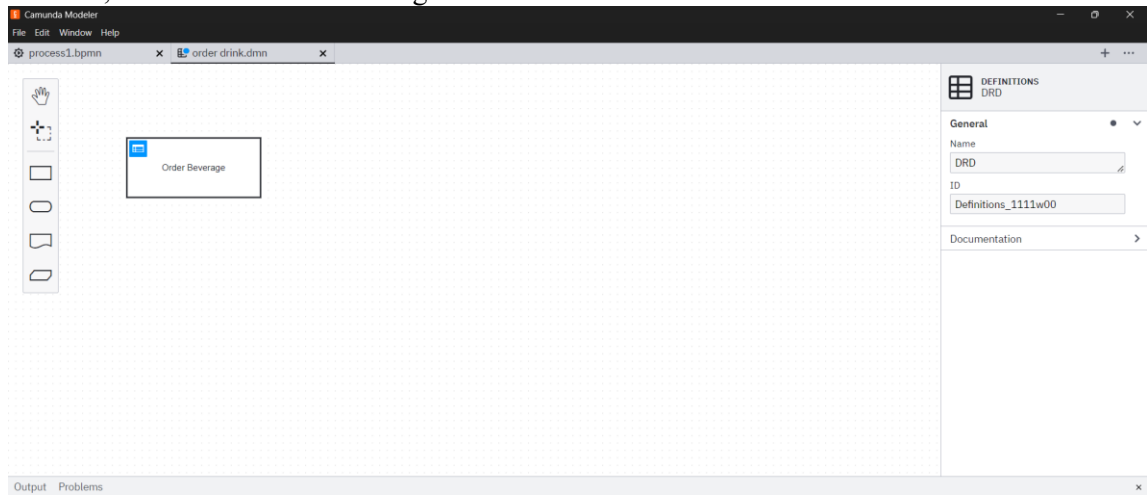


Sau đó tùy chỉnh lại tên và ID như sau:

Name = “Order Beverage”

ID = “Order Beverage”

Sau đó, thiết kế business role bằng cách nhấn vào để thiết kế.



Bắt đầu thiết kế:

Khách hàng lựa chọn thức uống bằng nhập vào trường”: Drink

Có các loại thức uống: Tra Vài, Cafe Đen . Cuối cùng là biên nhận hóa đơn thành tiền của khách hàng phải trả.

Order Beverage		Hit Policy: Unique	
	When	Then	Annotations
	Drink	Receipt	
	string	string	
1	"Tra Vài"	"Đơn hàng đã xong!! Tổng cộng là 50.000"	-
2	"Cafe Đen"	"Đơn hàng đã xong!! Tổng cộng là 40.000"	-

Chi tiết các trường nhập và kết quả của bản thiết kế:

```
<decisionRule id="DecisionRule_1f803d4" >
  <input id="Input_1" label="DrinkNBSP" biodi:width="153" camunda:inputVariable="drink">
    <inputExpression id="InputExpression_1" typeRef="string">
      <text>drink</text>
    </inputExpression>
  </input>
  <output id="Output_1" label="Receipt" name="receipt" typeRef="string" biodi:width="192" />
  <rule id="DecisionRule_1f803d4">
    <inputEntry id="UnaryTests_0ani26a">
```

- Label of the input (input name): **“Drink”**
 - Expression: **“drink”** (must not empty)
 - Expression Language: **“feel”**
 - Input Variable: **“drink”**
- Type: **“string”**
 - Sau đó nhấn vào save. Đặt tên là OrderBeverage

Thay đổi một số thông tin của bảng BPMN:

Name = “Xin chào khách hàng”

ID = “welcome-task”



SERVICE TASK
Xin chào khách hàng

General

Name
Xin chào khách hàng

ID
welcome-task

Documentation

Thêm 1 trường nhập vào:

Drink :

+ ID = “drink”

+ Label = “drink”

+ Type = “string”



USER TASK
Khách hàng order thức uống

Forms

Form fields

▼ drink

ID
drink

Refers to the process variable name

Label
Drink

Type
string

Default value

Thay đổi tên và ID :

+ Name = “Gửi yêu cầu đặt hàng”

+ ID = “send-task”



