INF2102 – System Specification

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1. System Objective

The goal of the Molic_Builder is to be a web application that allows its users to create and edit MoLIC diagrams using modern technologies (such as Angular and Node.js).
This project aims to provide a quick and simple way to elaborate MoLIC Diagrams. Considering this is an open-source program, further collaboration of the community will be possible.

2. Requisites

This system's requisites are divided in three specifications as follows: MoLIC Diagram, Mockups and User Stories.

3. MoLIC_Diagram:

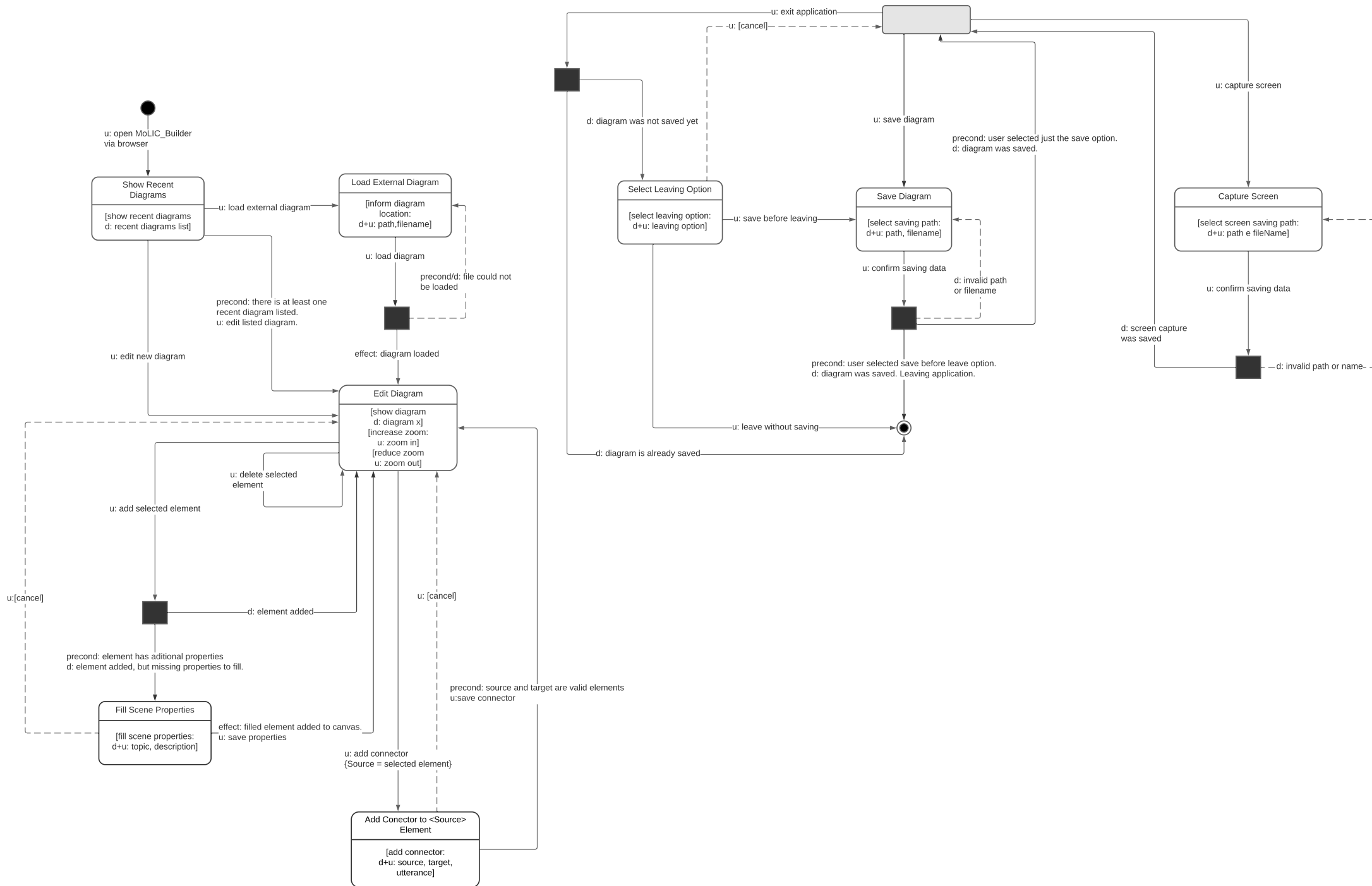In *Figure 1* there is the MoLIC Diagram of this application, representing the interaction between user and system.

u: exit application

-u: [cancel]-

u: open MoLIC_Builder via browser

u: capture screen

Show Recent Diagrams

[show recent diagrams
d: recent diagrams list]

u: load external diagram

Load External Diagram

[inform diagram
location:
d+u: path,filename]

d: diagram was not saved yet

u: save diagram

**precond: user selected just the save option.
d: diagram was saved.**

Select Leaving Option

[select leaving option:
d+u: leaving option]

u: save before leaving

Save Diagram

[select saving path:
d+u: path, filename]

