Lab 3: Modeling a Business Process

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Lab 3: Modeling a Business Process

Objective:

1. Create the Workflow model of the As-Is business process diagram using Signavio Process Manager

By the end of lesson, you will be able to use Signavio Process Manager to model a business process

Part 1: Business Process Step by Step Description

Based on Lab 2 StarMall Business Process description. The Rental Application process begins when a customer arrives at the customer service counter (CSC), 1st floor of StarMall to request for an industrial space. Below is the step by step description for StarMall Rental Application Process

Cur Step	Prev Step	Task Description	Execution Time (min)
1	-	CSO gathers customer requirements & fills Rental Application Form	30
2	1	OD dispatches Rental Application Form from CSO to MO	5
3	2	MO checks availability of choice industrial space using IMS using information from the rental application form	25
4	3	MO proceeds to CSC to meet customer	5
5	4	MO obtains customer UEN & verifies eligibility from government website	5
6a	5	MO markets choice industrial spaces to customer if UEN eligible (75%)	45
6b	5	MO informs customer of UEN ineligibility and updates Rental Application Form of rejection status (25%). Process ends.	3
7a	6a	If customer rejects choice industrial space, MO updates Rental Application Form of customer rejection (10%). Process ends.	3
7b	6a	If customer accepts choice industrial space, MO reserves customer selection in IMS, updates Rental Application Form & passes form to customer (90%)	5
8	7b	MO sends email to LM for Rental Application approval	3
9	8	CSO collects rental application form and booking fee from customer. CSO note down the payment and issue receipt to customer. Process ends.	12

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Additional information:

Number of Rental Application

Parameter	Information
Number of Application	25 customers each day with a uniform distribution inter-arrival rate of minimum 15 minutes and maximum 22 minutes.
Currency	SGD$

Roles: Cost and Number

Role	Cost per Hour	Number	Working Hours
CSO	$20	2	8.30am – 5.30pm (Monday – Friday)
MO	$30	3	8.30am – 5.30pm (Monday – Friday)
OD	$6	1	8.30am – 5.30pm (Monday – Friday)

Decision Points

Decision Points	Yes (%)	No (%)
Customer eligible for rental of industrial space	75	25
Customer rejects the choices of industrial spaces recommended by the MO	10	90

Part 2: Creating a Business Process Diagram

2.1. Change Currency

You can change the currency for the process diagram, which will be used in throughout the laboratory work.

a. Click "**Setup**" from toolbar and select "**Edit general configuration**".
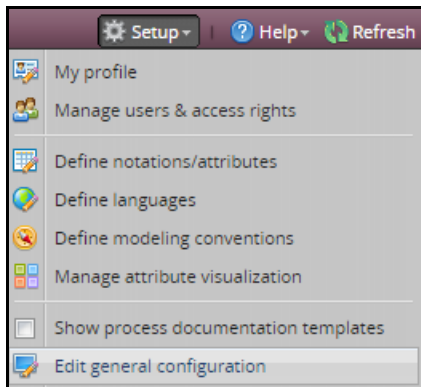
b. **Edit general configuration** window will be displayed.

c. Scroll down to "**Currency**" under **The Explorer** subsection

d. Select Currency dropdown menu and select "**SGD**". This currency will be used as default for all simulation of process diagram and reports.

e. Click on "**Save**" to save the changes.

2.2.   Create a new Folder and Process Diagram

Processes in Signavio Process Manager are representation of real time business processes. A process is a sequence of defined activities that are executed by people or machines in order to reach one or several goals.

