DEIG

Tutorial and Help

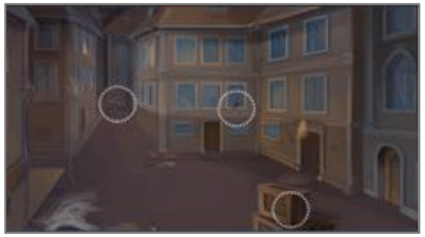
v. 1.3

Overview

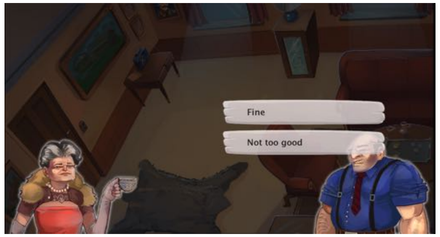
- This editor has been created to enable content generation for an iOS/Android game
- The mobile game is built in a Unity project
- The editor is a stand-alone Java program
    - The game logic can be tested and debugged inside the editor
    - The game can be played in the editor.
    - Dialog can be generated with text-to-speech
    - The current public version does not provide Unity export. It will be added in future versions.

The game modes

- When the game is played, there are two main modes of interaction



  - The exploration mode
    - the user drags his/her finger to find and activate interactables

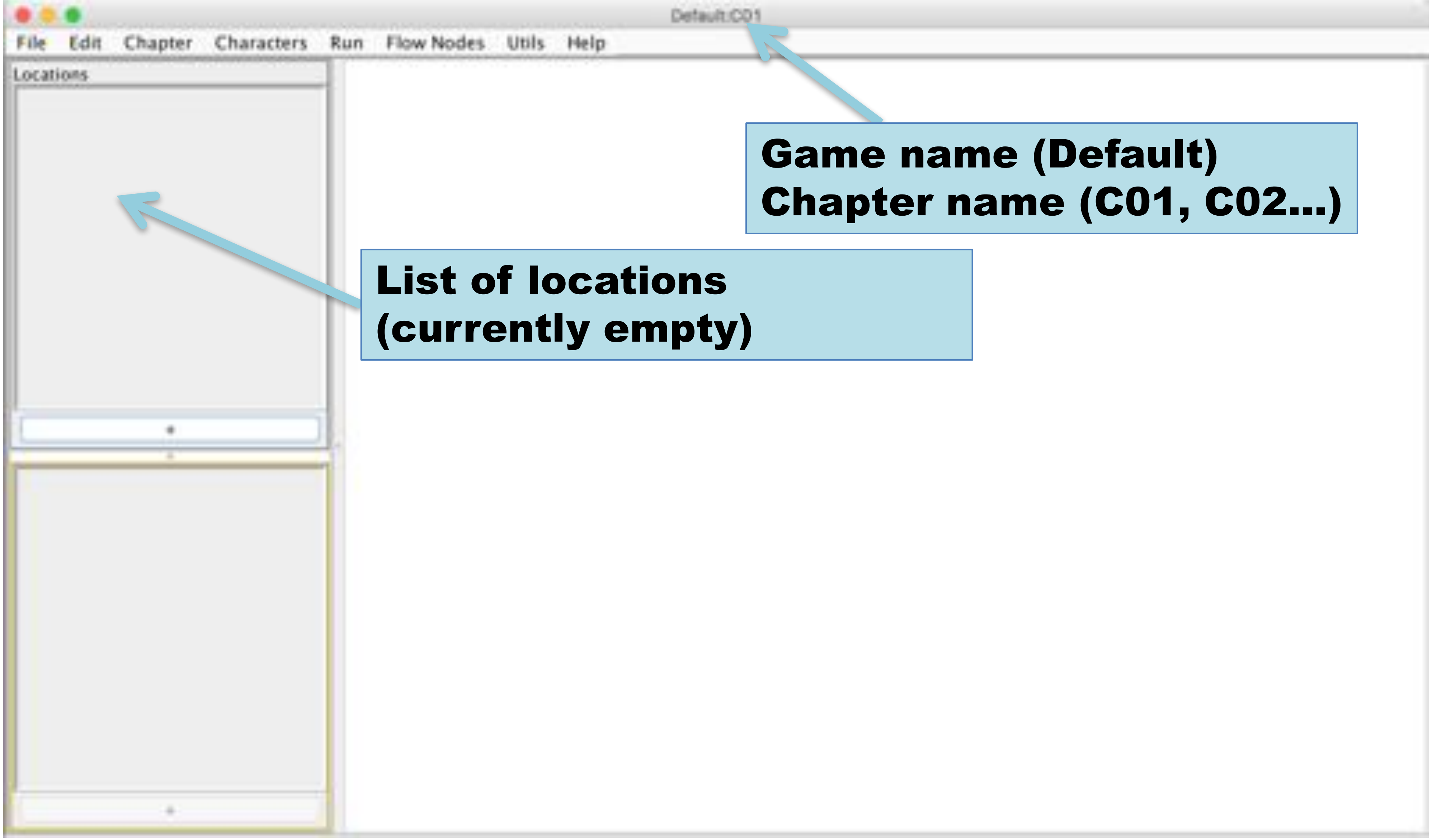


  - The dialog mode
    - when an interactable is activated, the user can interact with it through dialogs

Basic Editing

To add Locations, Interactables, and Characters

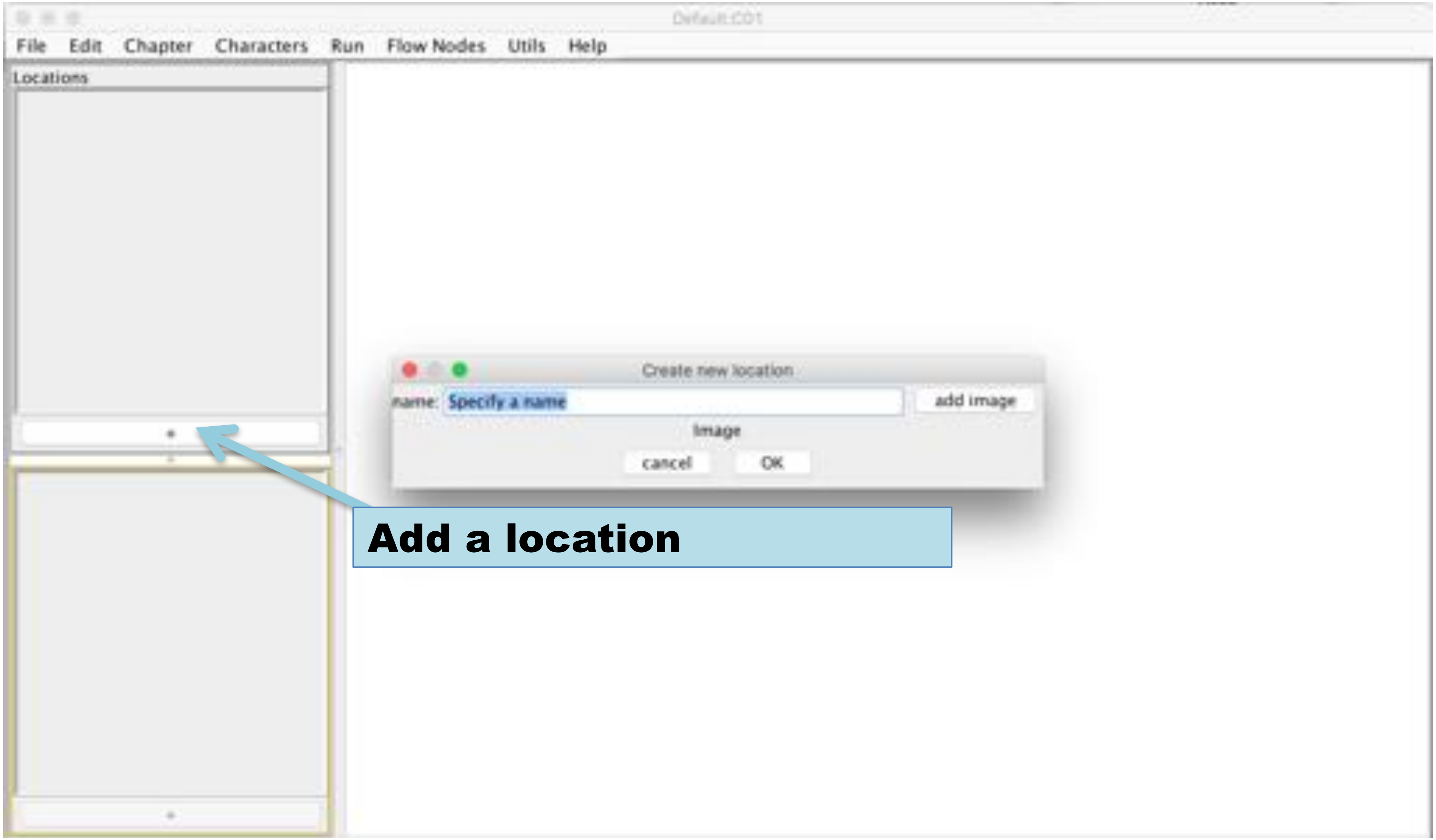
Main Window



Game name (Default)
Chapter name (C01, C02…)

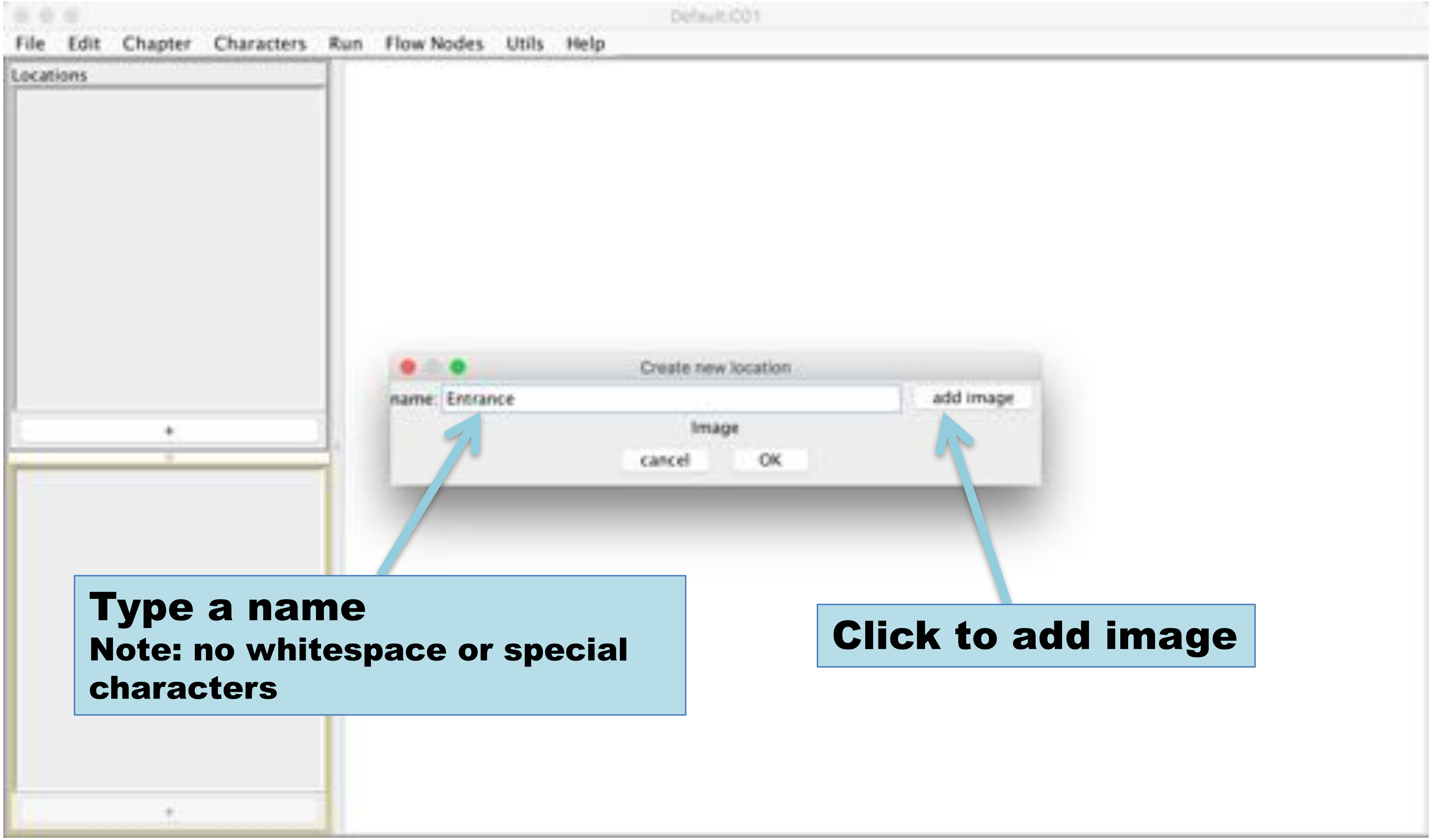
List of locations
(currently empty)