Capture Screen

[select screen saving path:
d+u: path e fileName]

u: load diagram

**precond/d: file could not
be loaded**

u: confirm saving data

**d: invalid path
or filename**

u: confirm saving data

**precond: there is at least one
recent diagram listed.
u: edit listed diagram.**

effect: diagram loaded

**d: screen capture
was saved**

u: edit new diagram

Edit Diagram

[show diagram
d: diagram x]
[increase zoom:
u: zoom in]
[reduce zoom
u: zoom out]

**precond: user selected save before leave option.
d: diagram was saved. Leaving application.**

d: invalid path or name

**u: delete selected
element**

u: leave without saving

u: add selected element

u: [cancel]

d: diagram is already saved

u:[cancel]

d: element added

**precond: source and target are valid elements
u:save connector**

**precond: element has aditional properties
d: element added, but missing properties to fill.**

Fill Scene Properties

[fill scene properties:
d+u: topic, description]

**effect: filled element added to canvas.
u: save properties**

**u: add connector
{Source = selected element}**

Add Conector to <Source>
Element

[add connector:
d+u: source, target,
utterance]

Figure 1 - MoLIC Diagram of MoLIC_Builder

4. Mockups:

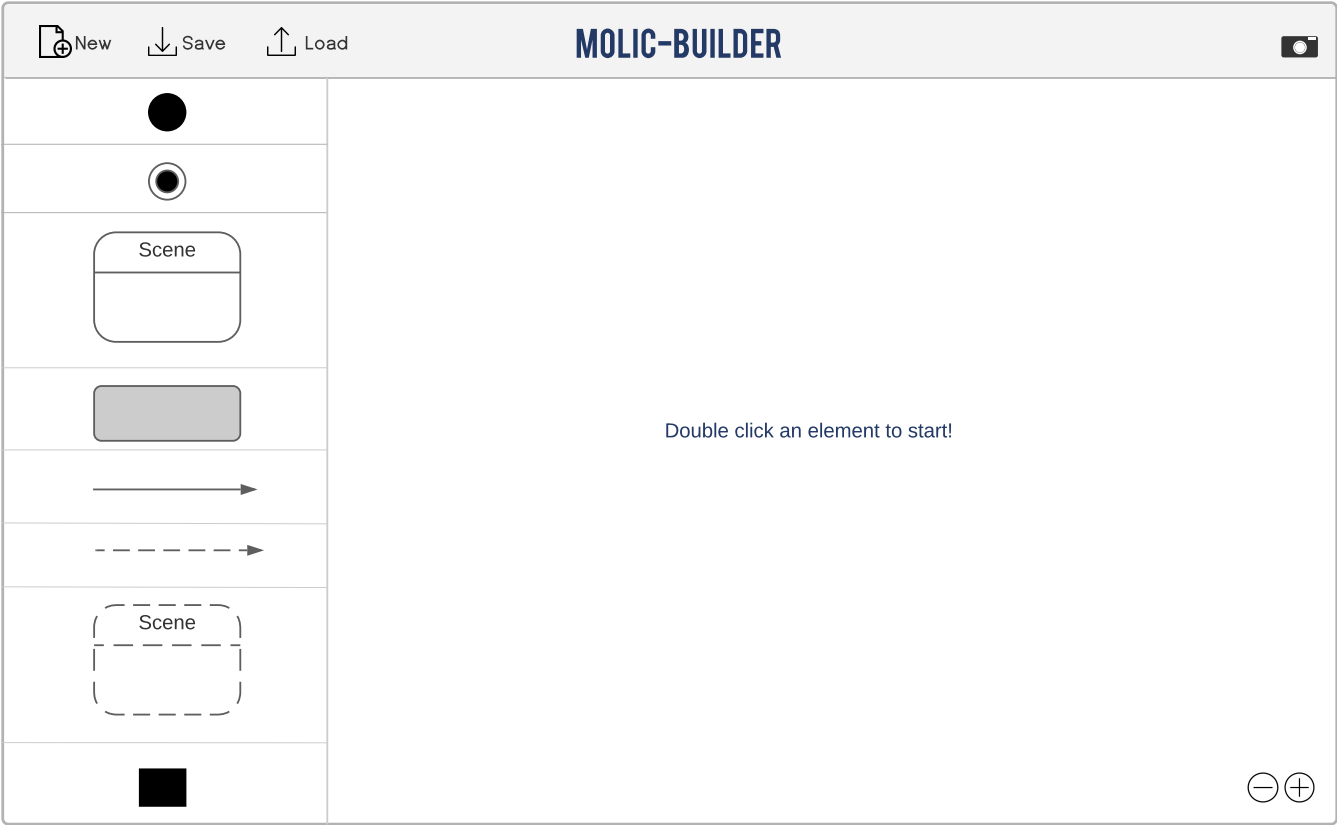The following mockups represent the MoLIC_Builder interface.