1. Open a web browser and go to http://academic.signavio.com/p/login
   a. Login using your **SMU student account and password**, and click "**Login**".
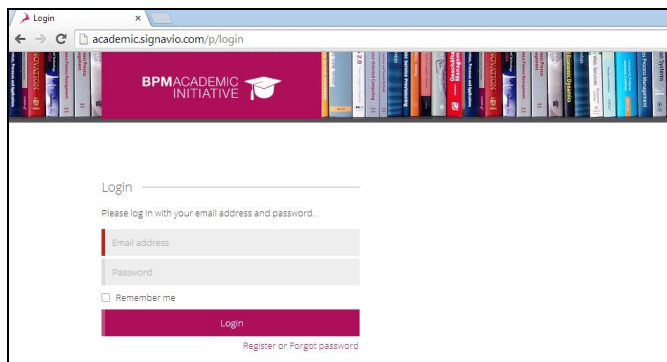
2. On **The Explorer**
   a. Click "**New**" from menu bar and then "**Folder**".
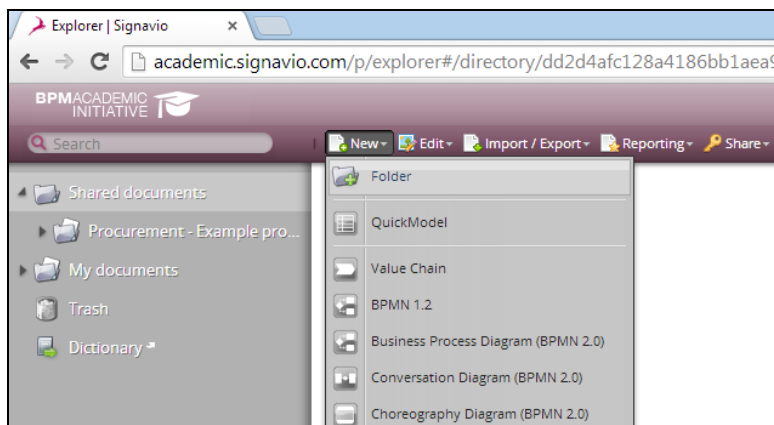
   b. Enter "**Lab Exercise**" as the folder name to store laboratory processes and click "**OK**".
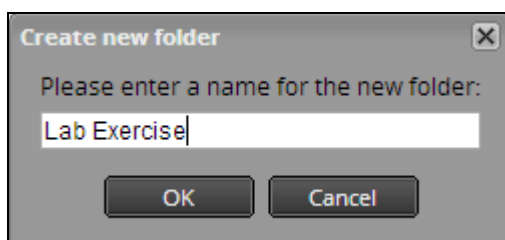
3. Double click on **Lab Exercise folder** to navigate to **Diagram Editor**.
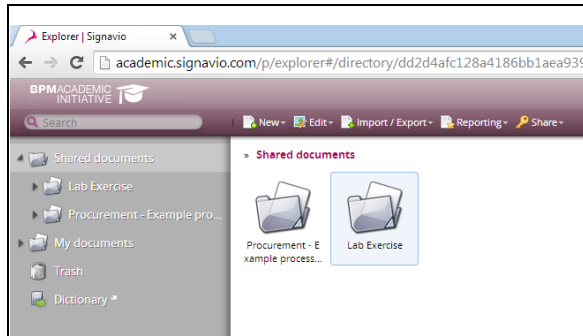
a. Click "**New**" and choose "**Business Process Diagram (BPMN 2.0)**". A new browser tab will open, showing the **Diagram Editor**.
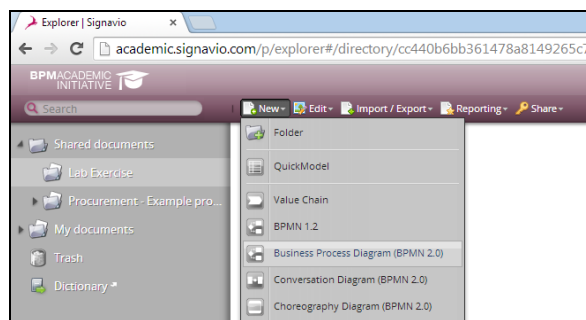
b. Now you can start adding modelling elements to create new process diagram.
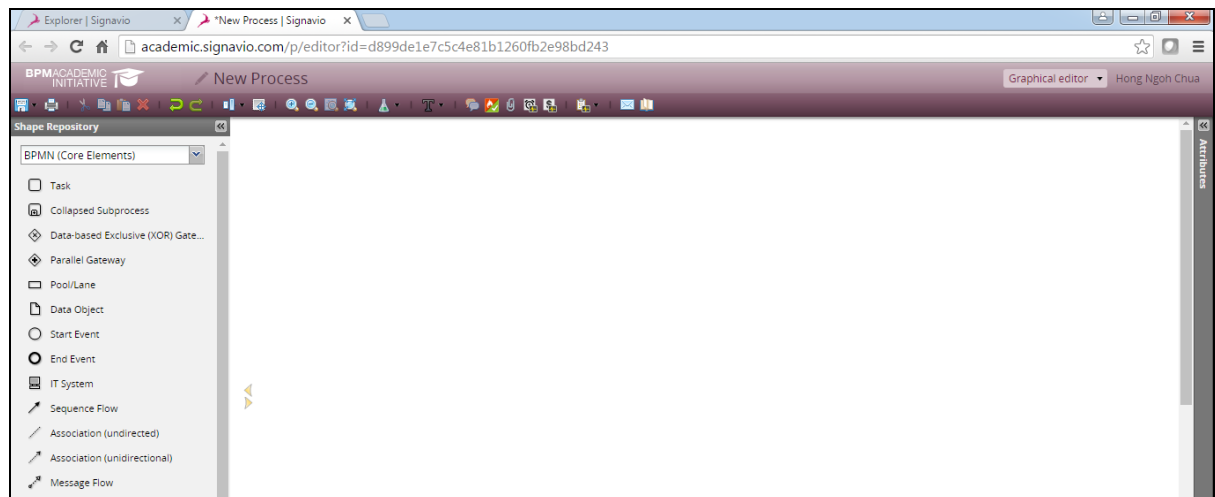
2.3.   Create a Process Diagram

Tasks are the most basic building block of a process model. Each task represents a block of work, or activity that is important to the overall process.

To model the StarMall Rental Application process workflow, you will need to:

- Create 3 lanes
- Create 11 tasks
- Create 2 gateways
- Connect the elements according to the flow described in the scenario
- Label the elements.