SEND TASK
Gửi yêu cầu đơn hàng

General

Name
Gửi yêu cầu đơn hàng

ID
send-task

Documentation

Element documentation

Implementation

Type
Java class

Java class
com.example.workflow.SendTask

Một số thay đổi:

+ Name = “Xử lý đơn hàng”

+ ID = “receipt-impl”

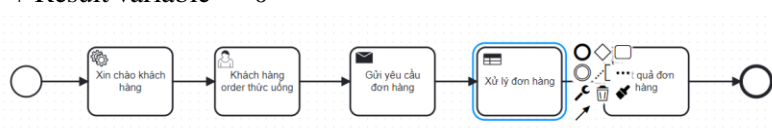
Implementation:

+ Type = “DMN”

+ Decision = “handleorder”

+ Binding = “latest”

+ Result variable = “0”



Implementation

Type
DMN

Decision reference
id

Binding
latest

Tenant ID
1

Result variable
0

Map decision result
singleEntry (TypedValue)

Properties Panel: Xử lý đơn hàng

General


Name
Xử lý đơn hàng

ID
receipt-impl

Documentation

+ Name = “Kết quả đặt hàng”

+ ID = receipt



Properties Panel: Kết quả đơn hàng

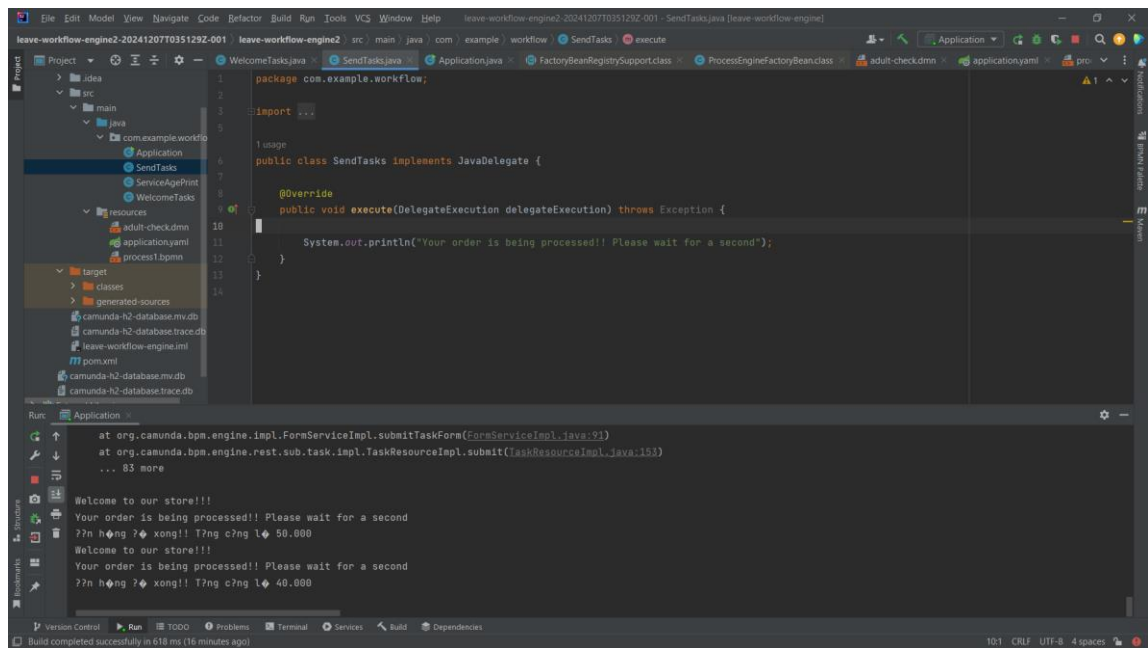
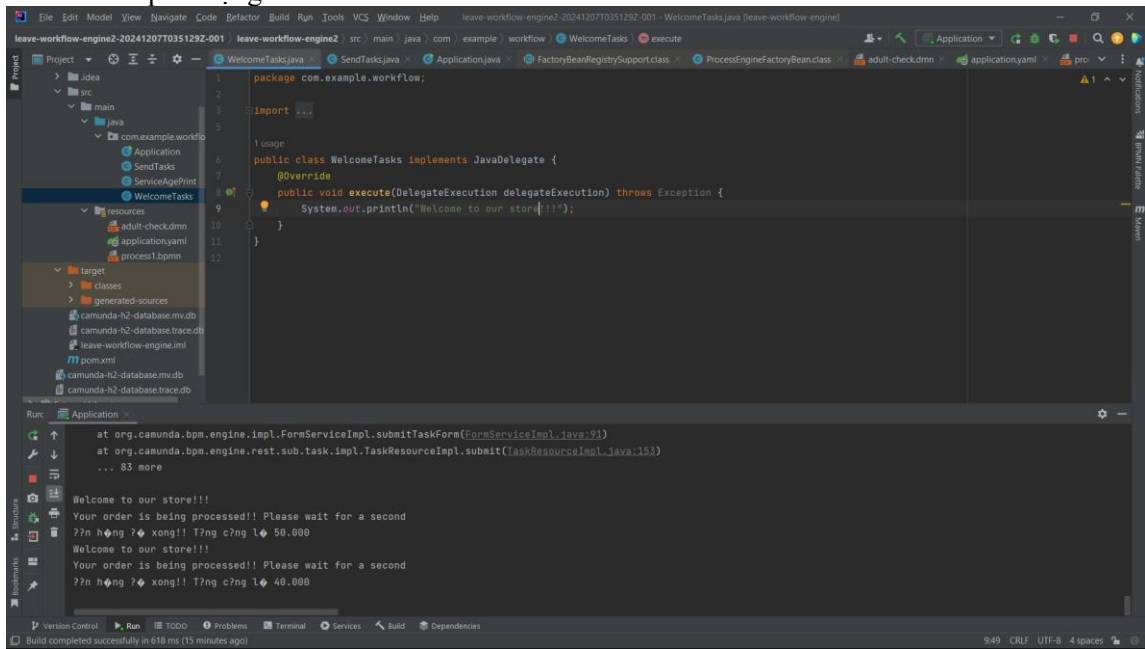
General