Figure 2 – Initial Screen of Version 1

In future works, the initial screen can evolve to a list of pre-existent diagrams in the user local area.
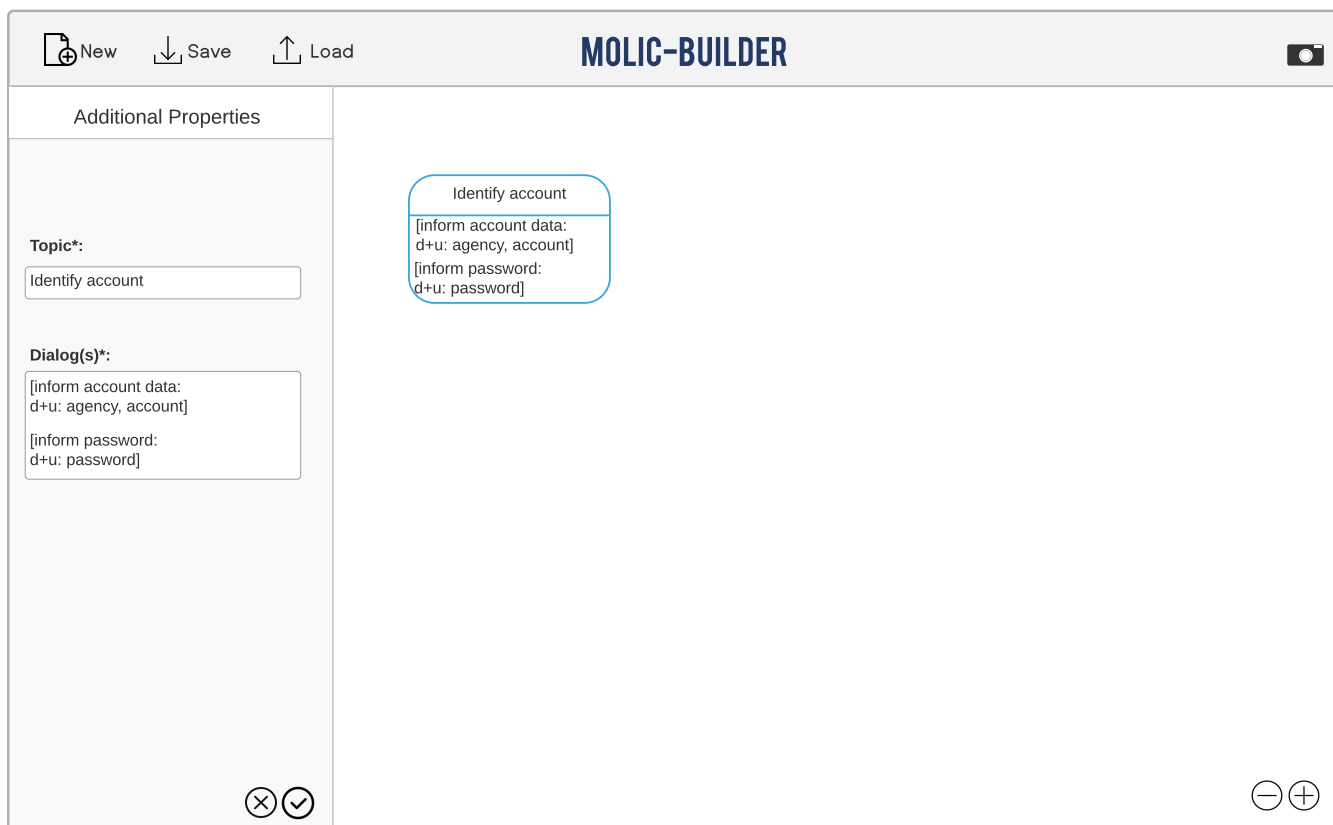
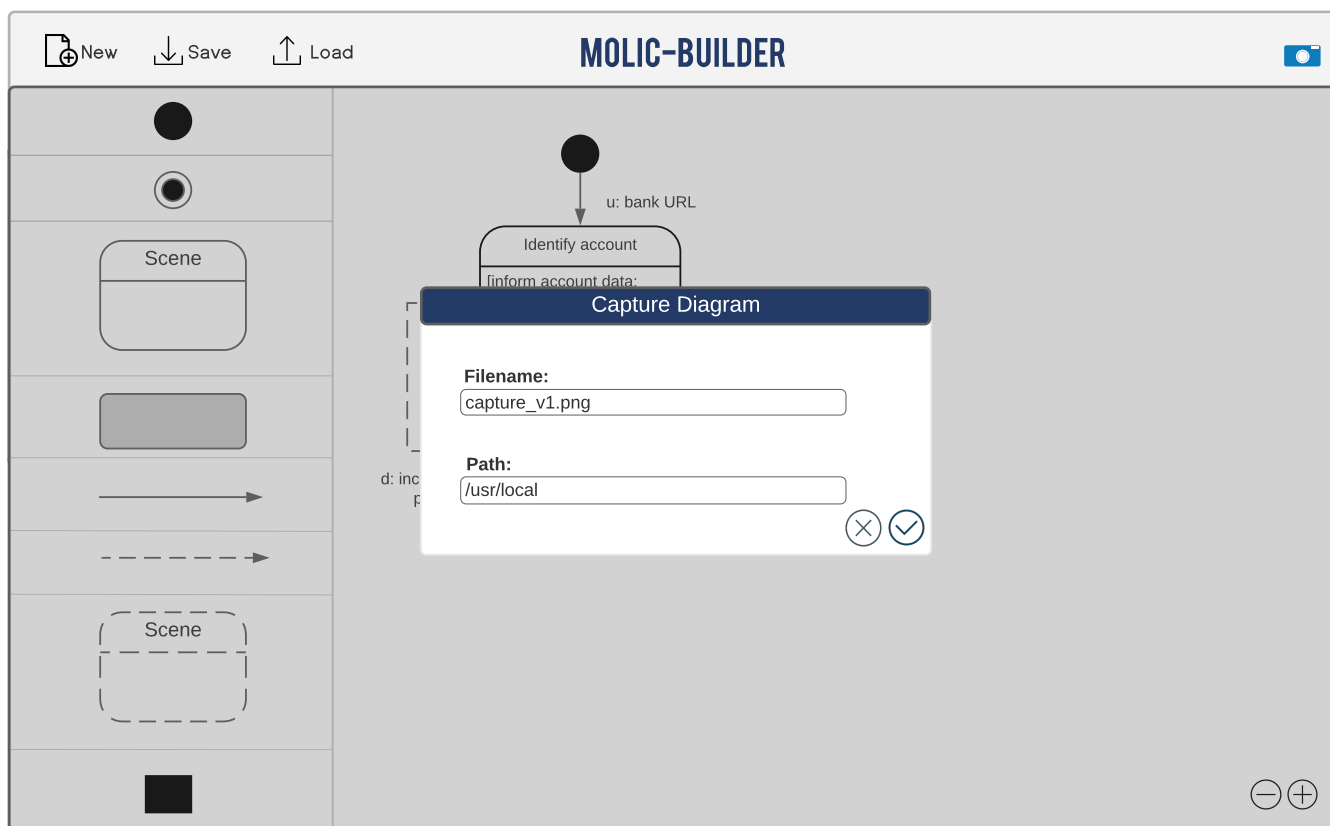New   Save   Load