1. **Create a Pool/Lane in Canvas**

    Pool/Lane represented Role or Participants involved in the process diagram. It enables the representation of responsibilities for each task in the process

    a. Click "**Pool/Lane**" from Shape Repository. Keep the mouse button pressed and drag the element to the canvas and drop it.
        The shape repository in the left column of the Editor displays all modelling elements available for the current modelling language

    b. To change the name of the pool;
   - Double click on the Pool and enter "**StarMall**"
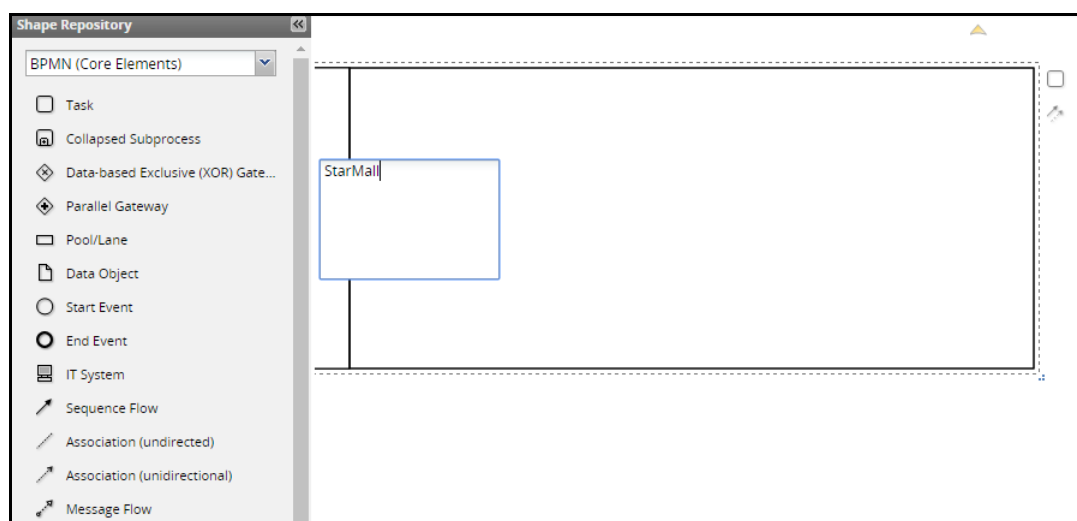
c. To change the name of the Lane,

- Double click on the lane, enter "**CSO**".
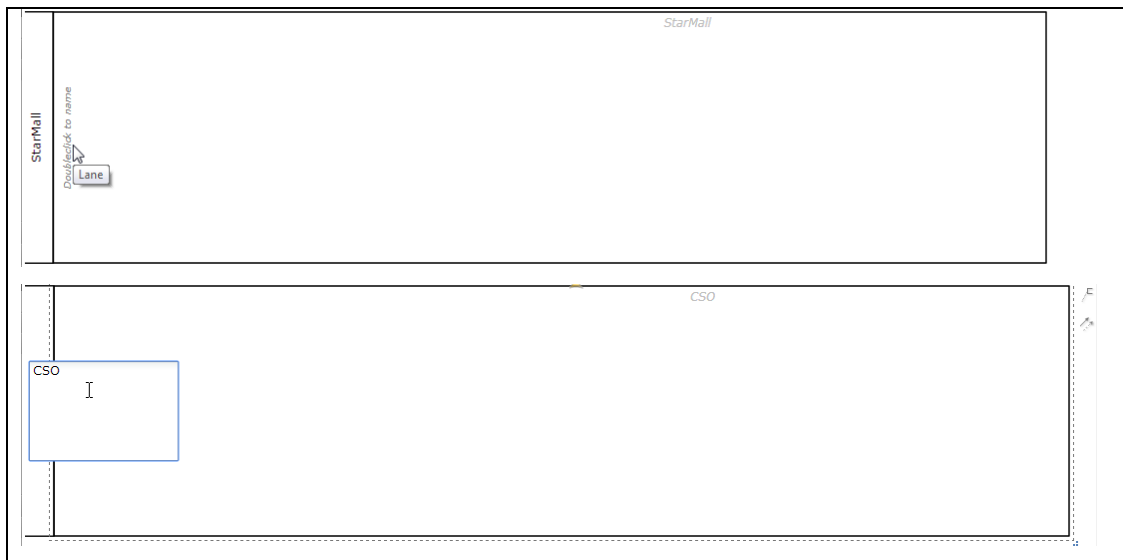
d. To add new role for the process, click "**Pool/Lane**" and drag the element to the upper or lower border of another lane, within the same StarMall Pool.
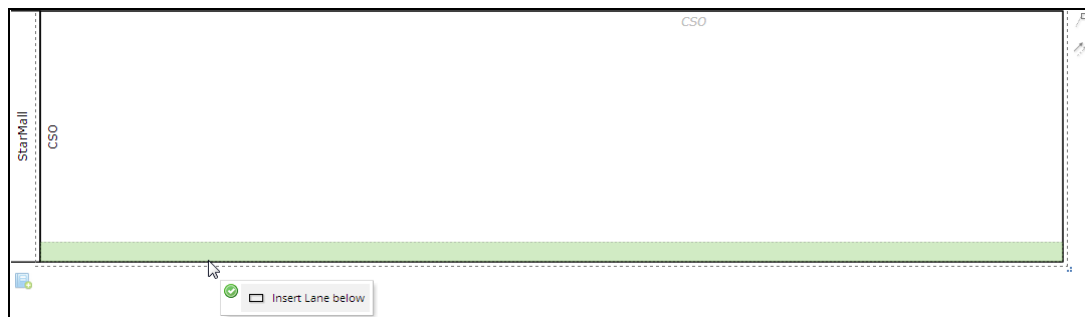