Add a location



Add a location

Select a name

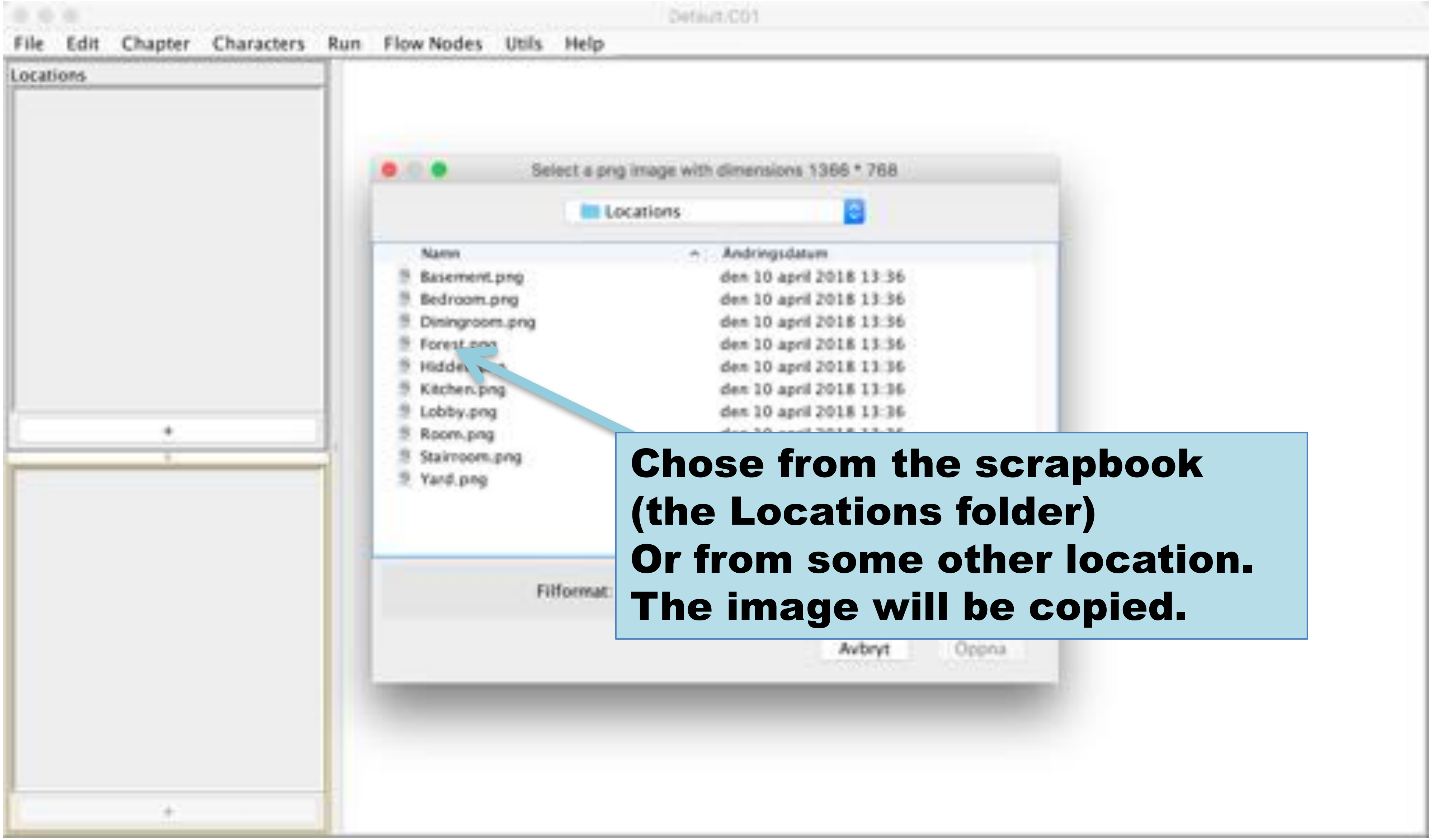


name: Entrance

Type a name
Note: no whitespace or special characters

Click to add image

Pick an image file

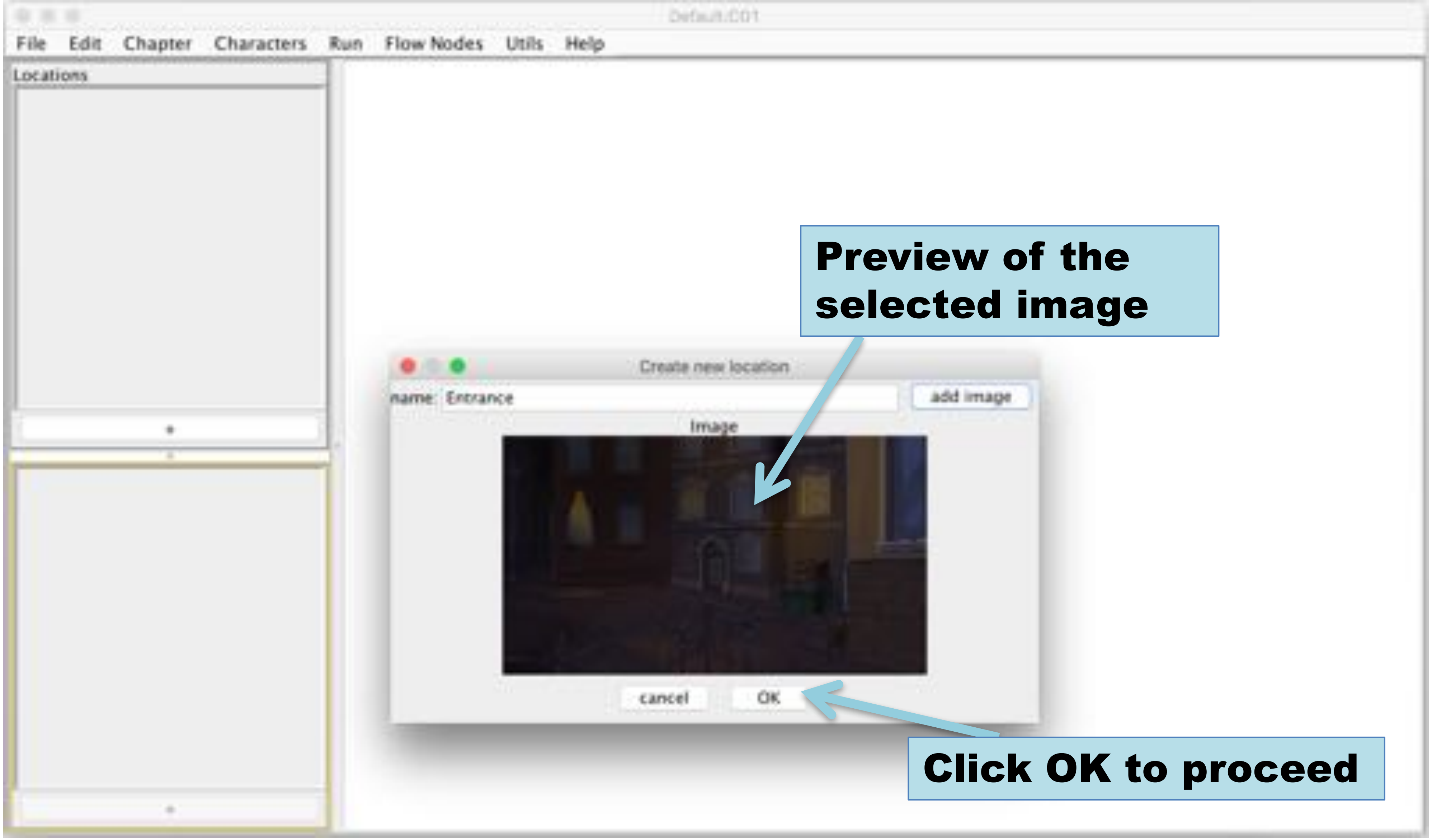


Select a png image with dimensions 1366 * 768

Namn	Ändringsdatum
Basement.png	den 10 april 2018 13:36
Bedroom.png	den 10 april 2018 13:36
Diningroom.png	den 10 april 2018 13:36
Forest.png	den 10 april 2018 13:36
Hidde[illegible]	den 10 april 2018 13:36
Kitchen.png	den 10 april 2018 13:36
Lobby.png	den 10 april 2018 13:36
Room.png	den 10 april 2018 13:36
Stairroom.png	
Yard.png	

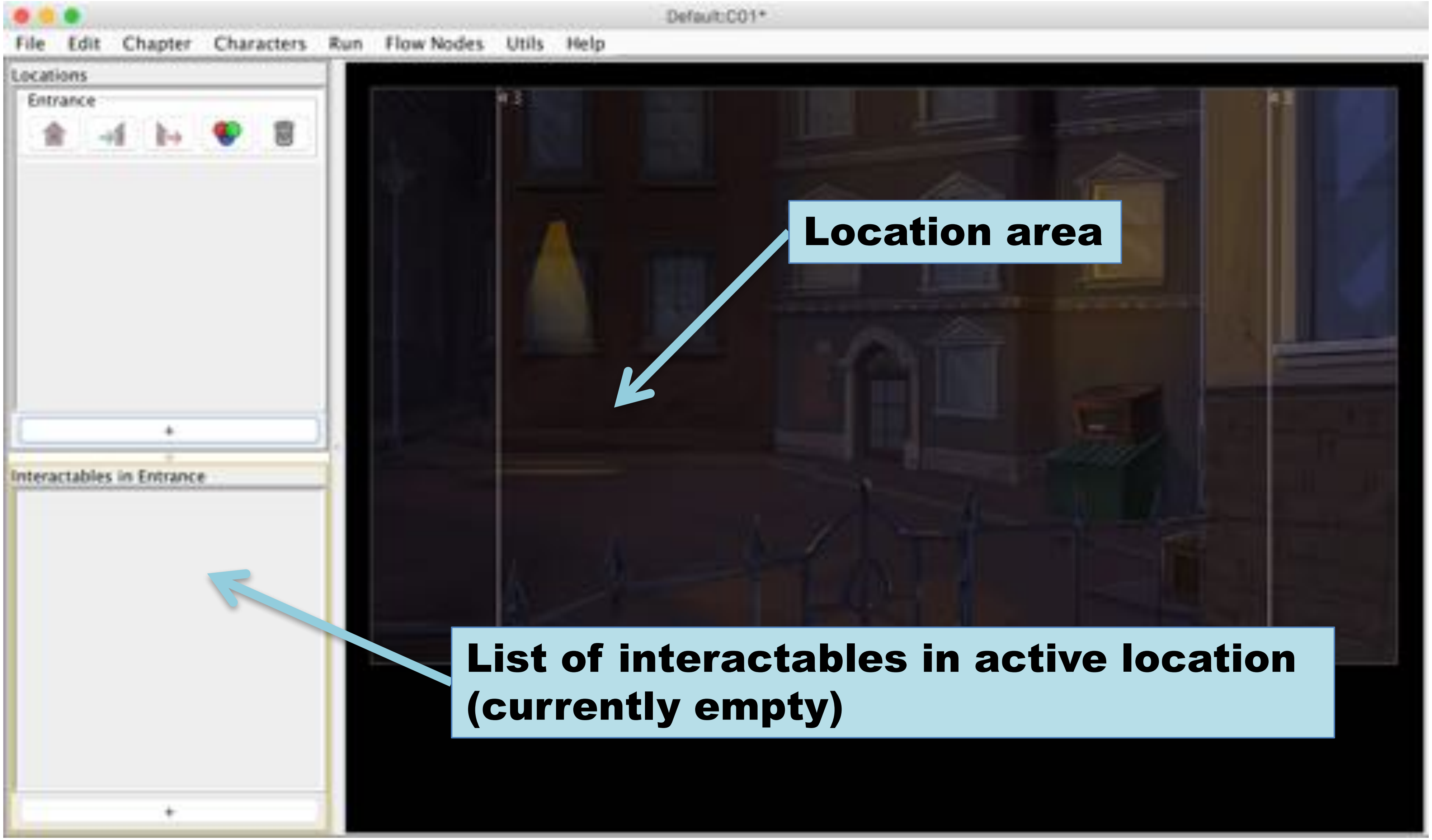
Chose from the scrapbook (the Locations folder)
Or from some other location.
The image will be copied.

Preview



Preview of the selected image

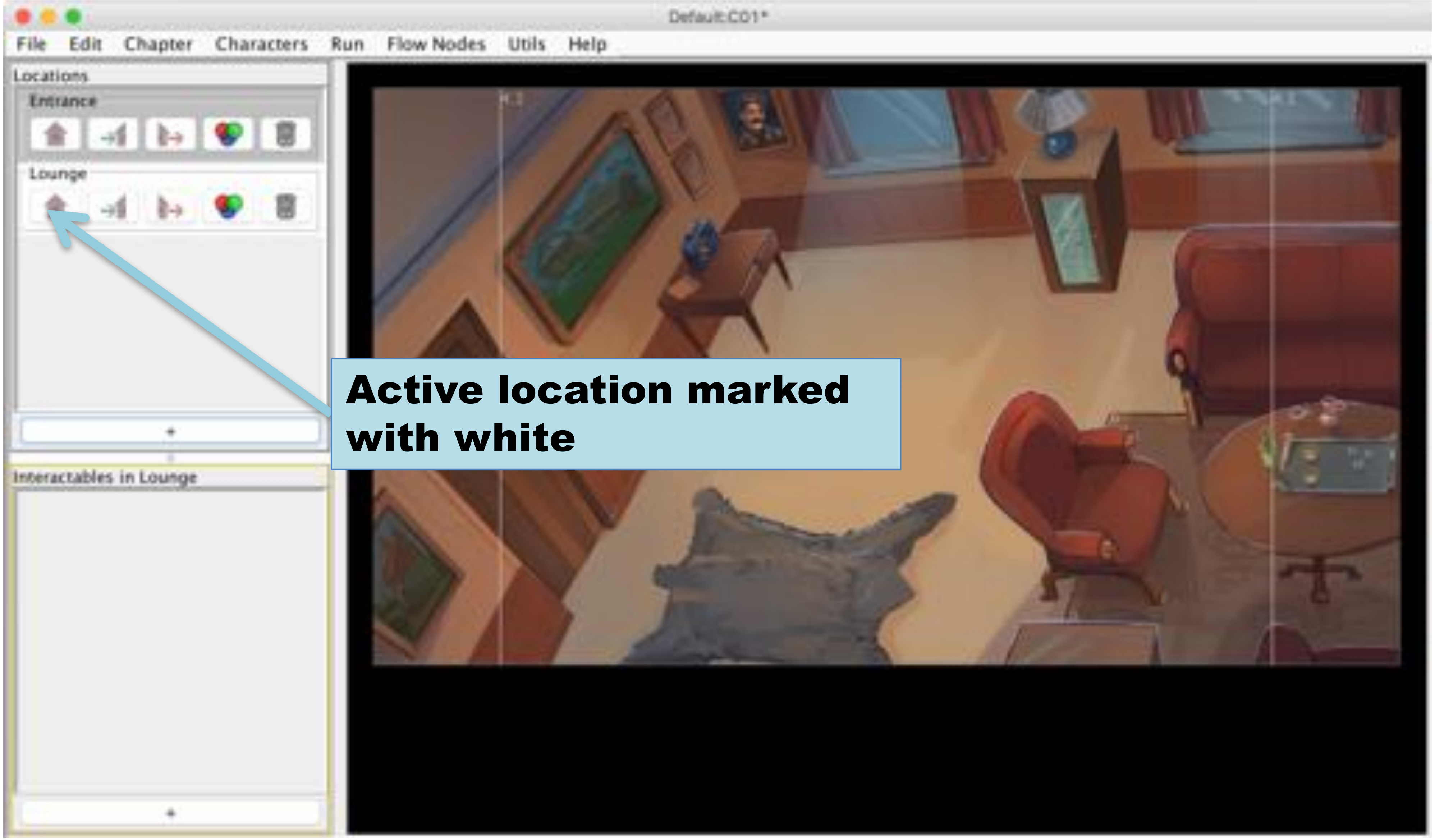
Click OK to proceed



Location area

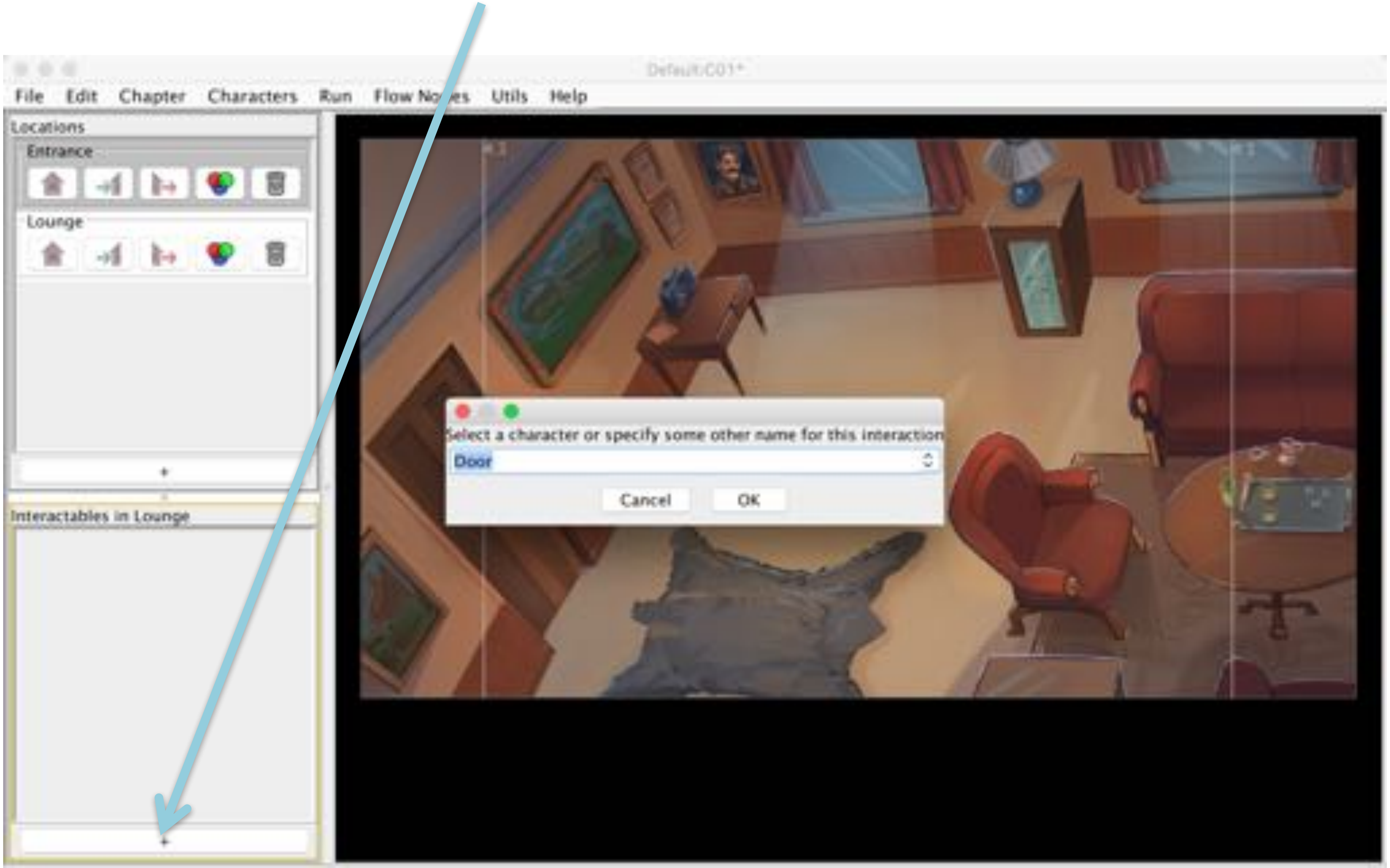
List of interactables in active location (currently empty)