MOLIC-BUILDER

Additional Properties

Topic*:

Identify account

Dialog(s)*:

[inform account data:
d+u: agency, account]

[inform password:
d+u: password]

Identify account

[inform account data:
d+u: agency, account]
[inform password:
d+u: password]

Figure 3 – Provide Additional Properties to an Element

New   Save   Load

MOLIC-BUILDER

Scene

Scene

u: bank URL

Identify account

[inform account data:

Capture Diagram

Filename:

capture_v1.png

Path:

/usr/local

d: inc
p

Figure 4 - Dialog to Capture Diagram*

Note about capture screen diagram (Figure 4): the first version of this system sends the capture automatically to the Downloads folder with an arbitrary name, thus, there will be no Capture Diagram dialog in the first version.
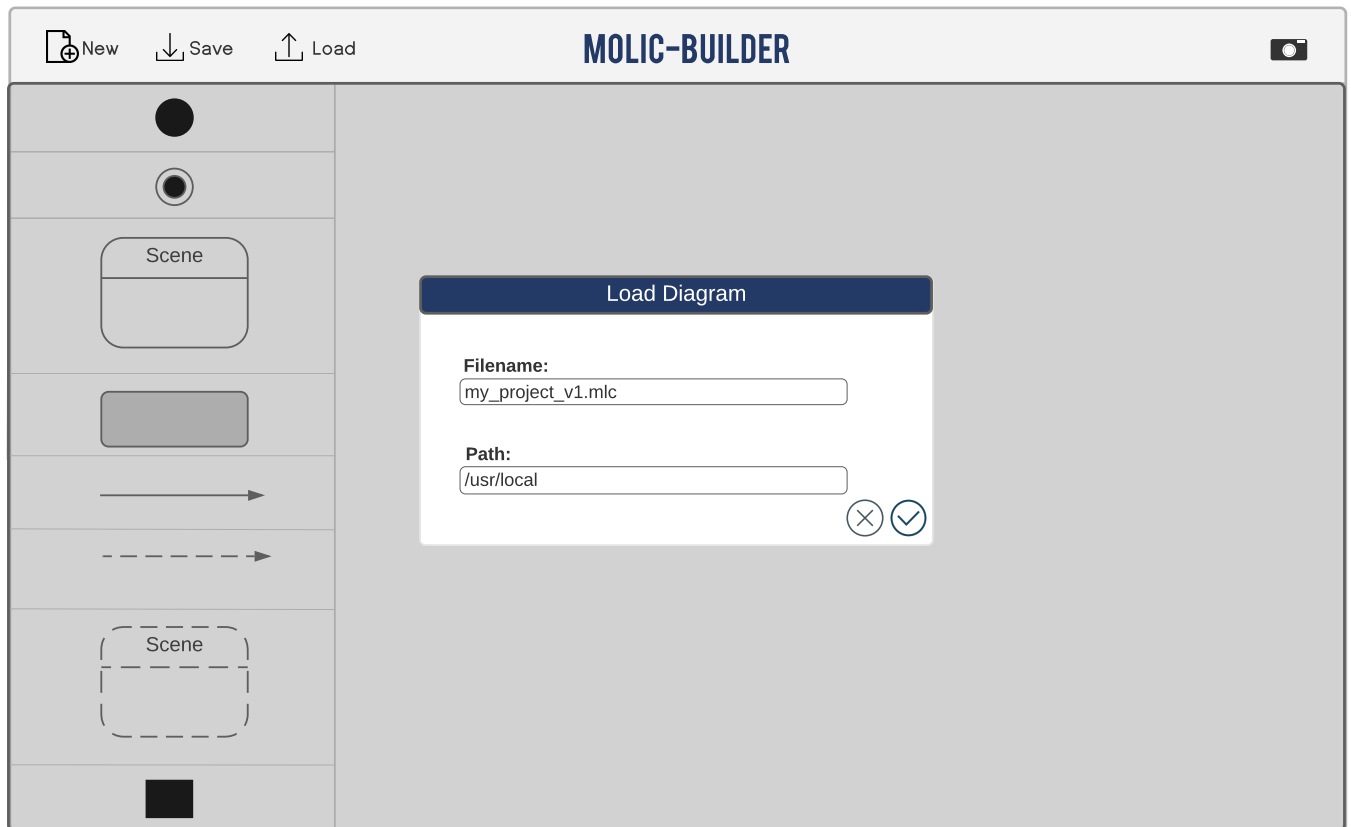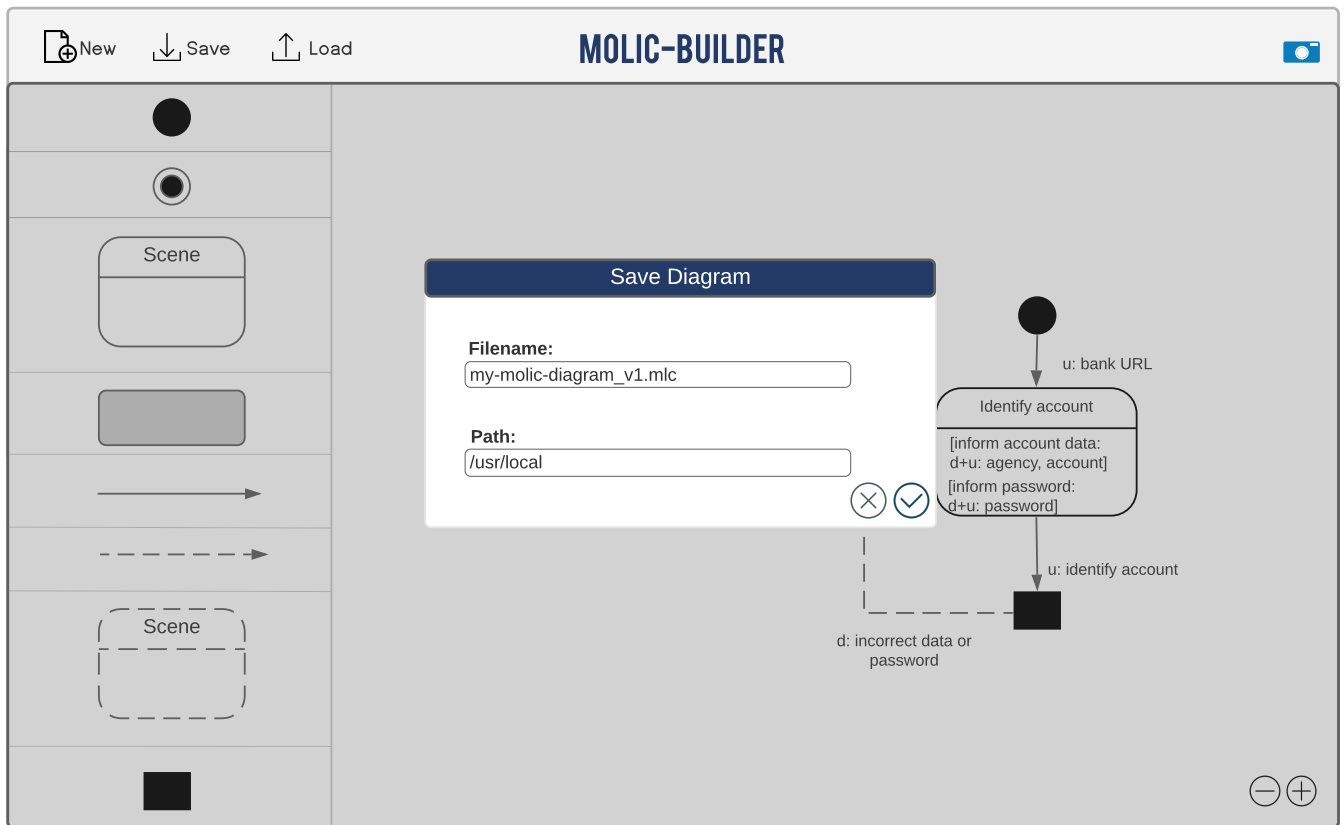