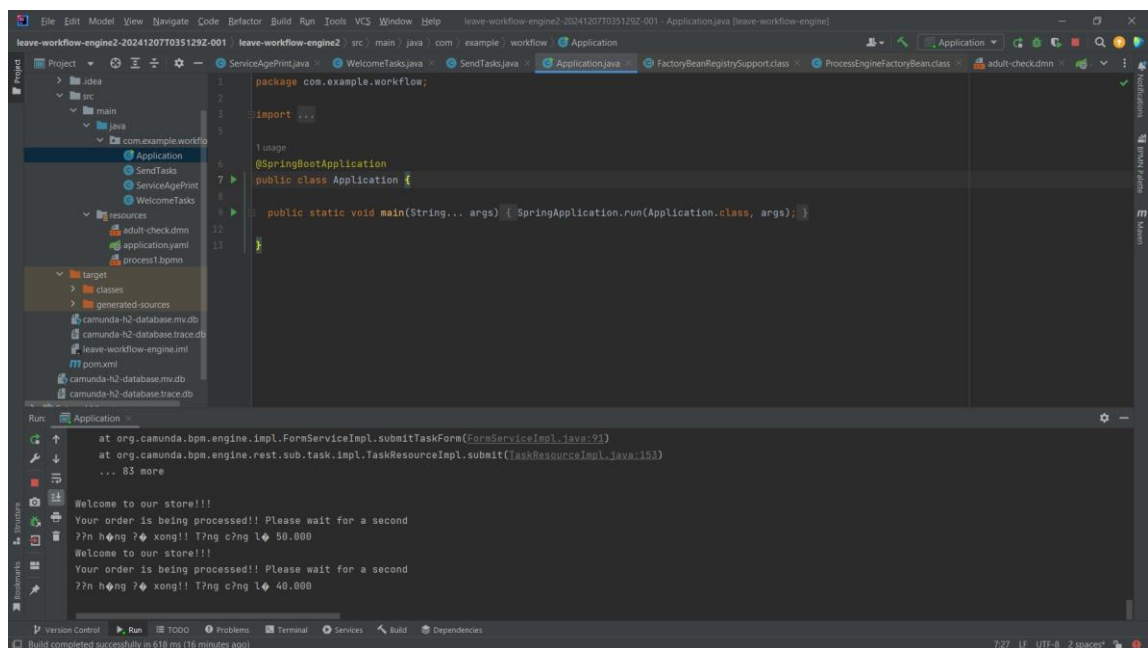
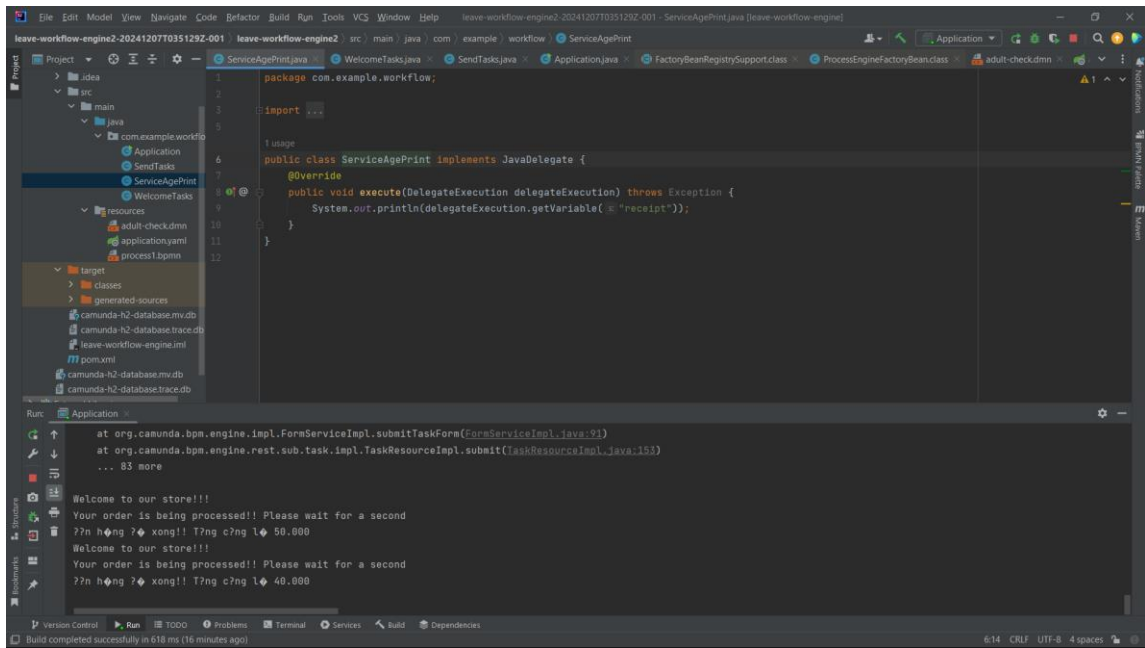
Name
Kết quả đơn hàng