Switch between locations



Active location marked with white

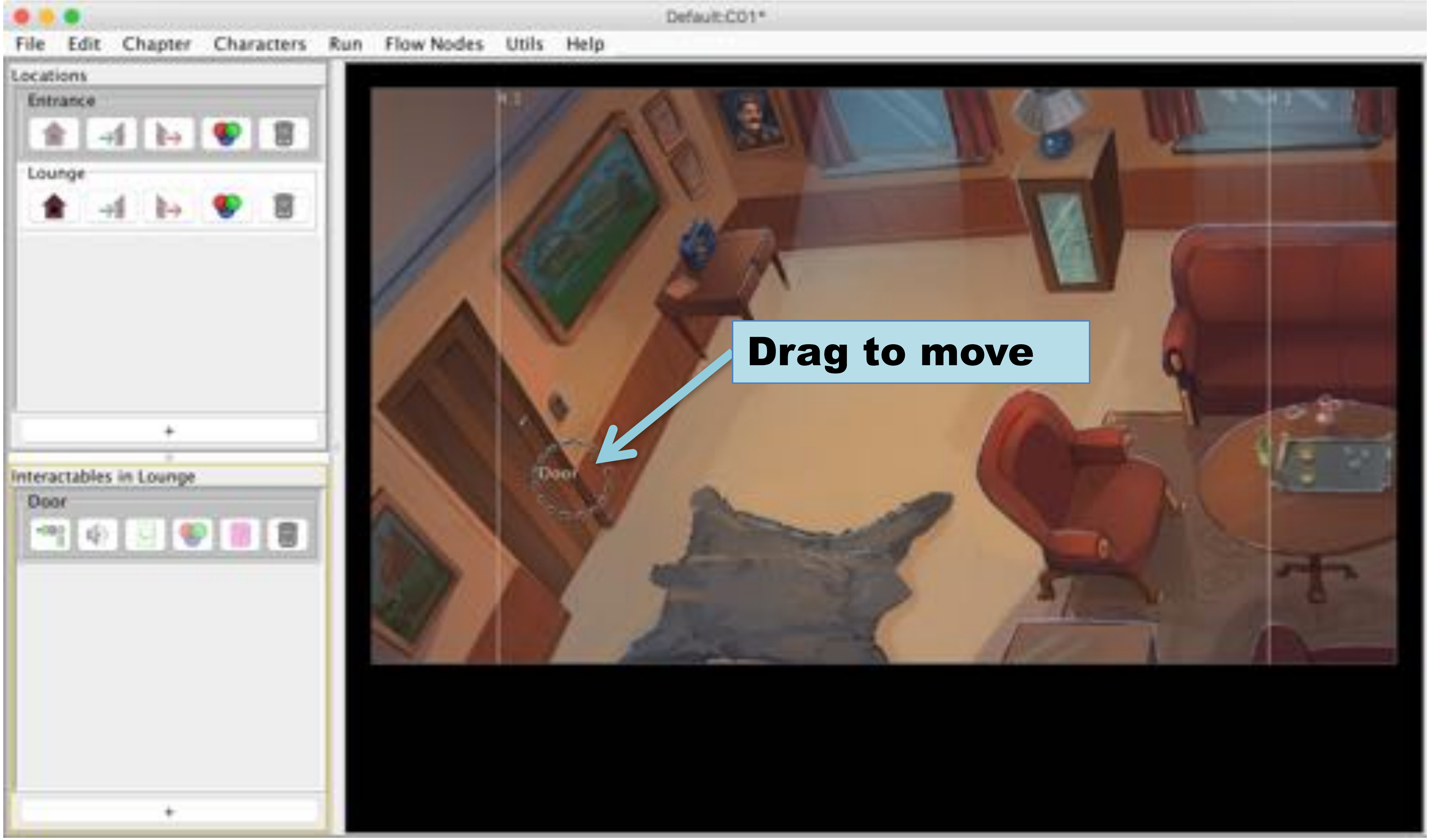
Add interactable



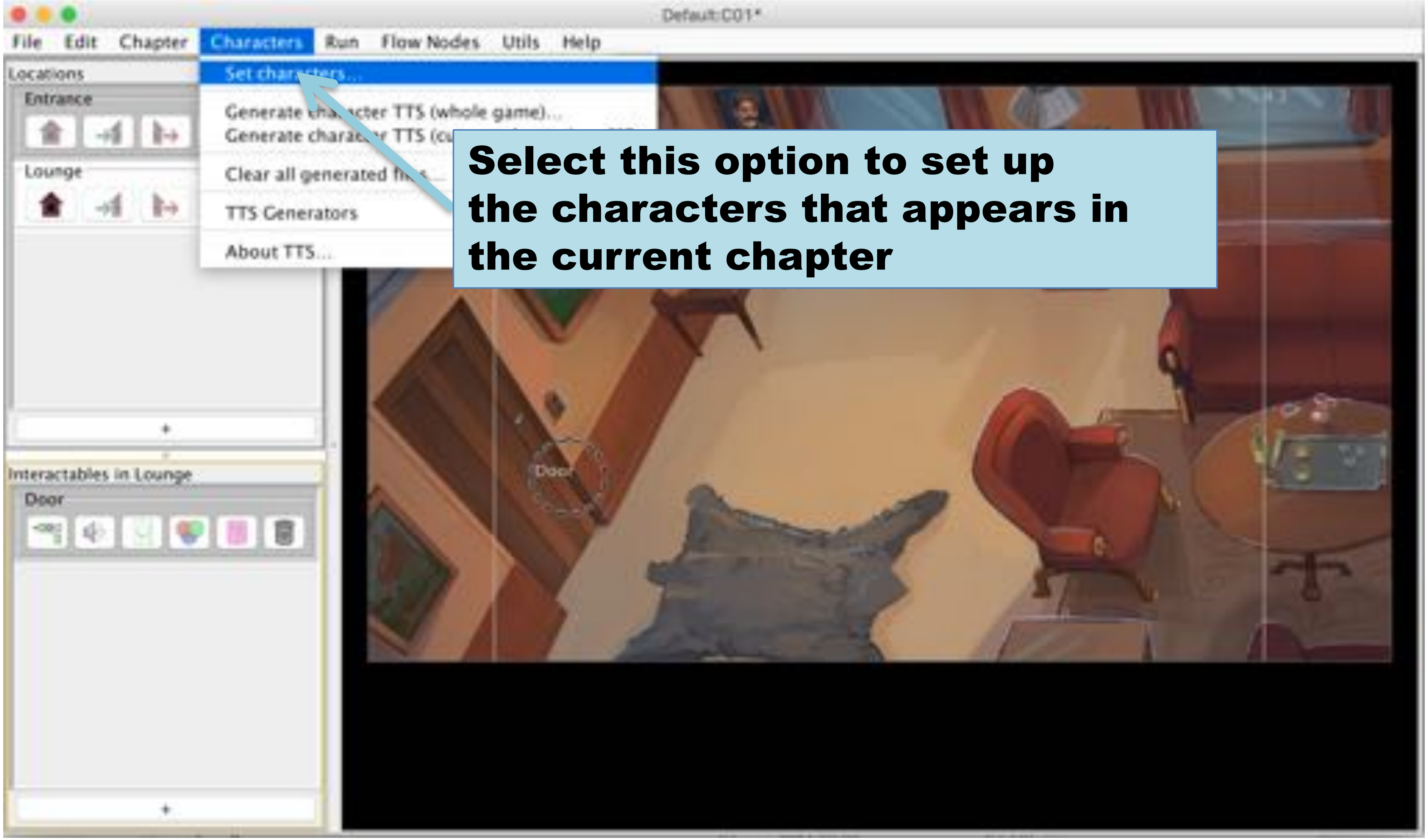
Select a character or specify some other name for this interaction

Door

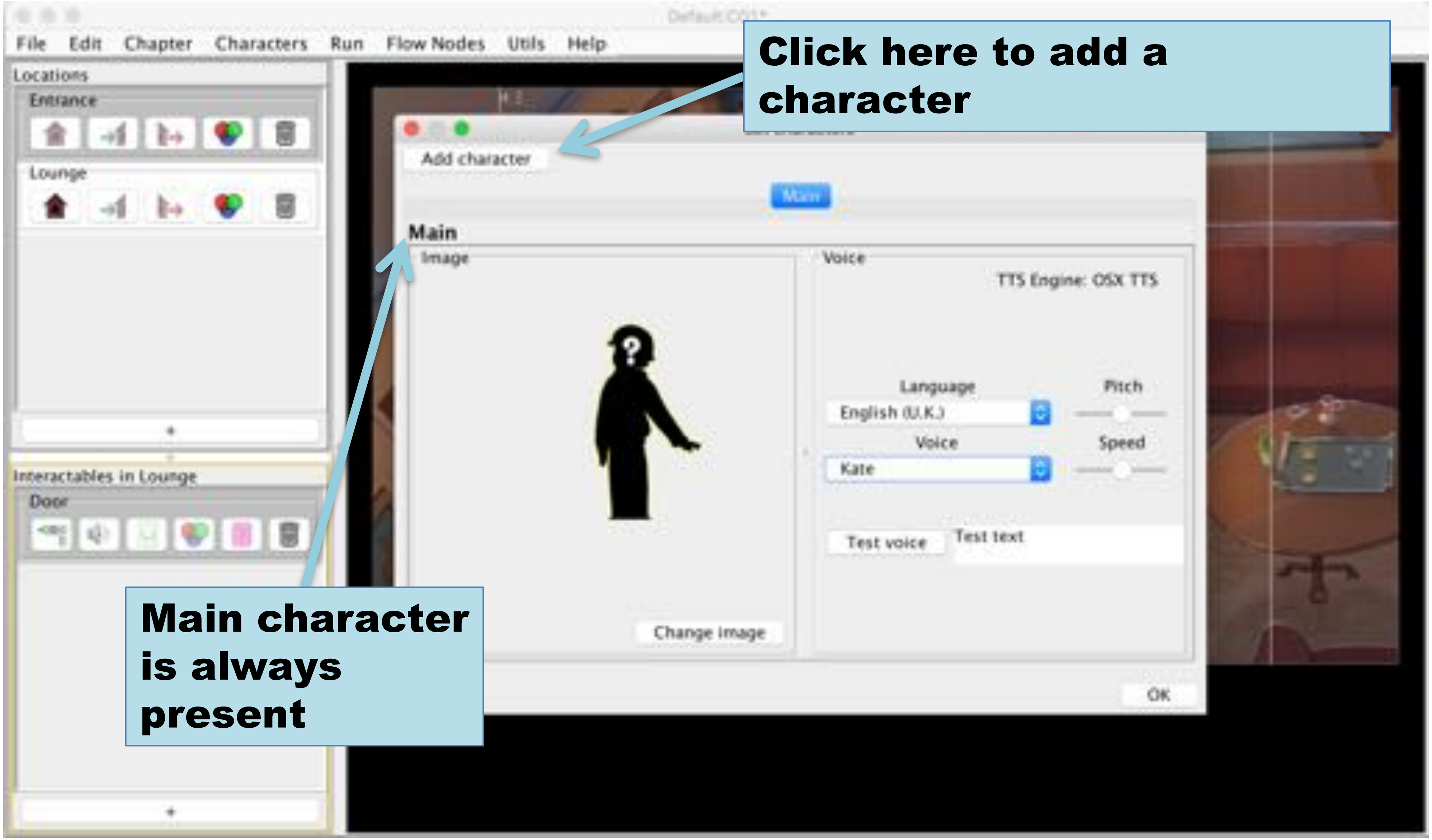
Position of interactable



Add characters



Select this option to set up the characters that appears in the current chapter



Main

TTS Engine: OSX TTS

Language: English (U.K.)