Figure 5 - Dialog to Load an External Diagram

New   Save   Load

Scene

Scene

Save Diagram

Filename:
my-molic-diagram_v1.mlc

Path:
/usr/local

u: bank URL

Identify account

[inform account data:
d+u: agency, account]
[inform password:
d+u: password]

u: identify account

d: incorrect data or
password

Figure 6 - Dialog to Download the Current Diagram

MOLIC-BUILDER

New   Save   Load

Scene

Scene

Leaving the Application

Save diagram before leaving?

No   Yes

u: bank URL

Identify account

[inform account data:
d+u: agency, account]
[inform password:
d+u: password]

u: identify account

d: incorrect data or
password
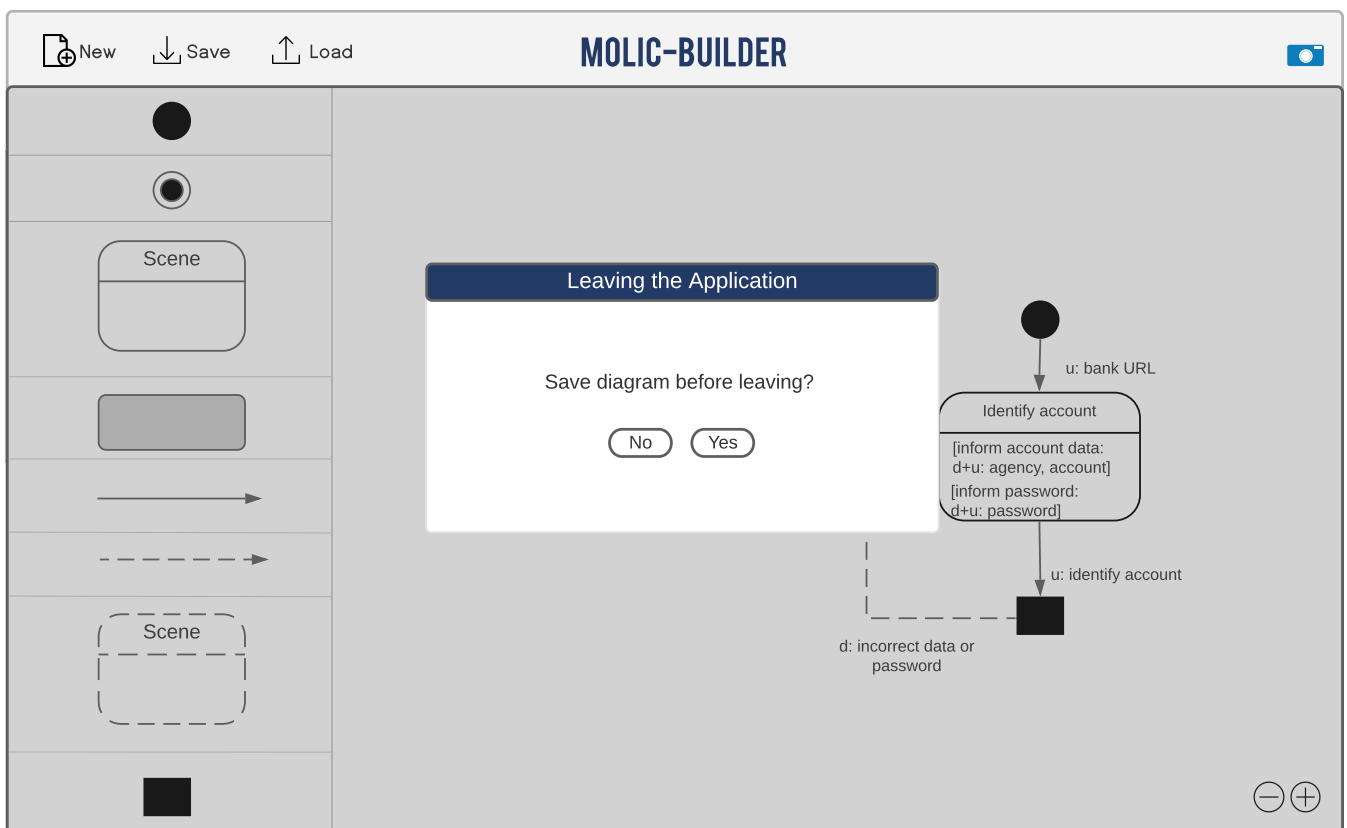
Figure 7 - Save Before Leave Dialog