e. Once the new lane is added, change the name

- Double click on the lane, enter "**OD**".
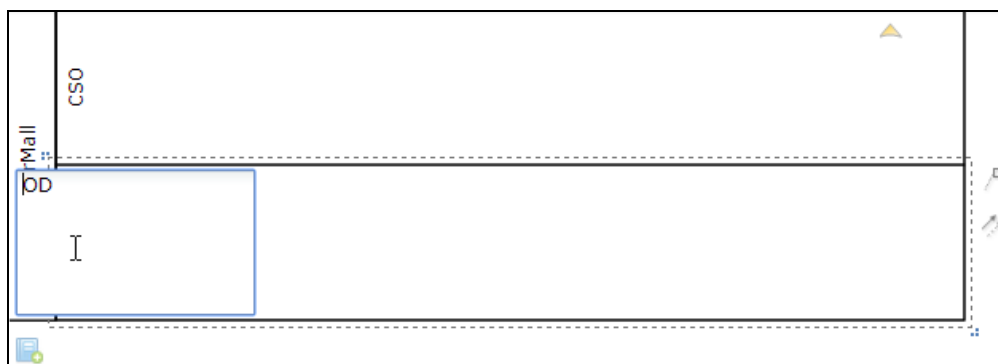
f. Complete the StarMall business process by adding more Pool/Lane for all the required roles.

2. **Create a Task in Canvas**

a. Click "**Task**" from the Shape Repository. Keep the mouse button pressed and drag the element to the canvas and drop it. The green icon shows you where you can drop the element. This might depend on whether an element can be contained by another element. For instance, a BPMN pool cannot be contained by a task.

b. Label the task as "**CSO gathers requirement and Fills rental application form**"
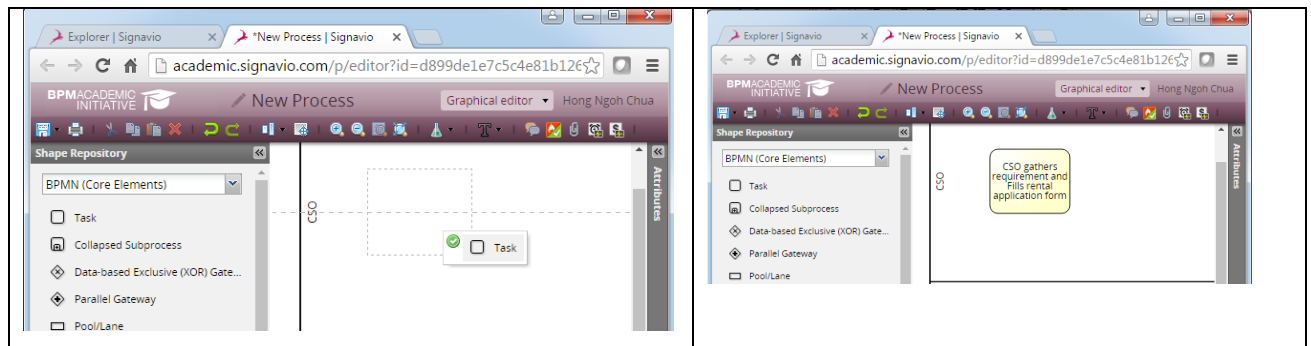
c. Continue to create more tasks to complete your Rental Application As-Is Process.

a. Add elements using the interactive shortcut menu.

b. Select the task in the diagram. The shortcut menu will appear on the right of the element.

c. Click on the icon of the element you want.

d. The new task will appear in the diagram.
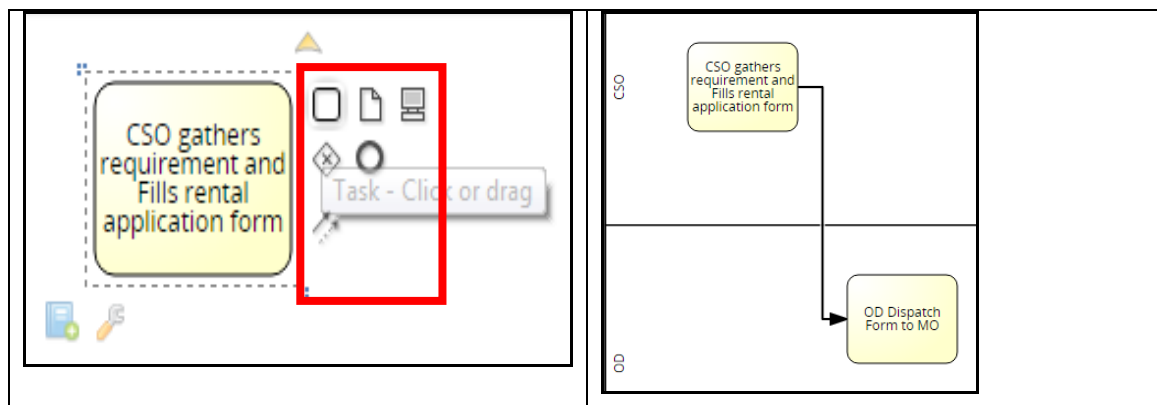
3. Save a Process Diagram

a. Click to save the changes made. When you save your process diagram, a model validation is carried out and the errors view will report any errors of your process diagram.
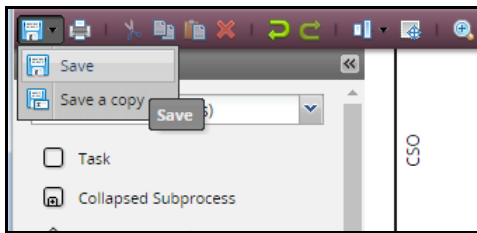