Voice: Kate

Pitch

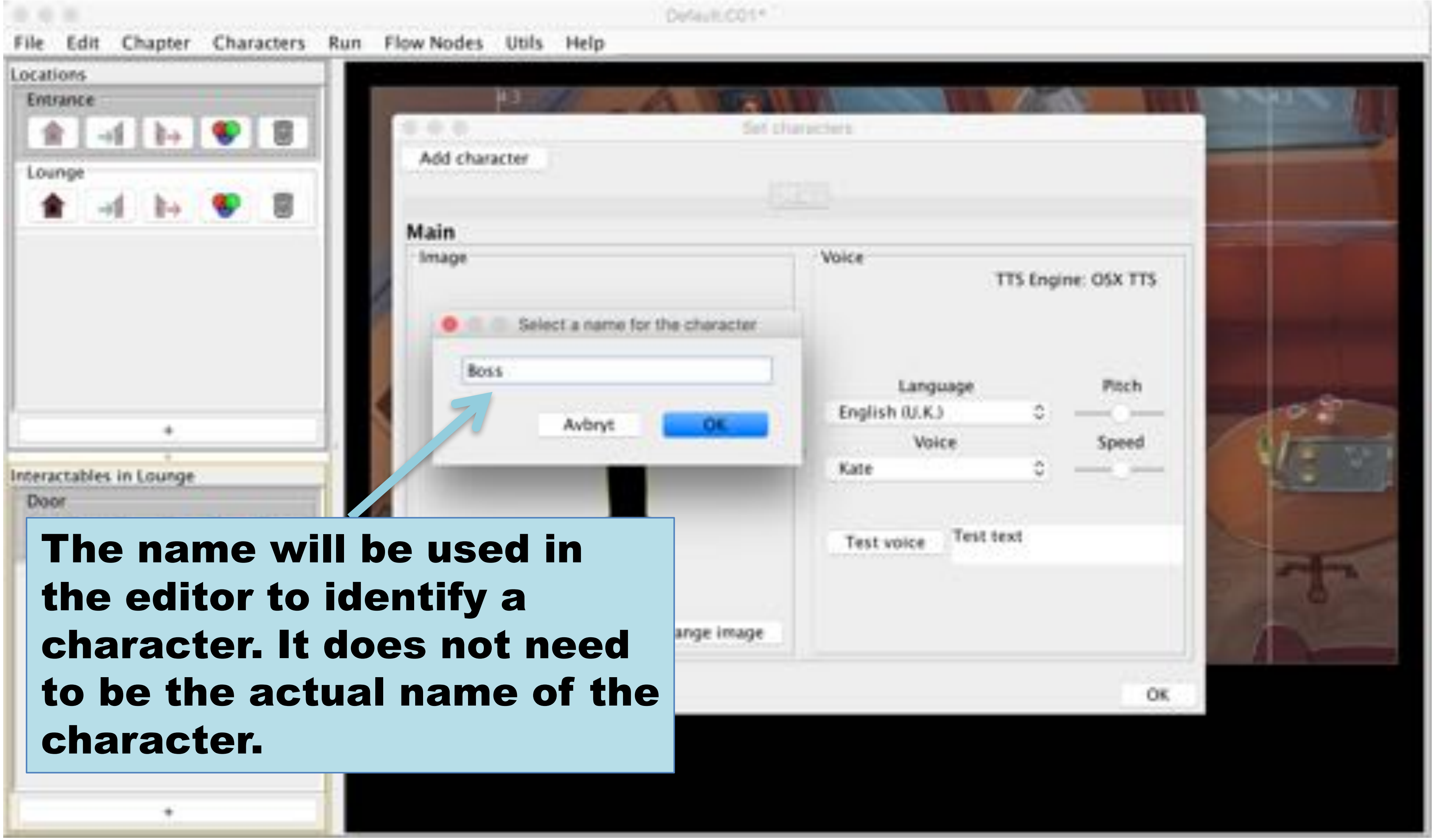
Speed

Test text

Click here to add a character

Main character is always present

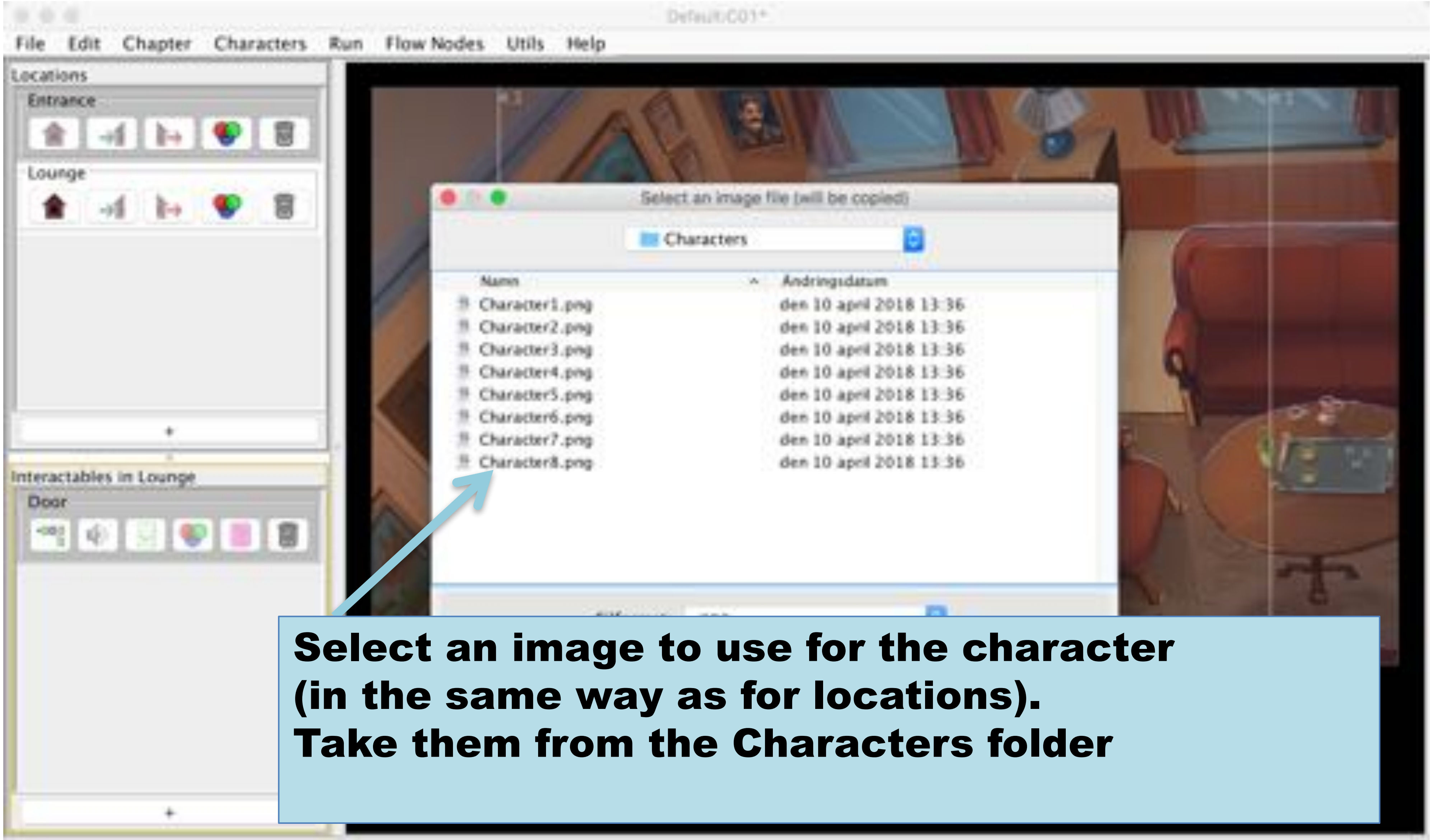
Select a name



Boss

The name will be used in the editor to identify a character. It does not need to be the actual name of the character.

Select an image



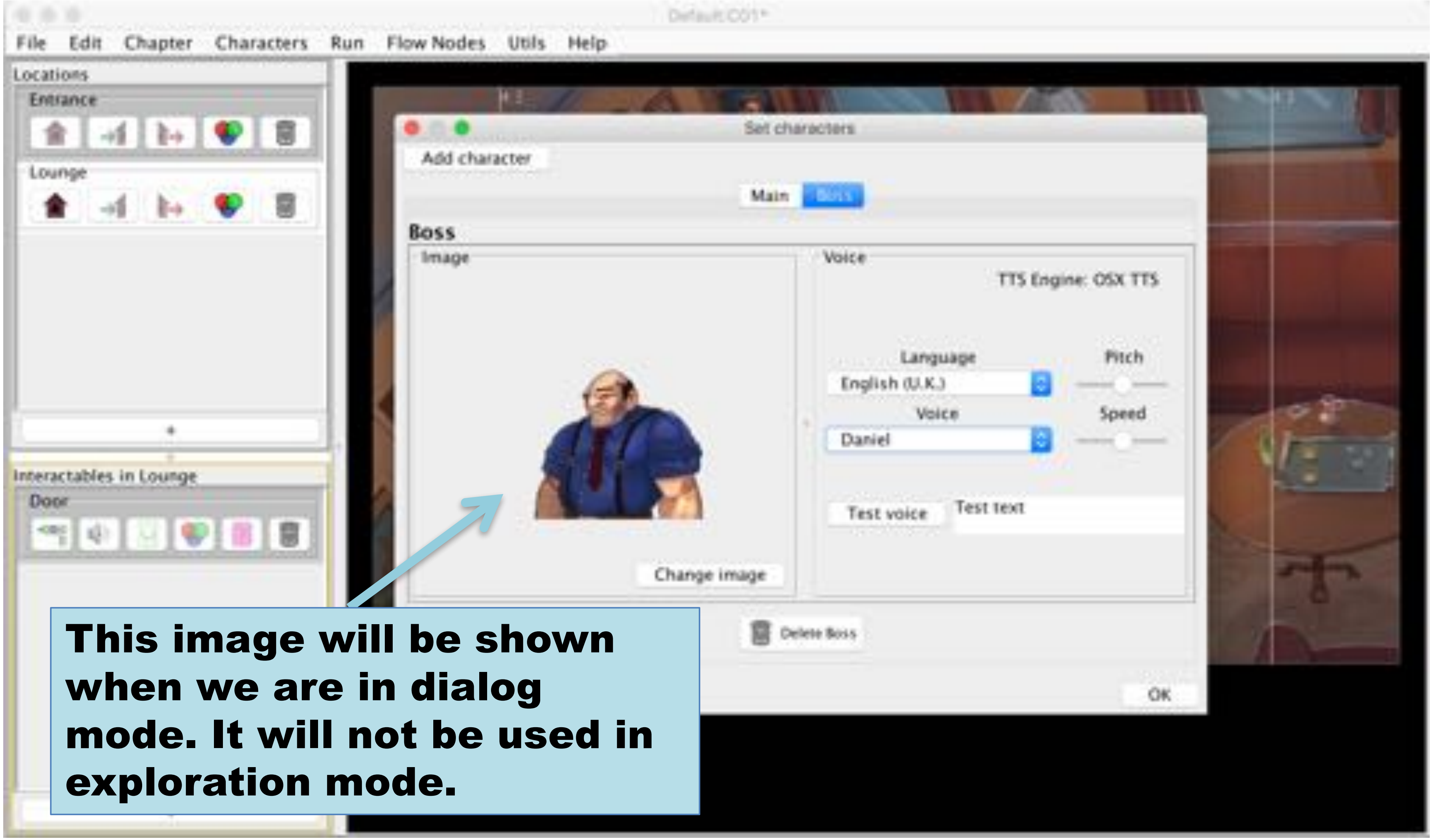
Select an image file (will be copied)

Characters

Namn	Ändringsdatum
Character1.png	den 10 april 2018 13:36
Character2.png	den 10 april 2018 13:36
Character3.png	den 10 april 2018 13:36
Character4.png	den 10 april 2018 13:36
Character5.png	den 10 april 2018 13:36
Character6.png	den 10 april 2018 13:36
Character7.png	den 10 april 2018 13:36
Character8.png	den 10 april 2018 13:36

Select an image to use for the character (in the same way as for locations). Take them from the Characters folder

Dialog image



TTS Engine: OSX TTS

Language: English (U.K.)

Voice: Daniel

Test text

This image will be shown when we are in dialog mode. It will not be used in exploration mode.

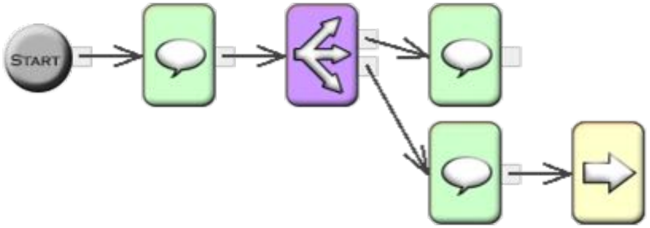
Flow Node Basics

Flow nodes model the logic of interactable

Role of Flow Nodes

- Flow nodes are used to create graphs that models the logic of an interactable
- When an interactable is selected, the game enters ”dialog mode” and the start node is activated (the root)

- The graph is then traversed according to the conditions and dialog choices
- When a leaf node (a node without exit connection) is reached, the game returns to ”exploration mode”



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Node types

Act – non-interactive dialog text with actor names

Dialog – a dialog choice with up to four options

Condition – Routes the flow depending on conditional expressions using variables

Fork, or ”first time fork” – enables a separate flow the first time the node is visited

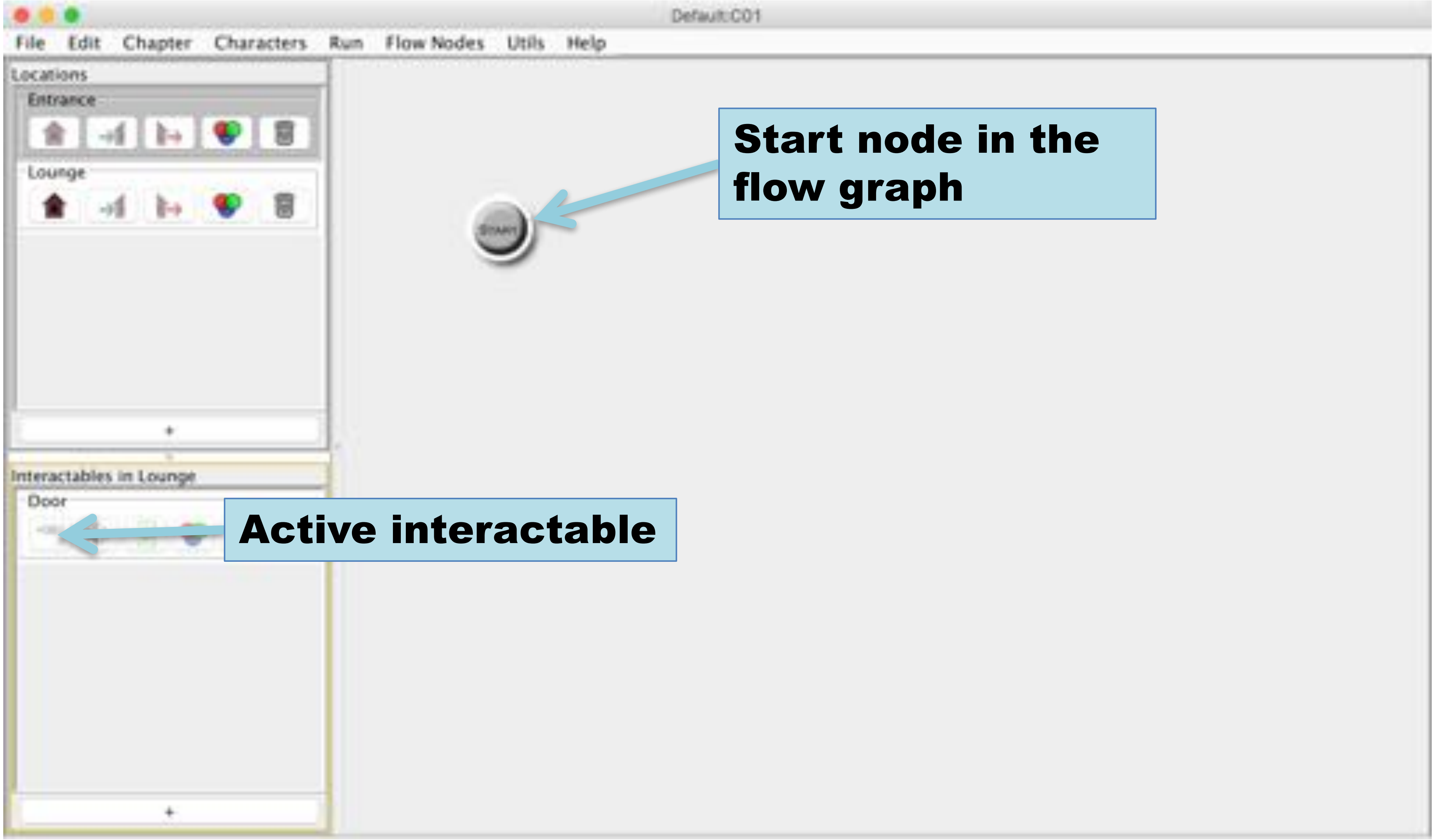
Set variable – sets a value to a Boolean variable (true or false)

Transition – changes the active location

Code – used to control various special interaction in the unity engine. Is used primarily to signal end of chapter