Note about Figure 7, this dialog is only shown if the user did not save the diagram in its current state.
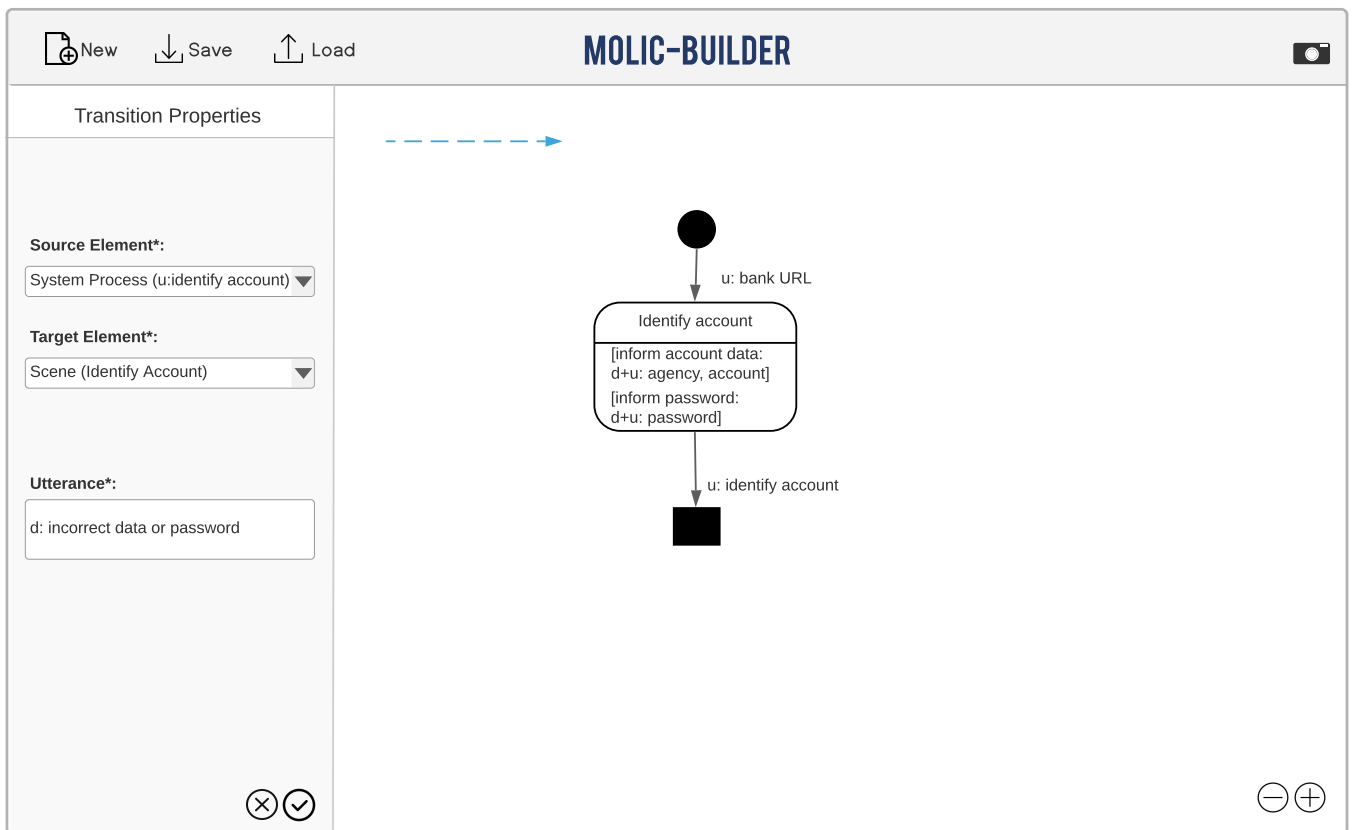
Figure 8 – Provide Connection Properties

What Figure 8 represents is the state of the application after the user adds a connection and fill its properties, which are: source, target and utterance.