b. The following dialog opens up:
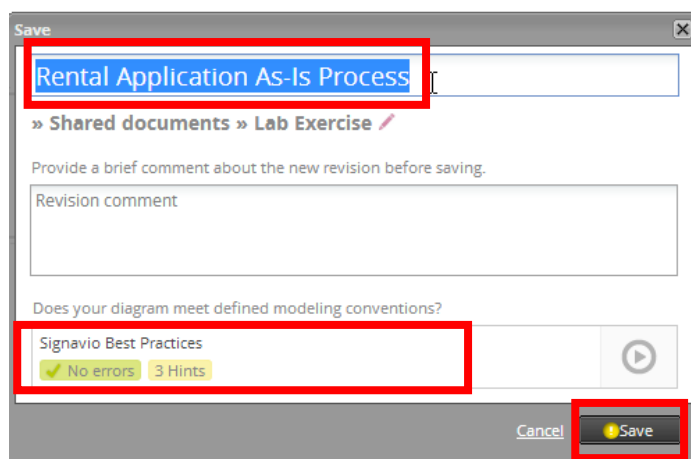
c. Enter "**Rental Application As-Is Process**" to name your process diagram.

d. Revision comment allows you to log your changes for the current version with regards to the previous version. This comment will appear in the version overview, to help in the tracking of changes for different version of a process diagram.

e. Click "**Save**" if there are no errors highlighted under the Appendix 2: Signavio Best Practices and Common Errors

f. If there are any errors that is not conforming to the modelling conventions, it will be highlighted under the Signavio Best Practices as shown below:
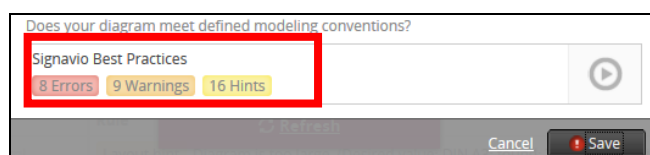
g. Click ⊙ to display the errors. You will have to clear all the errors before we can proceed to the next stage, Simulation of business process.

h. Please ensure that you resolve all the errors. Once all errors are resolved, system will notify you.
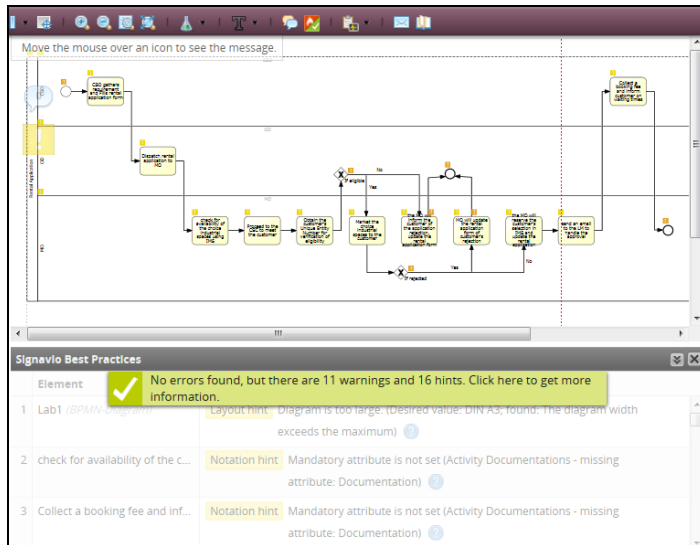
i. Click "**Save**" to save the process diagram. The process diagram will be saved and shown on **The Explorer**.

Part 3: Capturing Business Processes with QuickModel

Signavio QuickModel allows fast process capturing and completion. Information is simply added to a table and a diagram is automatically created out of the information.

The graphical diagram representation will automatically be created by the system, which enables you to fully concentrate on the diagram information.

QuickModel can be used to capture linear processes, which contain a workflow with a well-defined order of activities. It is also capable of capturing complex processes by simply recording the "Happy path" in the first place and adding more structural information like parallel tasks after that in the graphical editor.

1. Open **The Explorer** view and click "**New**" from toolbar and choose "**QuickModel**"
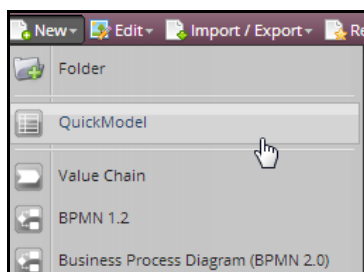
A new browser tab will open, showing the **QuickModel view**.

QuickModel view consists of three sections:

Sections	Remarks
Process details	It contains information about the process as a whole
Activities	It displays the workflow order.
Diagram preview	Its preview is automatically generated by the system.

Now let's start to create a new process diagram.

2. Create a new Process Diagram

    a. Under **Process section**,

        - Enter "**StarMall**" as the **Organisation**

        - Enter "**New Application**" as the **Start** event that initiates the process.

        - Enter "**Collected Booking Fee**" as the **End** event.

    b. In the **Activities section**, it captures the information needed for the creation of process diagram.

    When you are navigating in the table, the row and column name of the currently selected cells will be highlighted. You can add an activity above the current activity by clicking [⊞ Add activity above] or click [🗑 Remove activity] to remove activity.