Dice – a random exit is selected

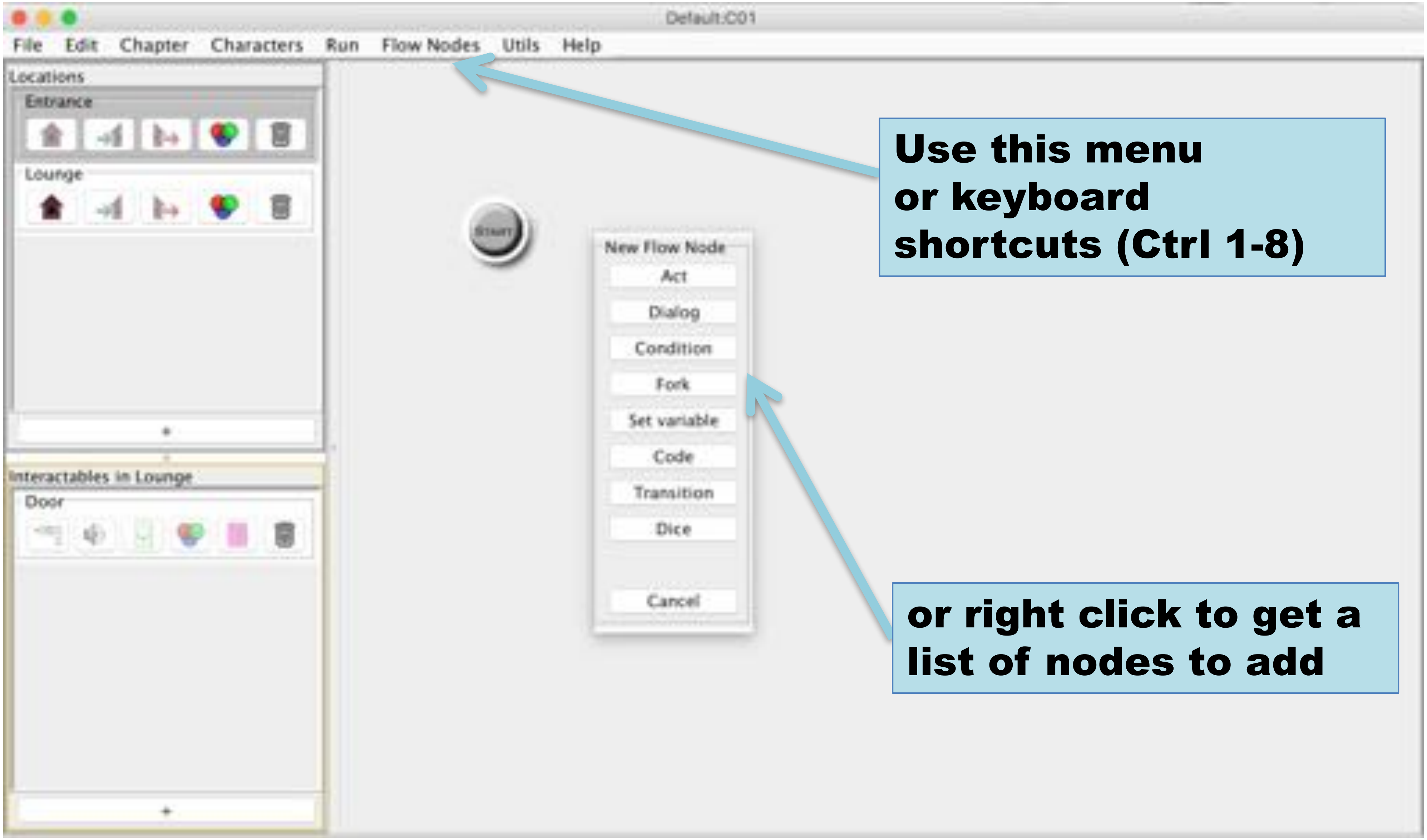
Editing Flow Nodes



Start node in the flow graph

Active interactable

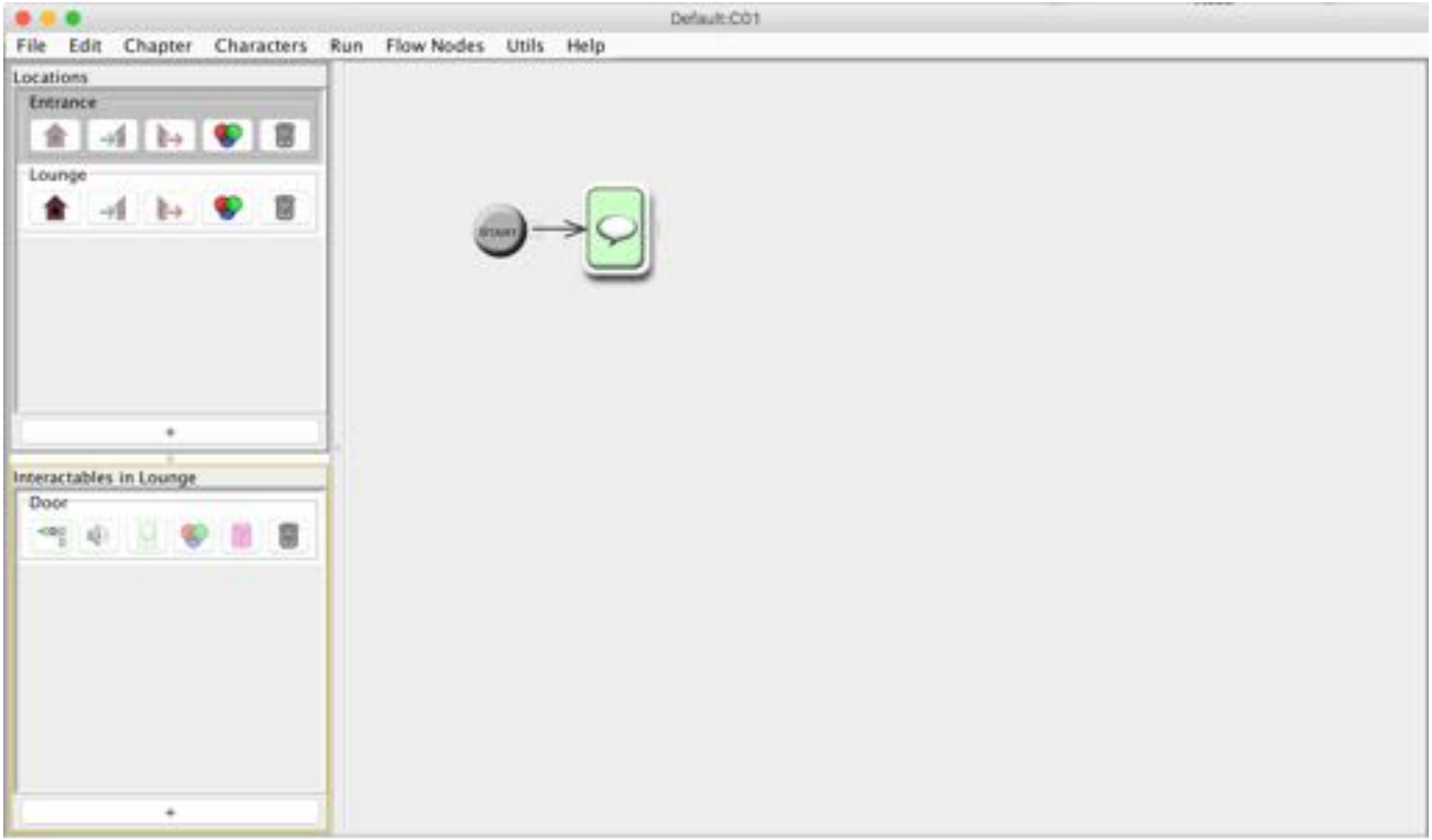
Add a flow node



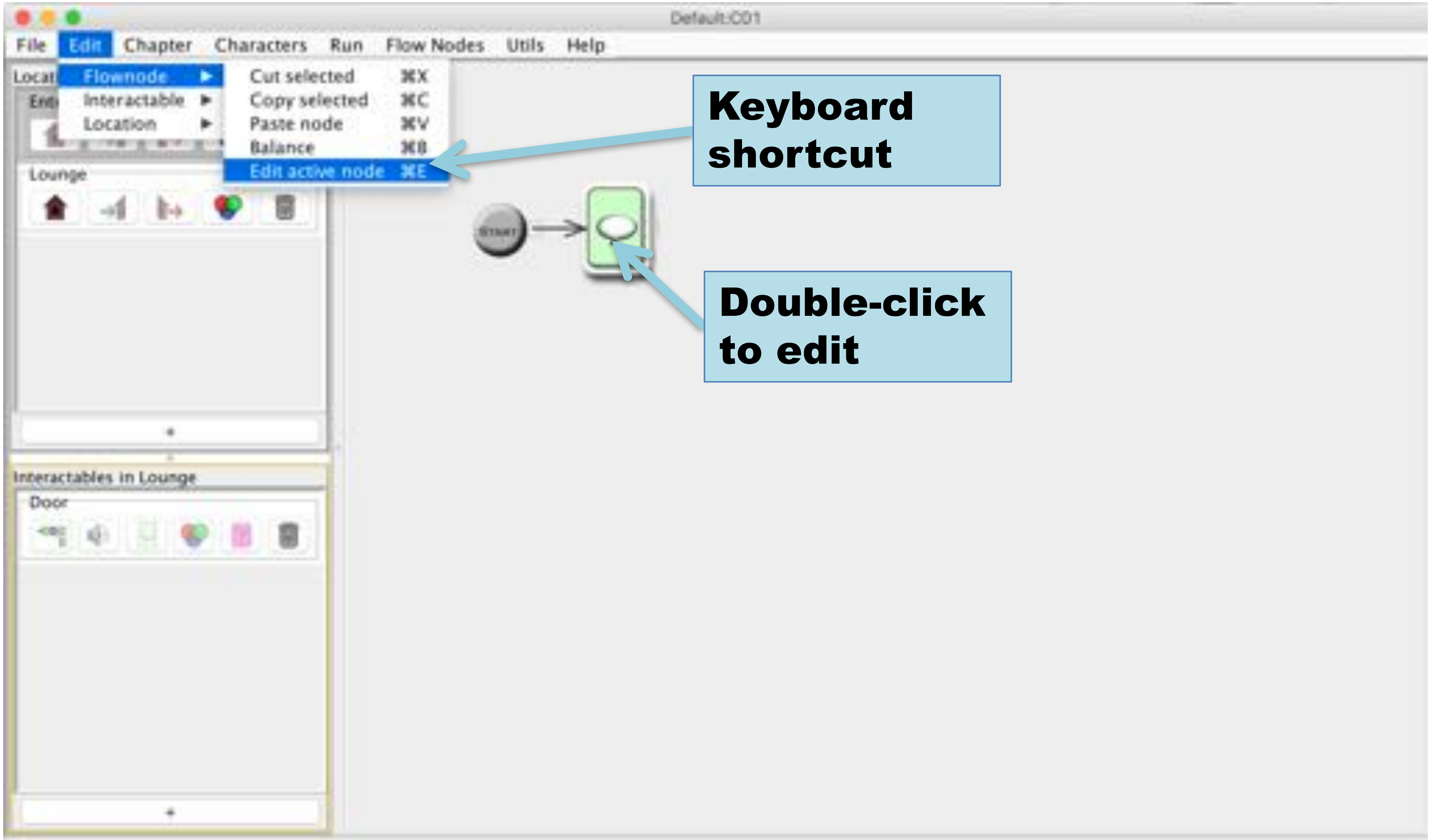
Use this menu or keyboard shortcuts (Ctrl 1-8)

or right click to get a list of nodes to add

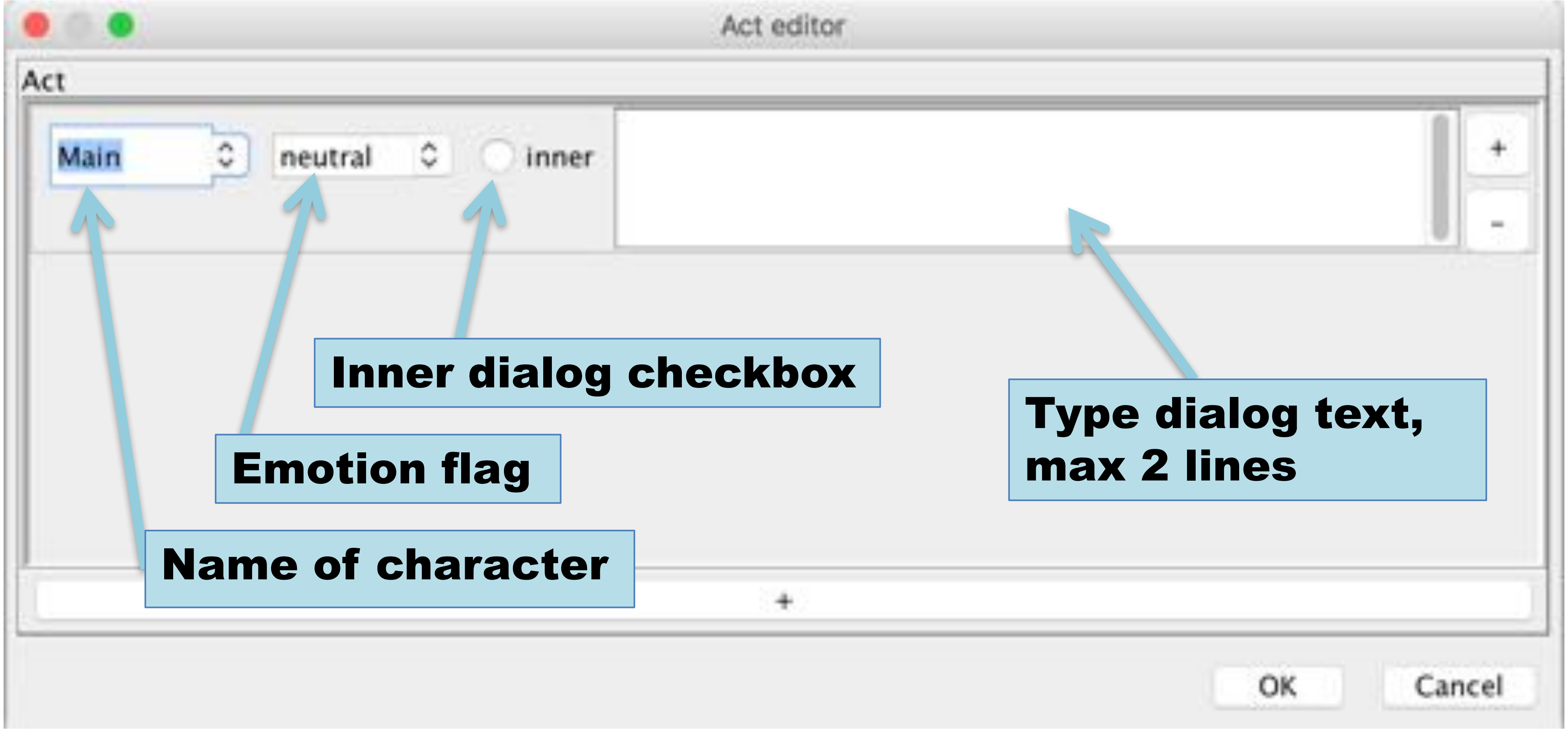
Act node


Default:C01
File
Edit
Chapter
Characters
Run
Flow Nodes
Utils
Help
Locations
Entrance
Lounge
+
Interactables in Lounge
Door
+
START

Double-click to edit node or use ctrl-e (⌘-e on mac)



Act editor window



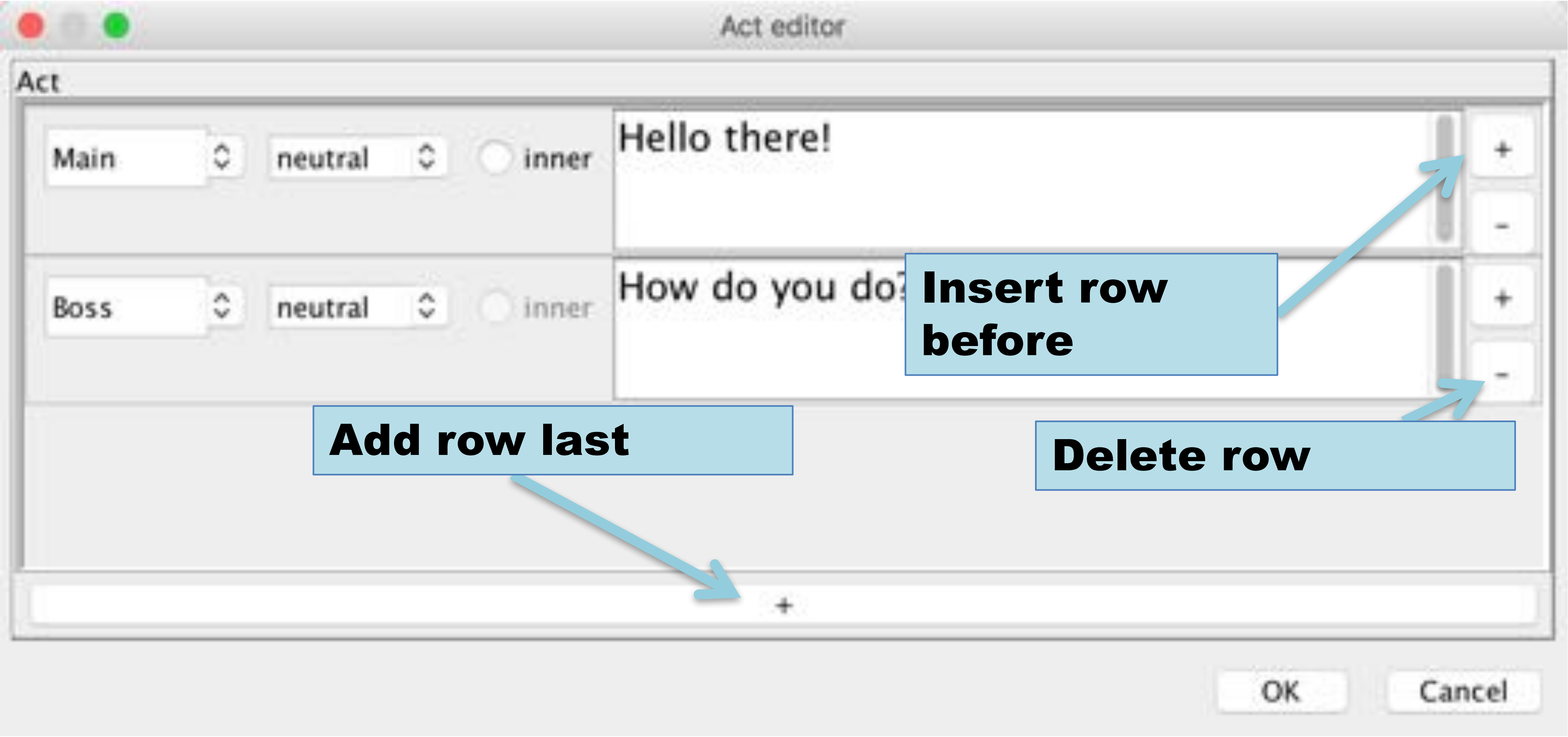
Inner dialog checkbox

Type dialog text, max 2 lines

Emotion flag

Name of character

Add rows



Act editor

Act

Main | neutral | ○ inner | Hello there!