5. User Stories:

US1: As a user, I want to be able to screen capture the MoLIC diagram under edition so that I can share with my colleagues.

US2: As a user, I want to be able to save the MoLIC diagram I am currently working on, so that I can keep my work in my computer.

US3: As a user, I want to be able to load and edit an existing MoLIC diagram, so that I can continue my work whenever I want.
US4: As a user, I want to be able to create a MoLIC diagram from scratch, so that I can start a brand new work.

US5: As a user, I want to be able to zoom in and out the MoLIC diagram under edition, so that I can focus in a specific area of the diagram.

US6: As a user, I want to drag the elements of the diagram in the canvas, so that I can dispose the elements wherever I want.

US7: As a user, I want to connect the base MoLIC elements using arrows so that I can mount my MoLIC diagram in a simple and interactive way.

6. Definition of Done

To consider this system as complete, there should be possible to replicate the MoLIC Diagram provided in *Figure 9*; also, the user should be able to export and import this diagram and screen capture the diagram area.
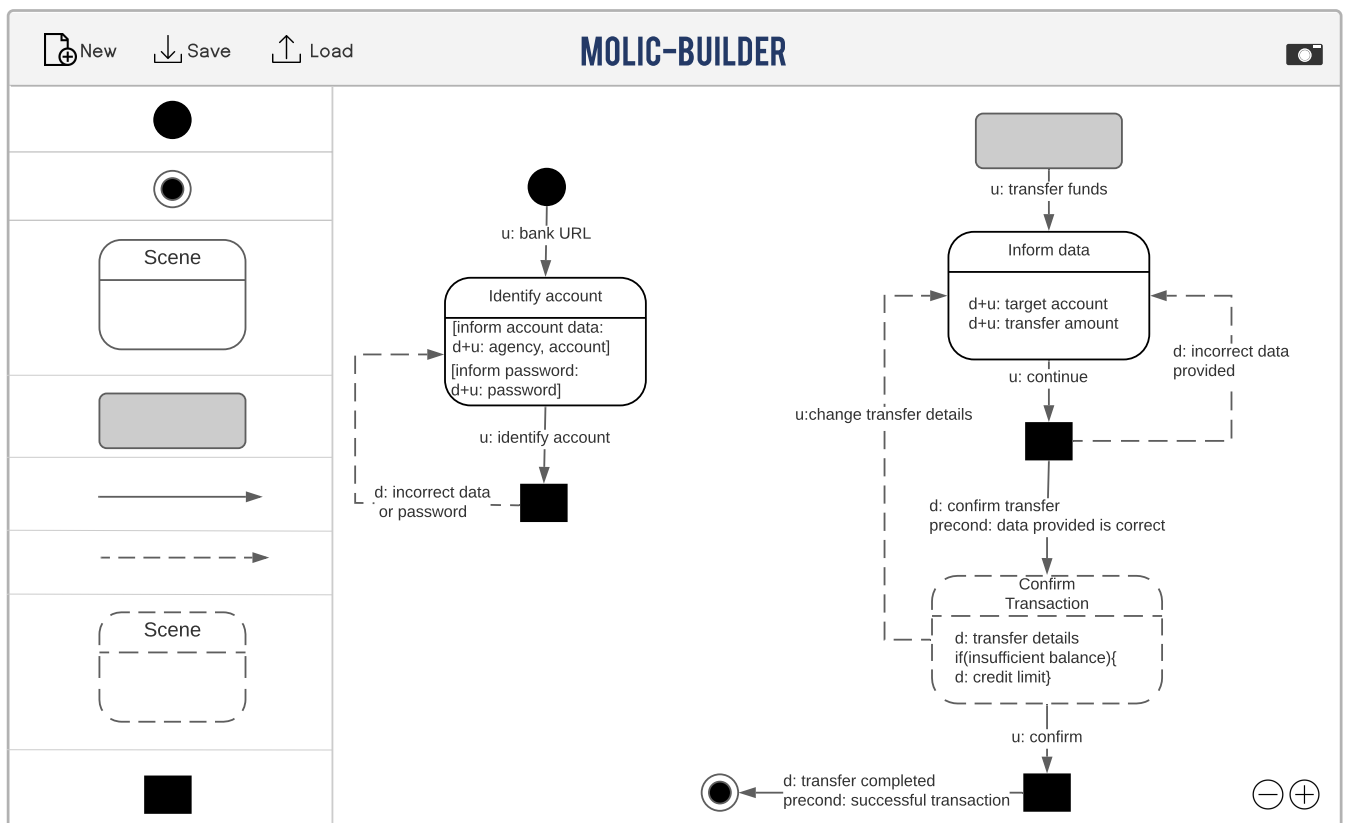

Figure 9 - Example of MoLIC Diagram