ID
receipt

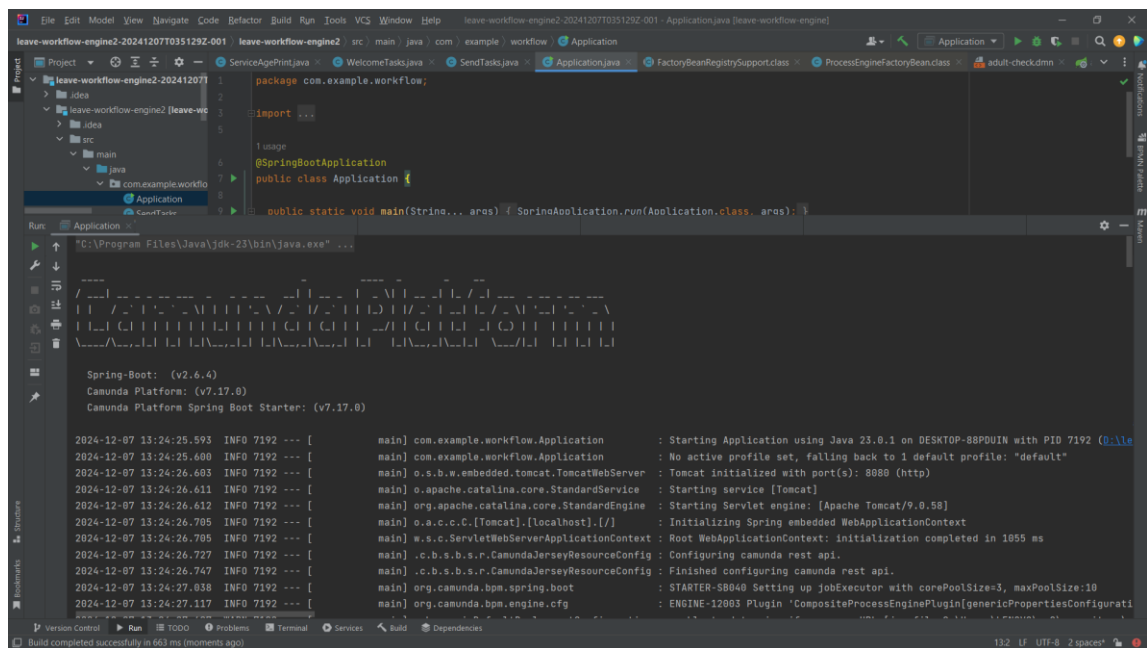
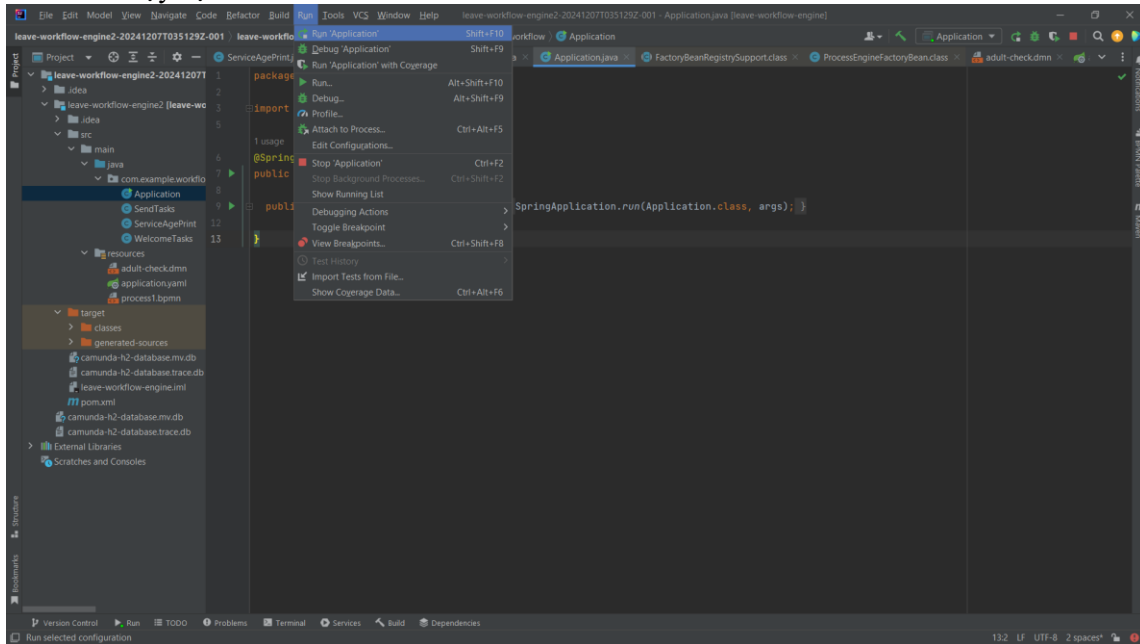
Documentation

Thiết kế lớp sử dụng:





4. Khởi chạy dự án

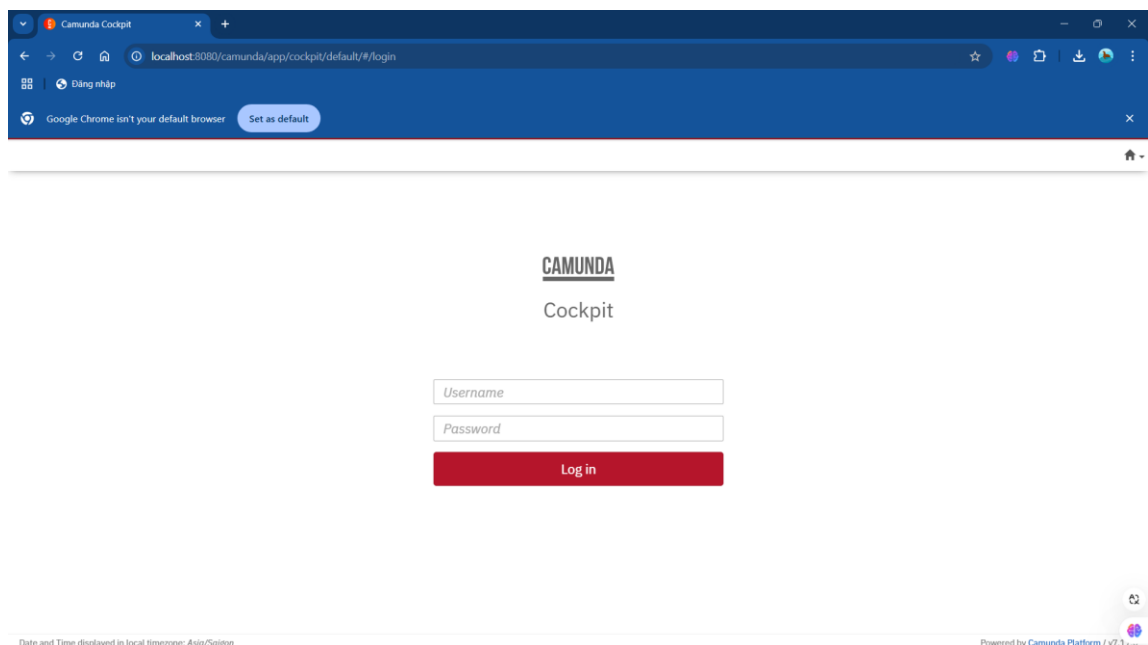


Truy cập vào URL <http://localhost:8080/>

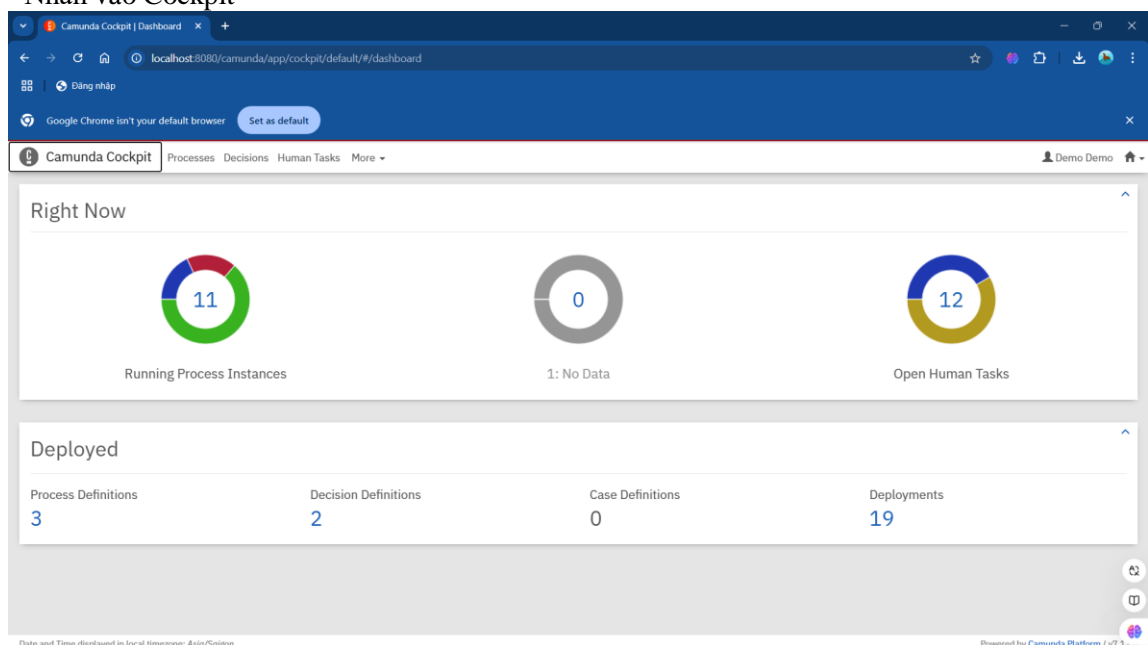
Sau đó nhập:

Username: demo

Password: demo



Nhấn vào Cockpit



Chúng ta có thể thấy Quy trình ordeertask đã được tải lên

Camunda Cockpit | Processes

localhost:8080/camunda/app/cockpit/default/#/processes

Camunda Cockpit Processes Decisions Human Tasks More

3 process definitions deployed

State	Incidents	Running Instances	Name	Tenant ID
✓	0	2	Leave Workflow Engine Process 2	
✓	0	2	order_task	
✓	0	7	ordertask	

Date and Time displayed in local timezone: Asia/Saigon

Powered by Camunda Platform / v7.13.0

Camunda Cockpit | ordertask

localhost:8080/camunda/app/cockpit/default/#/process-definition/ordertask:11-be7c4927-b464-11ef-baf6-40c2ba5225e5/runtime?searchQuery=%5B%5D&viewbox=%7B%7D&definition...

Camunda Cockpit Processes Decisions Human Tasks More

Dashboard » Processes » ordertask : Runtime

Definition Version: 11

Version Tag: null

Definition ID: ordertask:11:be7c4927-b464-11ef-b...

Definition Key: ordertask

Definition Name: ordertask

History Time To Live: null

Tenant ID: null

Deployment ID: be7ac285-b464-11ef-baf6-40c2ba5...

Instances Running: 0

Activity Instance Statistics: on

```
graph LR; Start(( )) --> Task1[Xin chào khách hàng]; Task1 --> Task2[Khách hàng order]; Task2 --> Task3[Gửi yêu cầu đơn hàng]; Task3 --> Task4[Xử lý đơn hàng]; Task4 --> Task5[Kết quả đơn hàng]; Task5 --> End((( )));
```

Process Instances Incidents Called Process Definitions Job Definitions

Add criteria

No process instances matched by current filter.

Date and Time displayed in local timezone: Asia/Saigon

Powered by Camunda Platform / v7.13.0

+Café Den

The screenshot shows an IDE with the following components:

- Top Pane (XML Editor):** Displays the BPMN XML definition. It includes a start event, a task named "Order Beverage" with a decision table, and an output event. The XML is in UTF-8 encoding.
- Left Pane (Project Explorer):** Shows the project structure, including the "resources" folder where the BPMN file is located.
- Bottom Pane (Run Console):** Displays the execution log, showing the process flow from the start event to the completion of the task.

The XML content in the top pane is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns="https://www.omg.org/spec/BPMN/201111/DMO/" xmlns:dndi="https://www.omg.org/spec/BPMN/201111/DMNDI/" xmlns:dc="http://www.omg.org/spec/BPMN/201111/DC/">
  <process id="Receipt" name="Order Beverage">
    <decisionTable id="DecisionTable_1b55al">
      <input id="Input_1" label="Drink Beverage">
        <inputExpression id="InputExpression_1" typeRef="string">
          <text>drink</text>
        </inputExpression>
      </input>
      <output id="Output_1" label="Receipt" name="receipt" typeRef="string" biodi:width="192" />
      <rule id="DecisionRule_1fay3p">
        <inputEntry id="UnaryTests_8api26a">
          <text>true Val</text>
        </inputEntry>
      </rule>
    </decisionTable>
  </process>
</definitions>
```

The Run Console output shows the following steps:

```
at org.camunda.bpm.engine.impl.cmd.SubmitTaskFormCmd.execute(SubmitTaskFormCmd.java:43)
at org.camunda.bpm.engine.impl.interceptor.CommandExecutorImpl.execute(CommandExecutorImpl.java:28)
at org.camunda.bpm.engine.impl.interceptor.CommandContextInterceptor.execute(CommandContextInterceptor.java:110)
at org.camunda.bpm.engine.spring.SpringTransactionInterceptor$1.doInTransaction(SpringTransactionInterceptor.java:72)
at org.springframework.transaction.support.TransactionTemplate.execute(TransactionTemplate.java:140)
at org.camunda.bpm.engine.spring.SpringTransactionInterceptor.execute(SpringTransactionInterceptor.java:70)
at org.camunda.bpm.engine.impl.interceptor.ProcessApplicationContextInterceptor.execute(ProcessApplicationContextInterceptor.java:70)
at org.camunda.bpm.engine.impl.interceptor.CommandCounterInterceptor.execute(CommandCounterInterceptor.java:15)
at org.camunda.bpm.engine.impl.interceptor.LogInterceptor.execute(LogInterceptor.java:33)
at org.camunda.bpm.engine.impl.FormServiceImpl.submitTaskForm(FormServiceImpl.java:91)
at org.camunda.bpm.engine.rest.sub.task.impl.TaskResourceImpl.submit(TaskResourceImpl.java:153)
... 83 more
```

The message at the bottom of the console indicates that the process has completed successfully:

```
Your order is being processed!! Please wait for a second
??n hōng 7? xōng!! Tīng cīng 1? 50.880
```


Dữ liệu được sử dụng:
+ Café Đen

The screenshot shows the Camunda Tasklist interface in a web browser. The URL is localhost:8080/camunda/app/tasklist/default/#/?searchQuery=%5B%5D&filter=23234e7-b455-11ef-8d97-40c2ba5225e8&sorting=%5B%7B%22sortBy%22%3A%22created%22%2C%22sortOrder%22%3A%22desc%22%7D%5D. The task is titled 'Khách hàng order' (Customer order) and is of type 'ordertask'. It has a 'Set follow-up date' button and a 'Set due date' button. The task is assigned to 'Demo Demo'. The task has a 'Form' tab selected, showing an input field labeled 'Drink' with the value 'Cafe Den'. There are 'Save' and 'Complete' buttons at the bottom right. The footer indicates 'Date and Time displayed in local timezone: Asia/Saigon' and 'Powered by Camunda Platform / v7.13.0'.

The screenshot shows an IDE with the BPMN XML for the 'adult-check.dmn' task and the corresponding Java code for the 'Application' class. The BPMN XML is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns="https://www.omg.org/spec/BPMN/20191111/DMN/" xmlns:dmndi="https://www.omg.org/spec/DMN/20191111/DMNDI/" xmlns:dc="http://www.omg.org/spec/DMN/20191111/DMNDC/">
  <decision id="receipt" name="Order Beverage">
    <decisionTable id="DecisionTable_1sb5s5al">
      <input id="Input_1" label="DrinkNESP" bdiid="width=153" camunda:inputVariable="drink">
        <inputExpression id="InputExpression_1" typeRef="string">
          <text>drinks/text</text>
        </inputExpression>
      </input>
      <output id="Output_1" label="Receipt" name="receipt" typeRef="string" bdiid="width=192" />
      <rule id="DecisionRule_1f7ay3p">
        <inputEntry id="UnaryTests_0ap126a">
          <text>Tra Vai</text>
        </inputEntry>
      </rule>
    </decisionTable>
  </decision>
</definitions>
```

The Java code for the 'Application' class is as follows:

```
at org.camunda.bpm.engine.impl.cmd.SubmitTaskFormCmd.execute(SubmitTaskFormCmd.java:43)
at org.camunda.bpm.engine.impl.interceptor.CommandExecutorImpl.execute(CommandExecutorImpl.java:28)
at org.camunda.bpm.engine.impl.interceptor.CommandContextInterceptor.execute(CommandContextInterceptor.java:110)
at org.camunda.bpm.engine.spring.SpringTransactionInterceptor$1.doInTransaction(SpringTransactionInterceptor.java:72)
at org.springframework.transaction.support.TransactionTemplate.execute(TransactionTemplate.java:140)
at org.camunda.bpm.engine.spring.SpringTransactionInterceptor.execute(SpringTransactionInterceptor.java:70)
at org.camunda.bpm.engine.impl.interceptor.ProcessApplicationContextInterceptor.execute(ProcessApplicationContextInterceptor.java:70)
at org.camunda.bpm.engine.impl.interceptor.CommandCounterInterceptor.execute(CommandCounterInterceptor.java:35)
at org.camunda.bpm.engine.impl.interceptor.LogInterceptor.execute(LogInterceptor.java:33)
at org.camunda.bpm.engine.impl.FormServiceImpl.submitTaskForm(FormServiceImpl.java:91)
at org.camunda.bpm.engine.rest.sub.task.impl.TaskResourceImpl.submit(TaskResourceImpl.java:153)
... 83 more
```

The console output shows the message: 'Your order is being processed!! Please wait for a second' and '??n h?ng ?? xong!! T?ng c?ng l? 40.000'.

Đã kết thúc 2 Quy trình đặt hàng và kết quả của 2 quy trình được hiển thị.