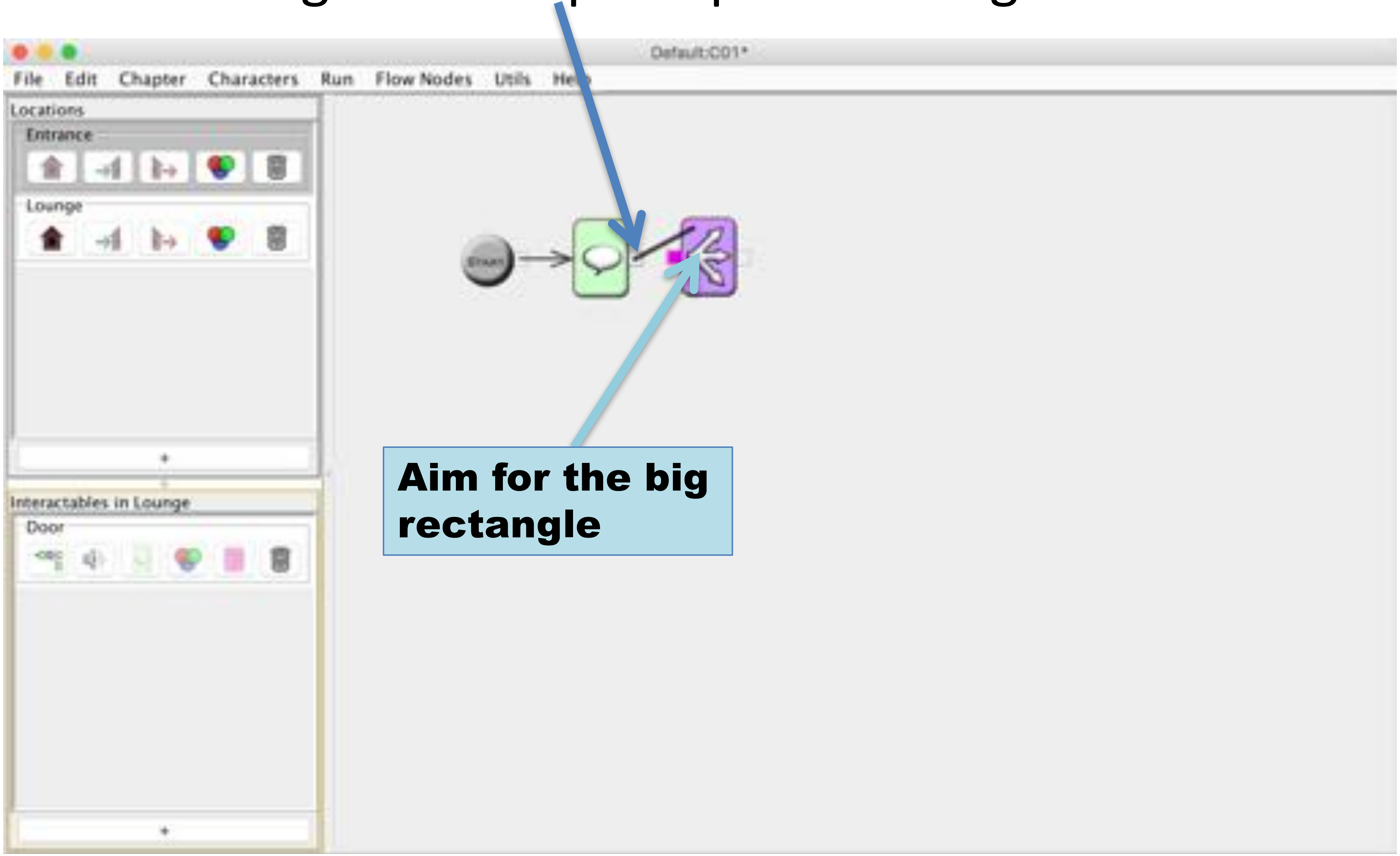
Boss | neutral | ○ inner | How do you do?

Insert row before

Add row last

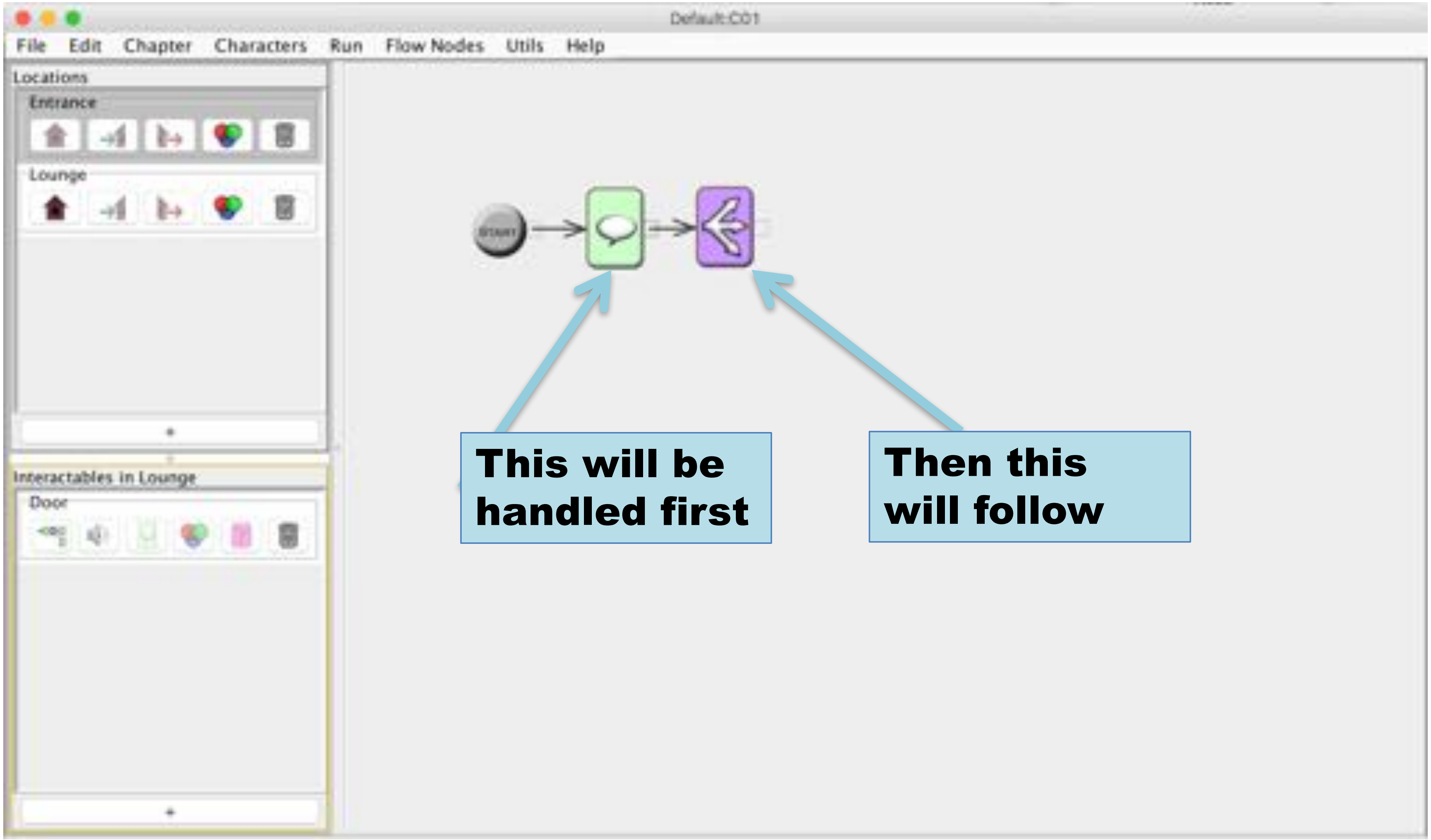
Delete row

Connect nodes:
Drag from output square to target node



Aim for the big rectangle

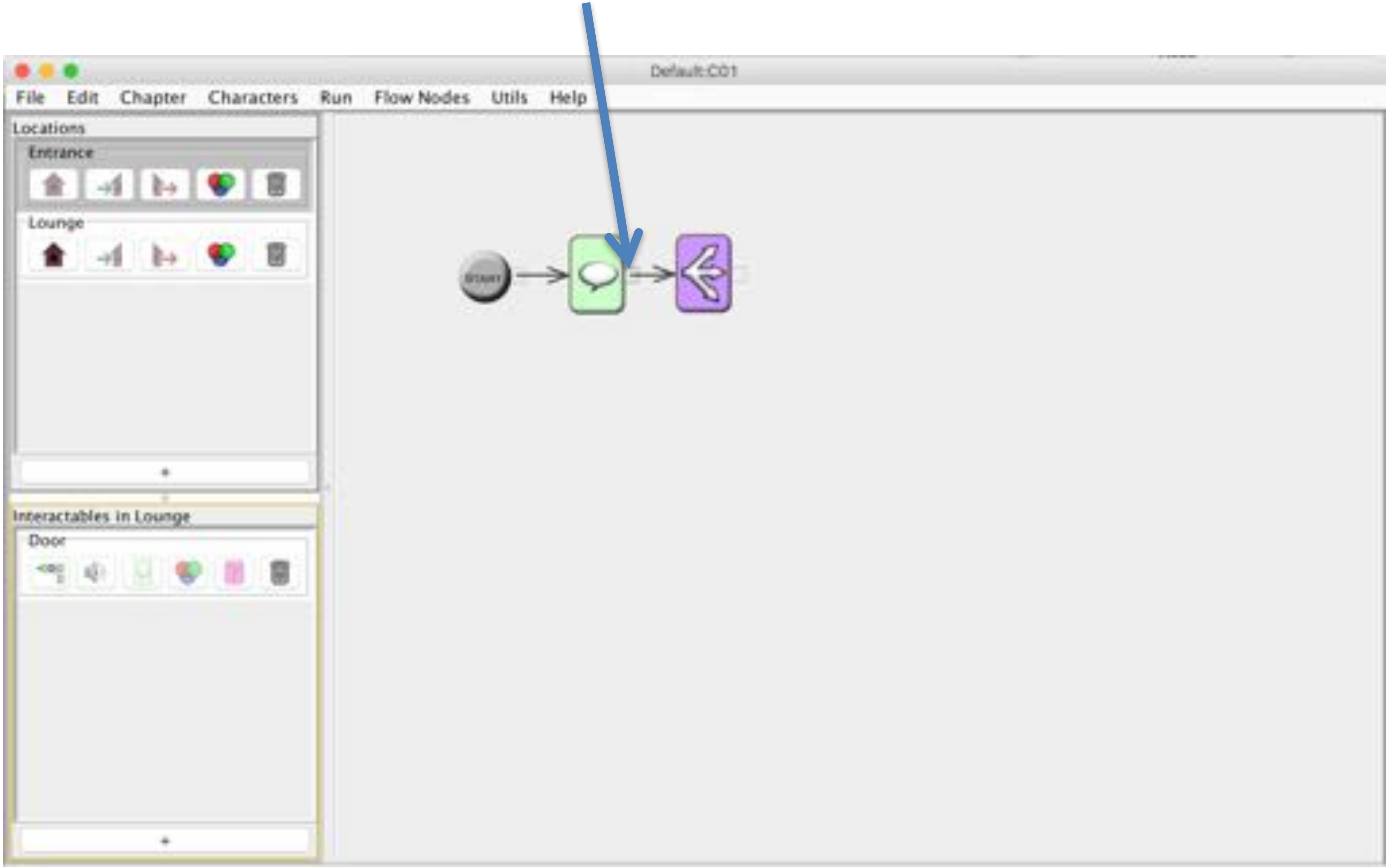
Arrows indicate flow



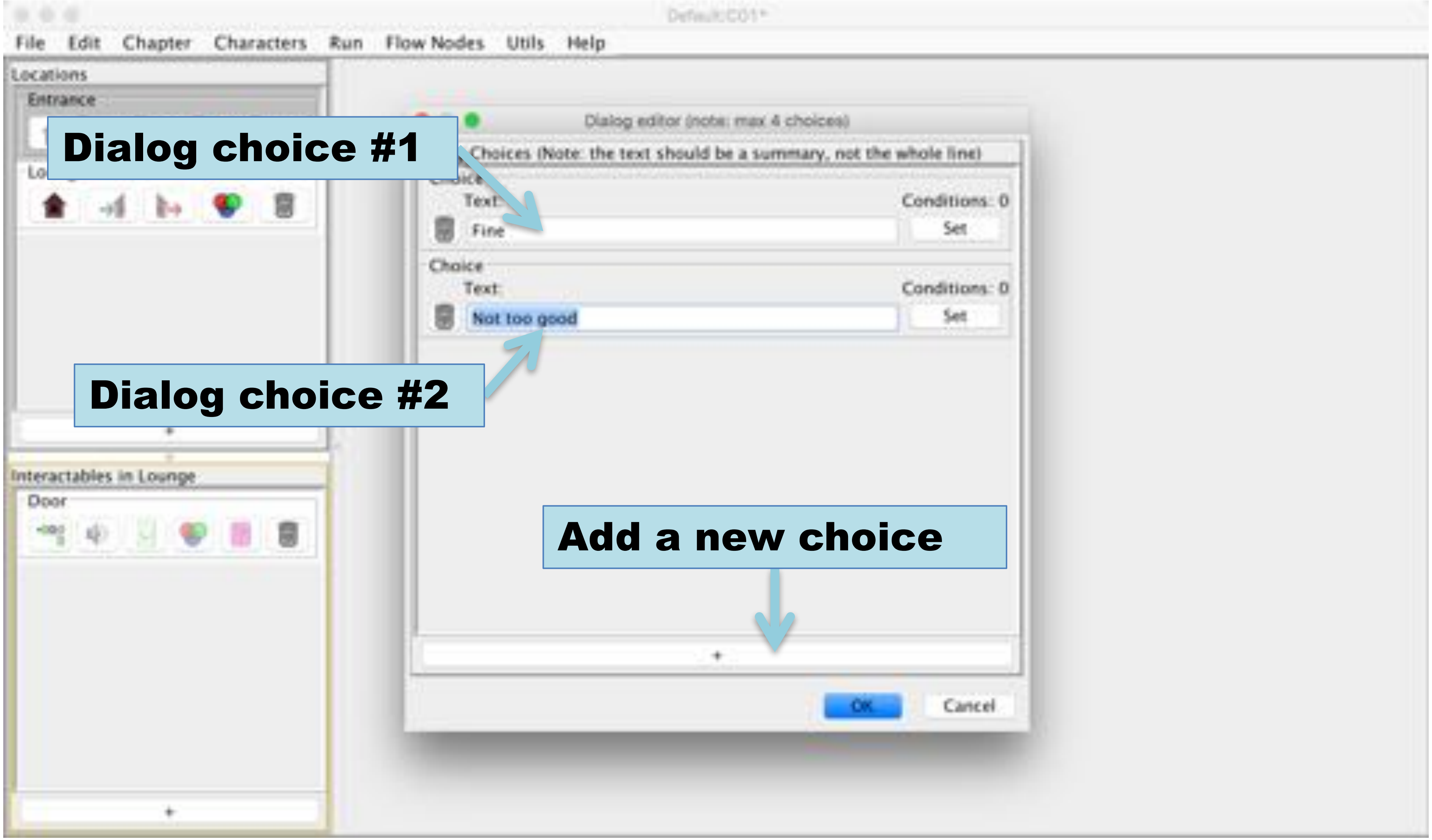
This will be handled first

Then this will follow

Double-click the square to delete connection



Dialog node



Dialog editor (note: max 4 choices)