Definition for each cell, attributes, is described as below:

Items	Remarks
What?	The name of respective Activity / Task
Who?	Responsible role for respective Activity/Task
How?	Description Text
IT Systems	IT system used by respective Activity/Task
Input Documentation	Required data artifacts
Output Documentation	Created or Modified data artifacts
Execution Costs (Min)	Execution Cost of respective Activity/Task

These are the main attributes which are displayed in the table view as default. You can add or hide columns by clicking on [wrench icon] on the right of the activities list. A window will be displayed which allows you to select the attributes to be displayed on the table. Click "**OK**" once you have selected the collection of attributes to be displayed.
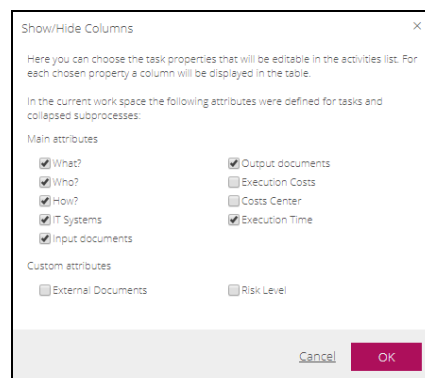
c. To complete the flow, enter "**CSO gathers requirement and Fills rental application form**" in first cell of the table directly below "**What?**" under **Activities** section.

d. Enter "**CSO**" in the second cell, of the table directly below **"Who?"**

e. Enter "**30**" in **Execution Time** cell.

f. The diagram preview will refresh and show a **start event**, the **task** and an **end event**.
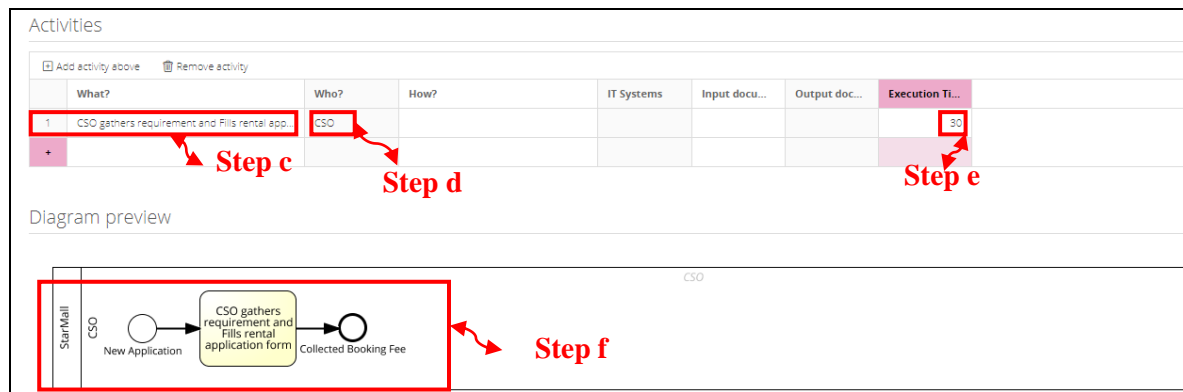
g. Continue to create more tasks to complete your Rental Application As-Is Process.

h. Enter "**Rental Application As-Is Process**" in the head of the view to name your process diagram.

i. Click [Save] in the **QuickModel** toolbar to save the process diagram. The diagram will be saved and be accessible in **The Explorer** view after refreshing.

~ ~ ~ **END OF LABORATORY EXERCISE 3** ~ ~ ~

Appendix 1: Information about Signavio Process Manager

The following section will describe the two different views of Signavio Process Manager. They are The Explorer and The Editor.

1.1. The Explorer

The Explorer gives access to all tools that Signavio Process Manager offers. It allows creating, sorting and deleting diagram and folders.

The Explorer consists of:

a. **Tree View of Folders**: It allows quick navigation within the workspace.

b. **Selected Folder**: It shows the currently selected folder in the **center**

c. **Toolbar**: It allows accessing functionalities and configuration features.
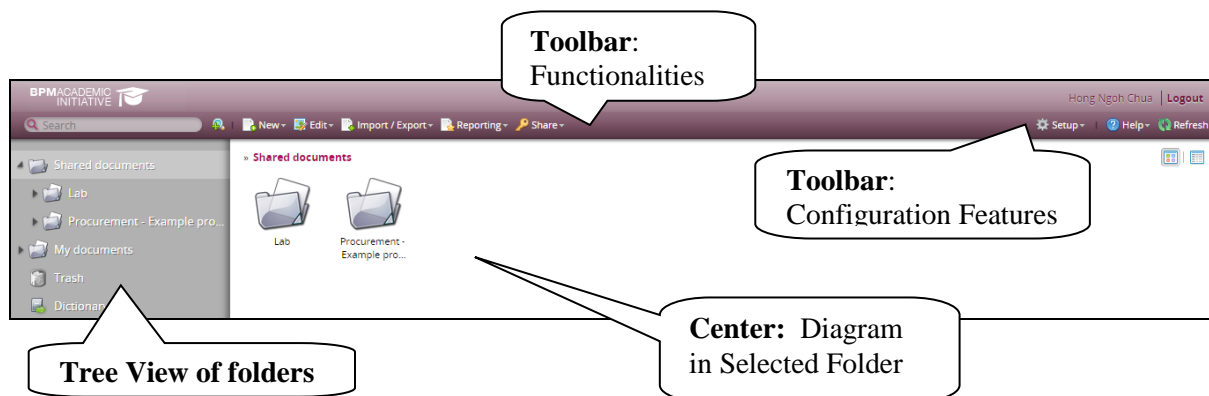
1.2. The Editor