Choices (Note: the text should be a summary, not the whole line)

Choice

Text: Fine

Conditions: 0

Choice

Text: Not too good

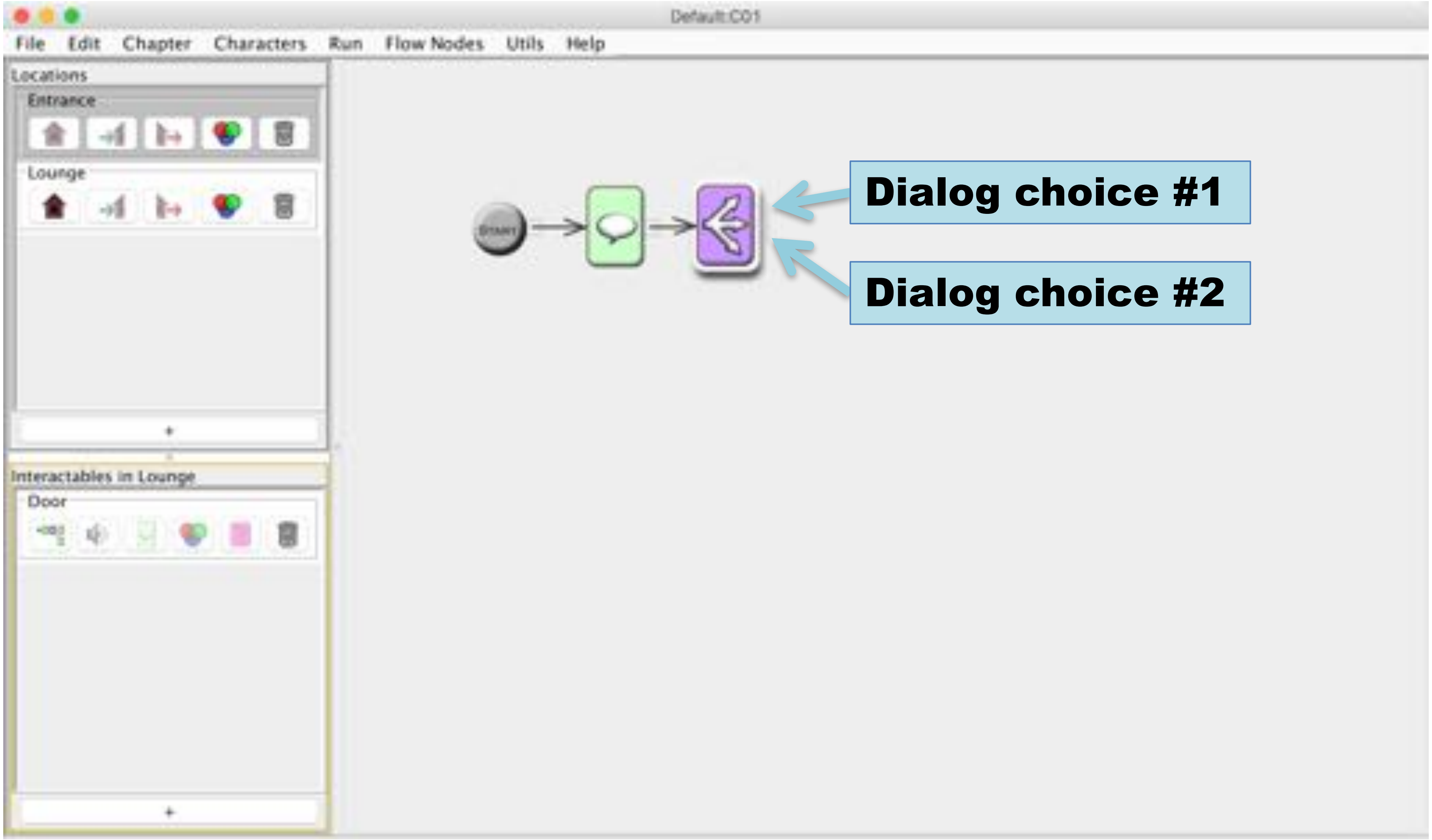
Conditions: 0

Dialog choice #1

Dialog choice #2

Add a new choice

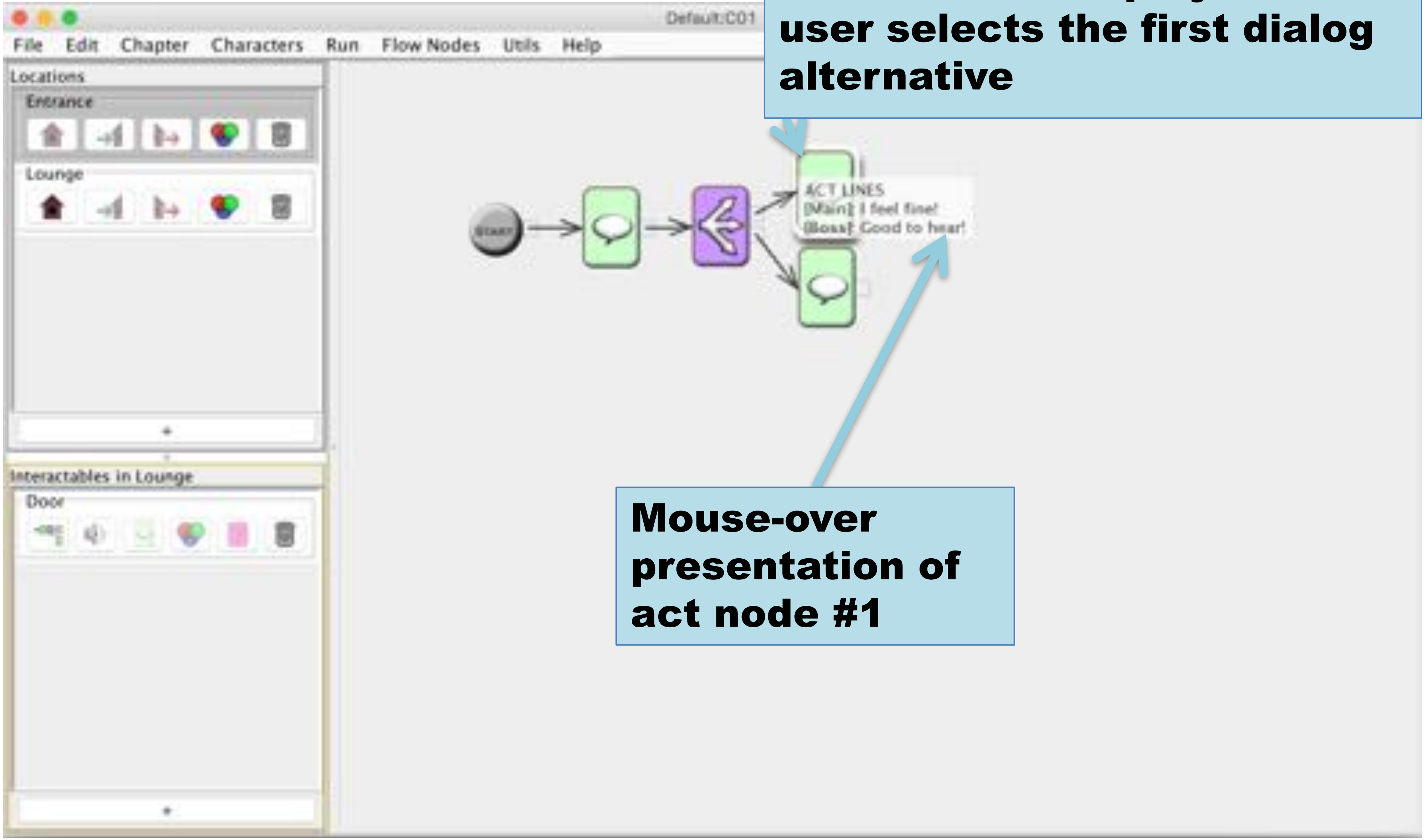
Dialog outputs



Dialog choice #1

Dialog choice #2

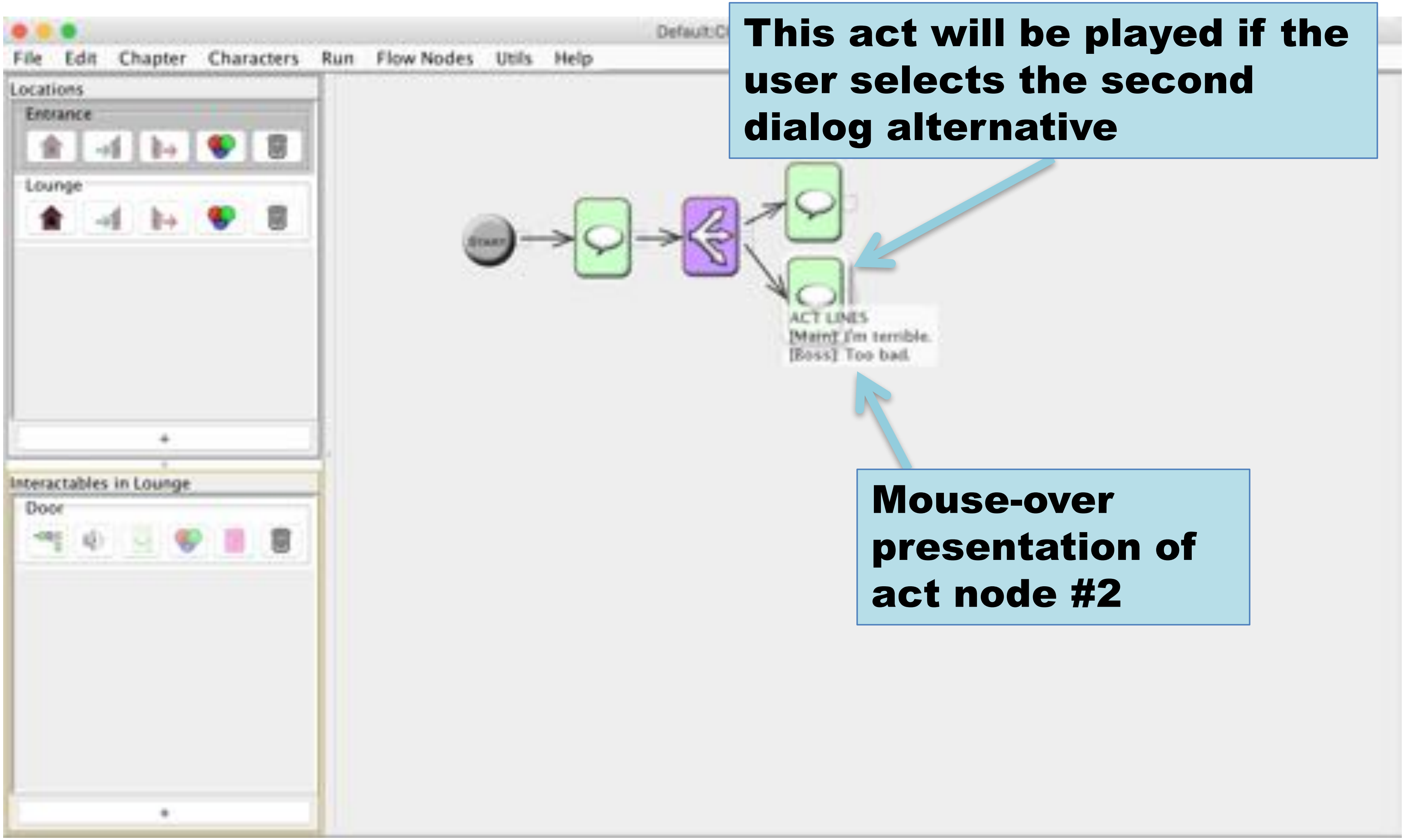
Connect output to different act nodes



ACT LINES
[Main]: I feel fine!
[Boss]: Good to hear!

This act will be played if the user selects the first dialog alternative

Mouse-over presentation of act node #1



ACT LINES
[Main] I'm terrible.
[Boss] Too bad.

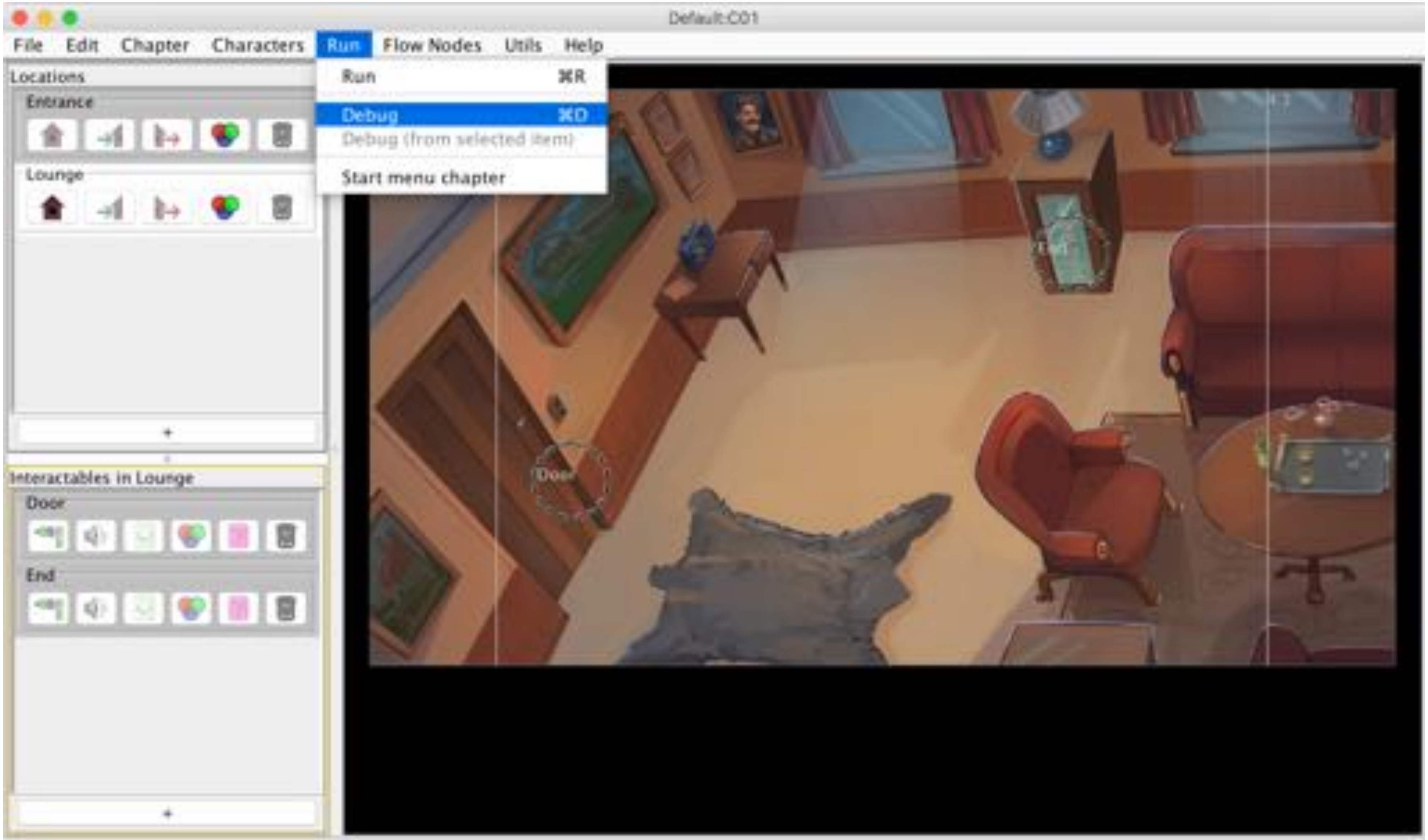
This act will be played if the user selects the second dialog alternative