The Editor is where you will create and edit a process diagram.

a. Overview of Editor
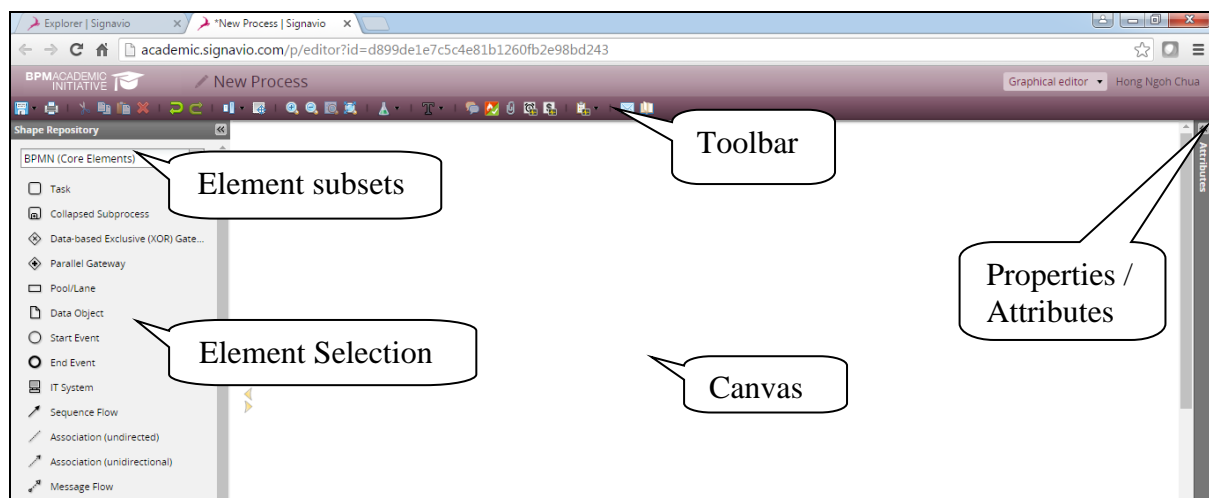
b. Overview of **Basic Core Elements**

Symbol	Remarks
Activity	
	Activity / Task It the work that a company performs. It is an atomic activity within a process diagram.
Events	
	Start Event An event that triggers a new process instance
	End Event An event that marks the standard end of a process
Gateways	
	Parallel Gateway When used to split the sequence flow, all outgoing branches are activated simultaneously. When merging parallel branches it waits for all incoming branches to complete before triggering the outgoing flow.
	Data-Based Exclusive (XOR) Gateway When splitting, it routes the sequence flow to exactly one of the outgoing branches based on conditions. When merging, it awaits one incoming branch to complete before triggering the outgoing flow.
Connecting Objects	
	Sequence Flow It is the execution order of activities
Data Objects	
	Data Object It is used to model data especially as input and output of activities.
Artifacts	
	IT System An IT System can be associated with an activity. It is a system or an application used while fulfilling the activity
Swimlanes	
	Pools / Lanes (Participants/Resources/Roles) A pool or a lane can be an organization, a role or a system. It is an element representing a process into an organisation Lanes is a representation of an area or department of the company. It can represent a role into a process diagram.

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c. Overview of **Attributes Panel**

Each modelling element comes with a range of attributes that you can edit. To change the values of the attributes;

- Open the attributes panel on the right side of the Editor by clicking ◀ button.
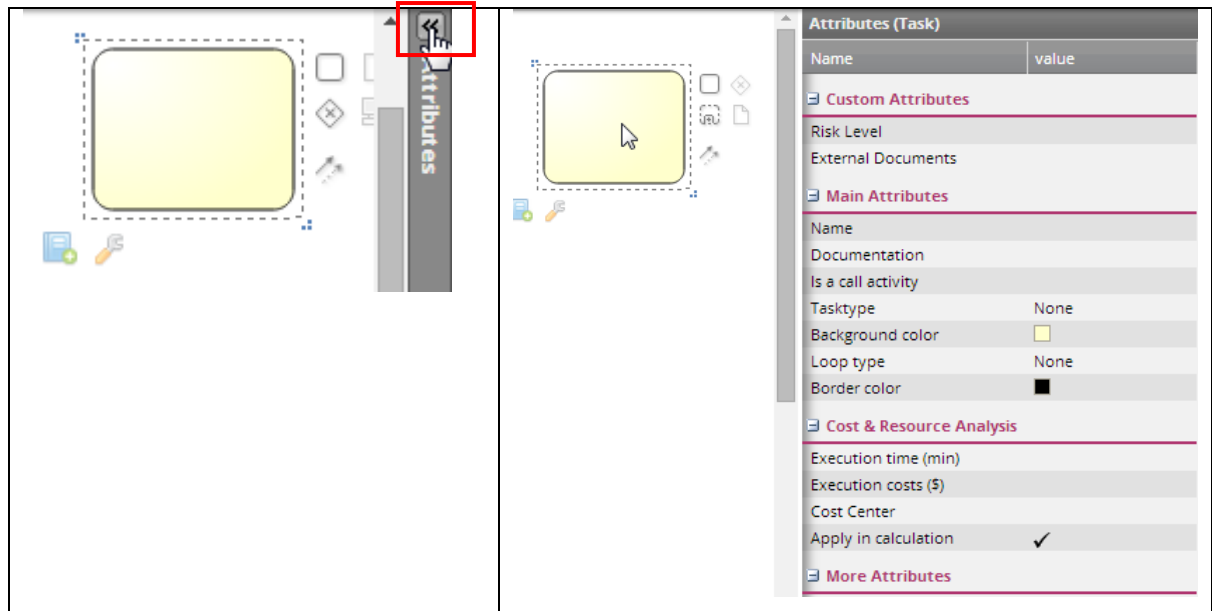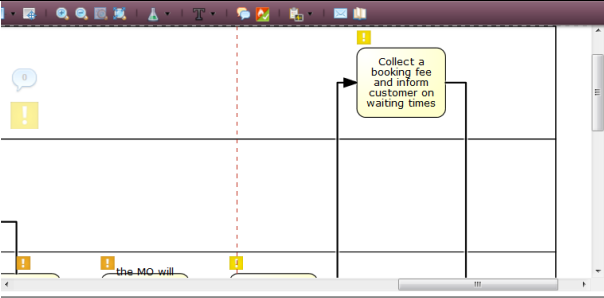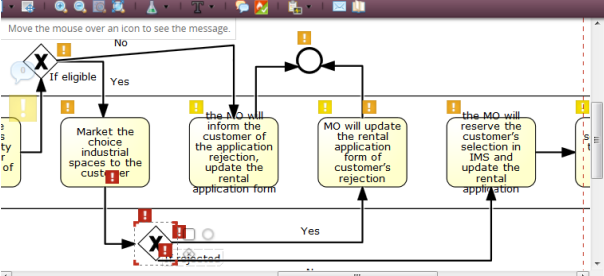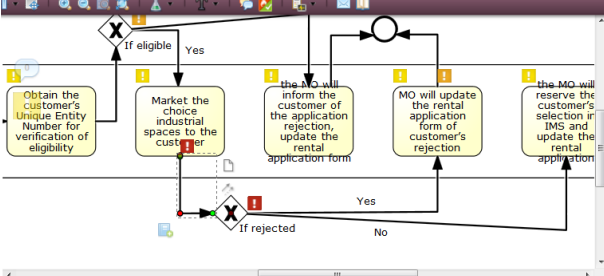
- The attributes are divided into categories where content can be opened by clicking the "⊞" symbol.
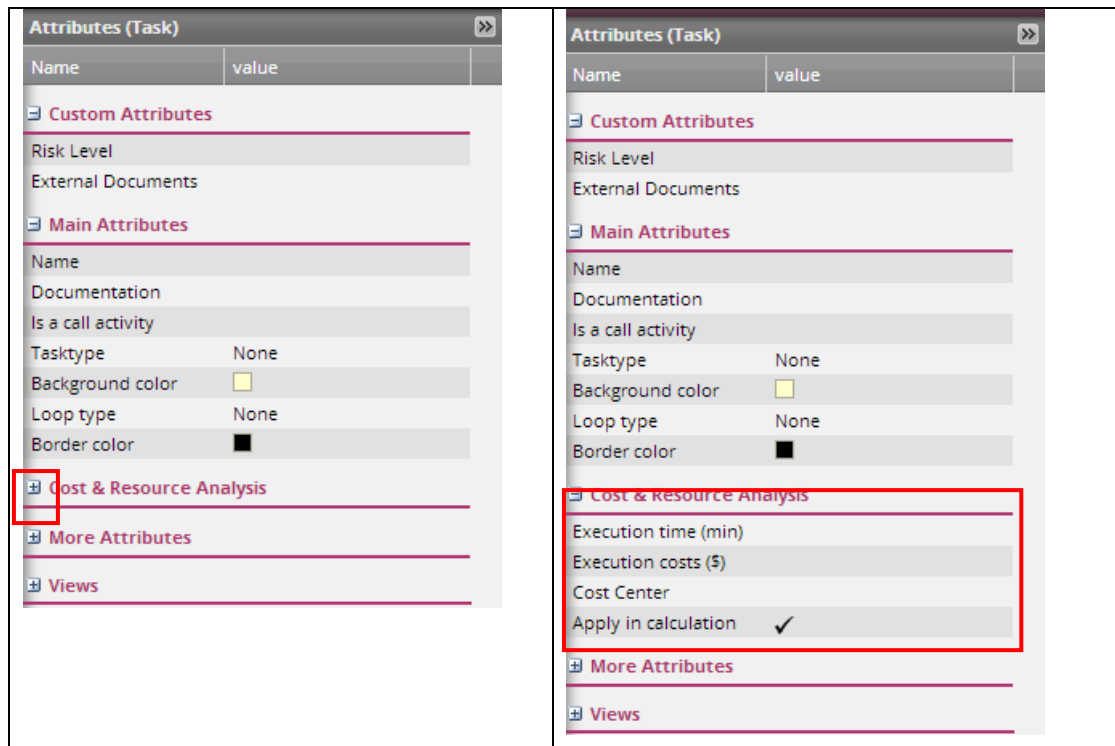
Appendix 2: Signavio Best Practices and Common Errors

Errors / Hints / Warnings	Examples
Hint	
Errors	
Warning	

~ ~ ~   **END OF LABORATORY 3 APPENDICES**   ~ ~ ~