Mouse-over presentation of act node #2

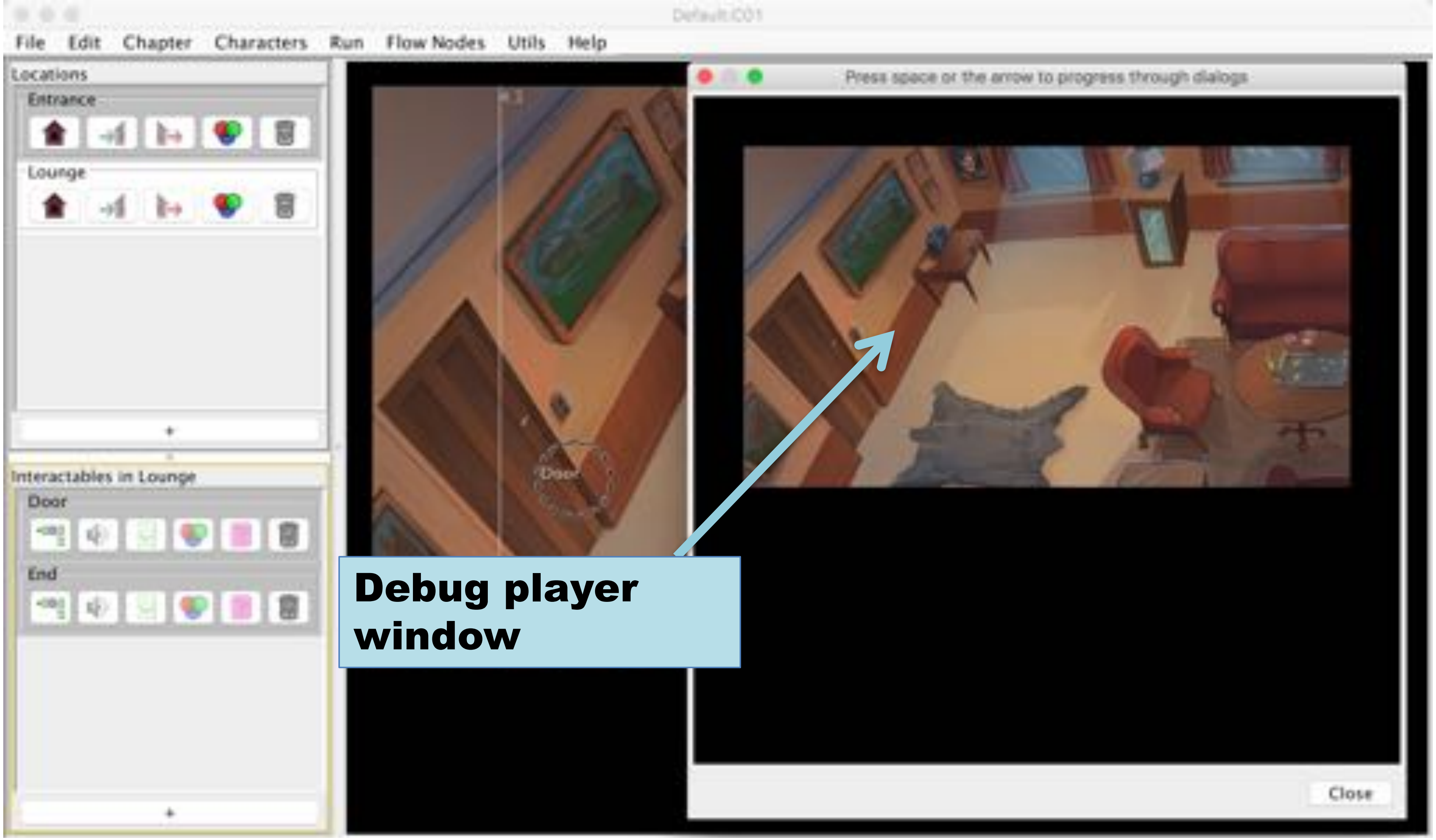
Debug Game Logic

Using the built in player to test the logic

Select Run→Debug



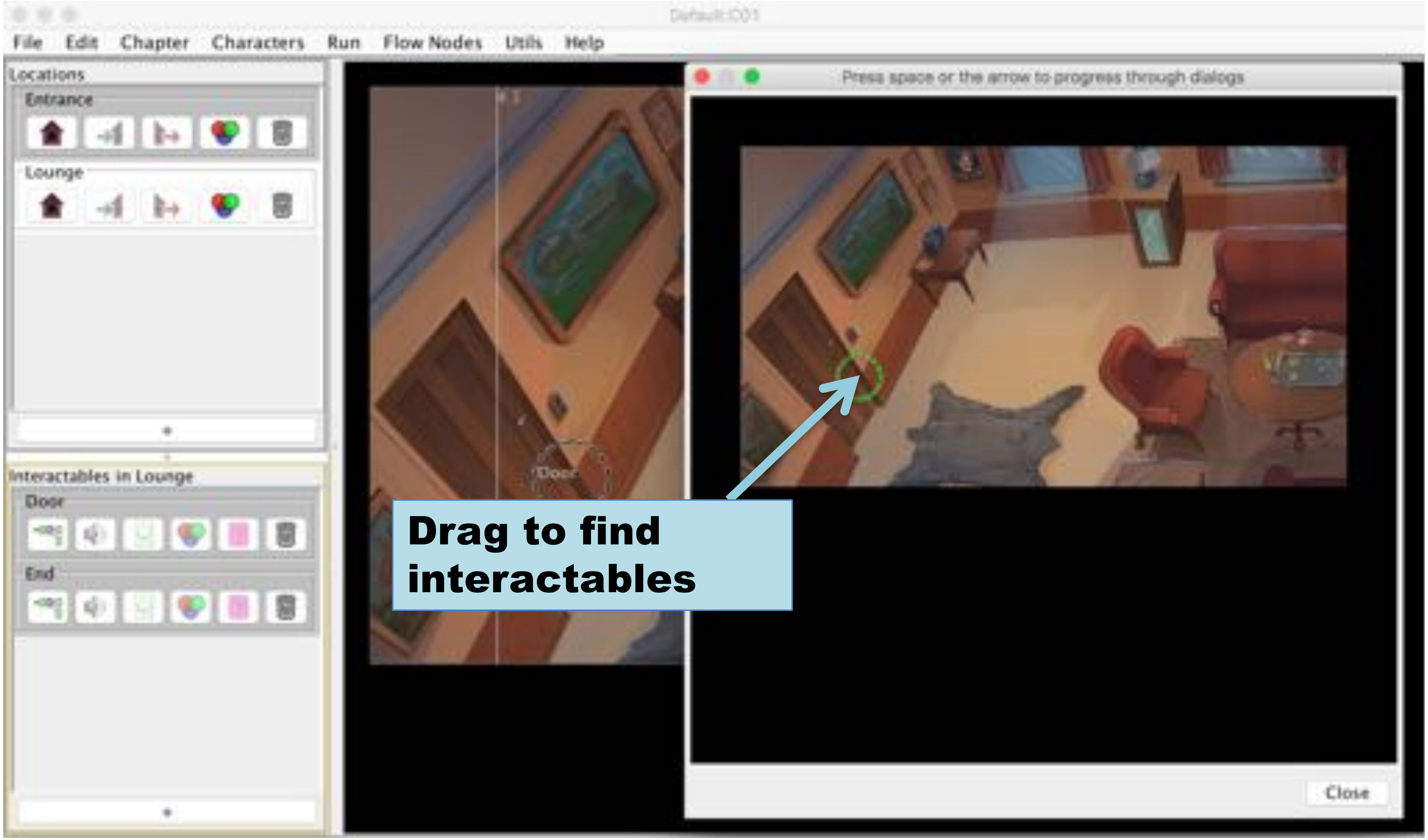
Debugger let you play the game and follow the game logic



Press space or the arrow to progress through dialogs

Debug player window

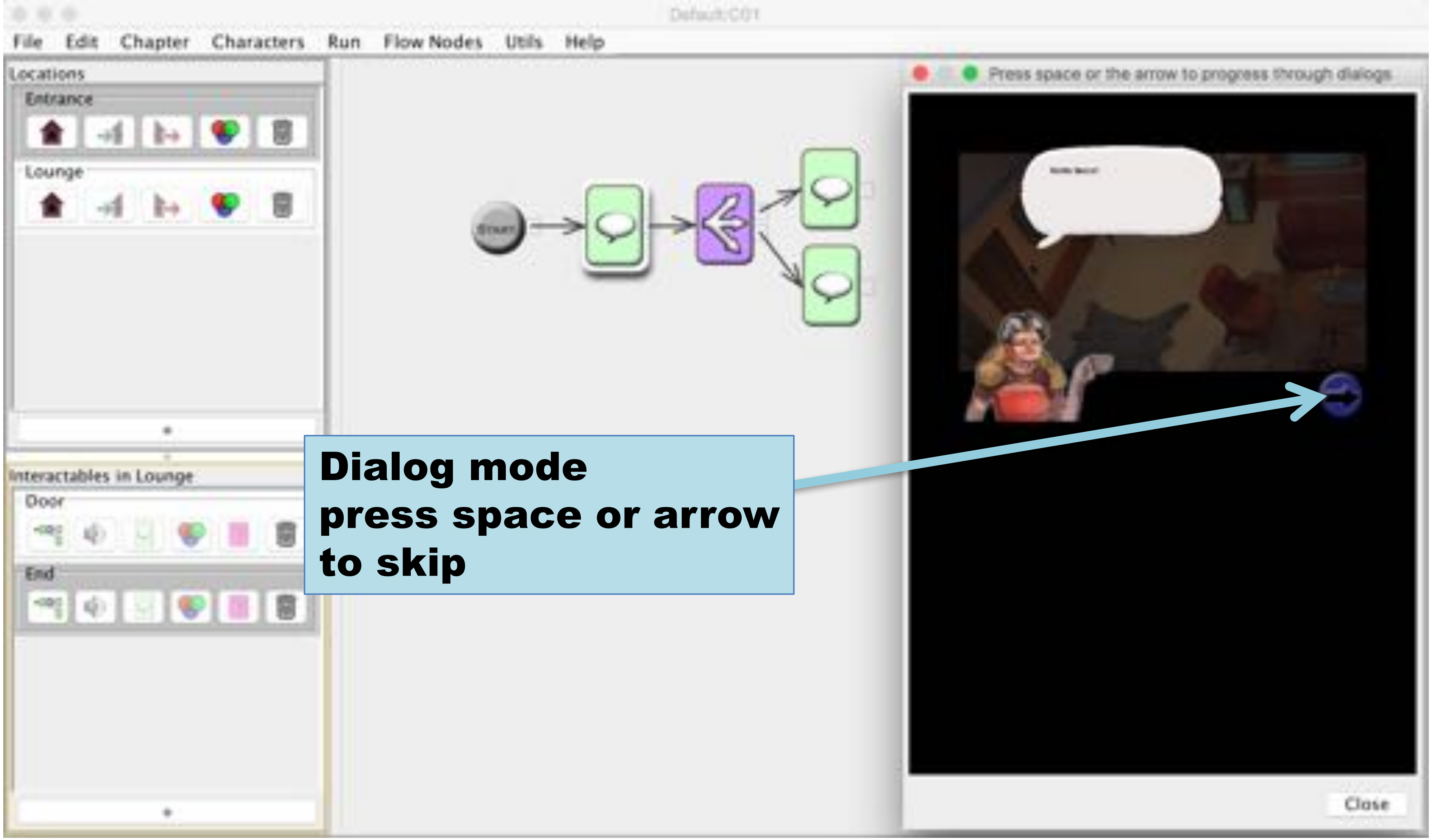
Exploration mode



Press space or the arrow to progress through dialogs

Drag to find interactables

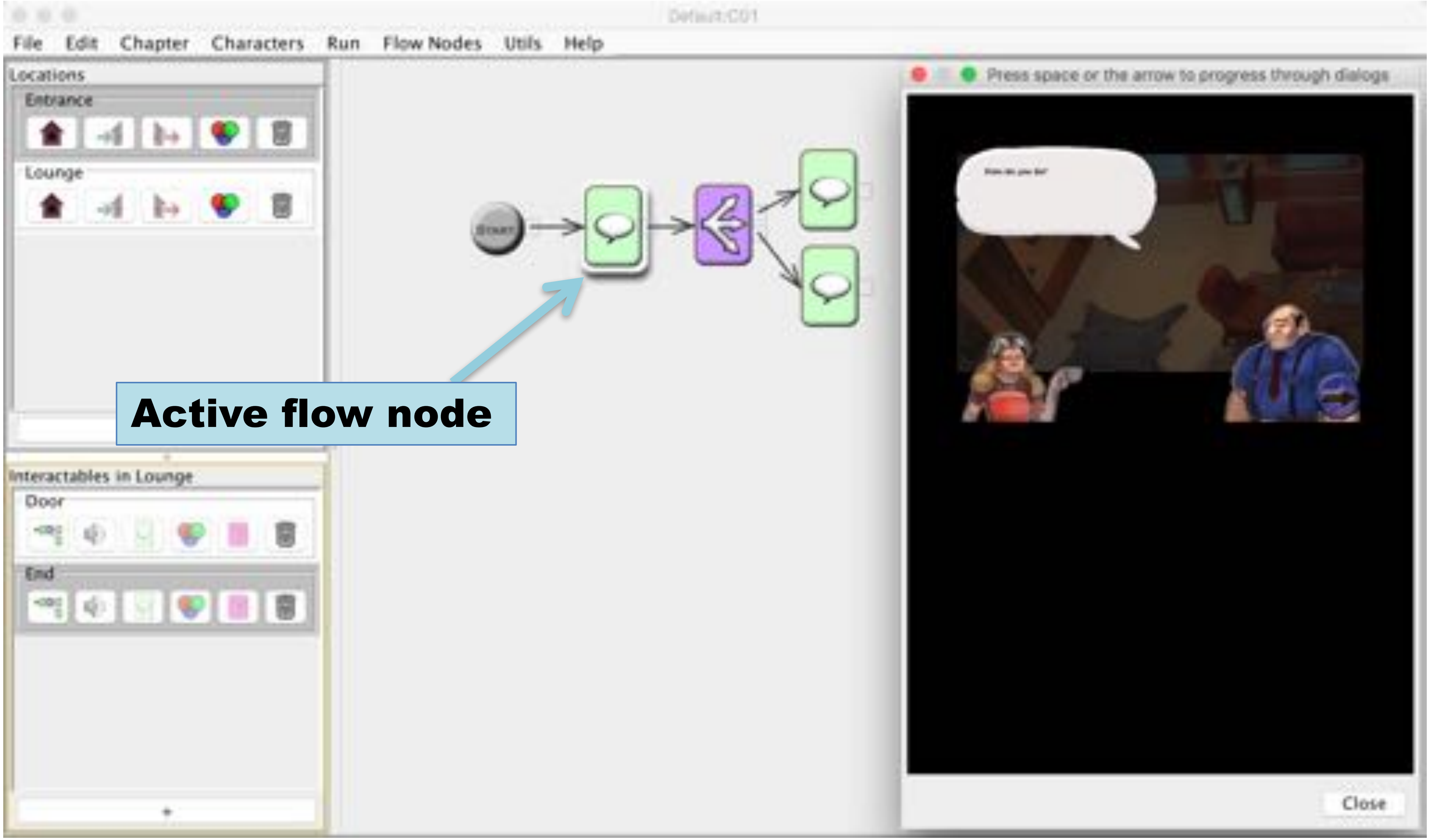
Dialog mode



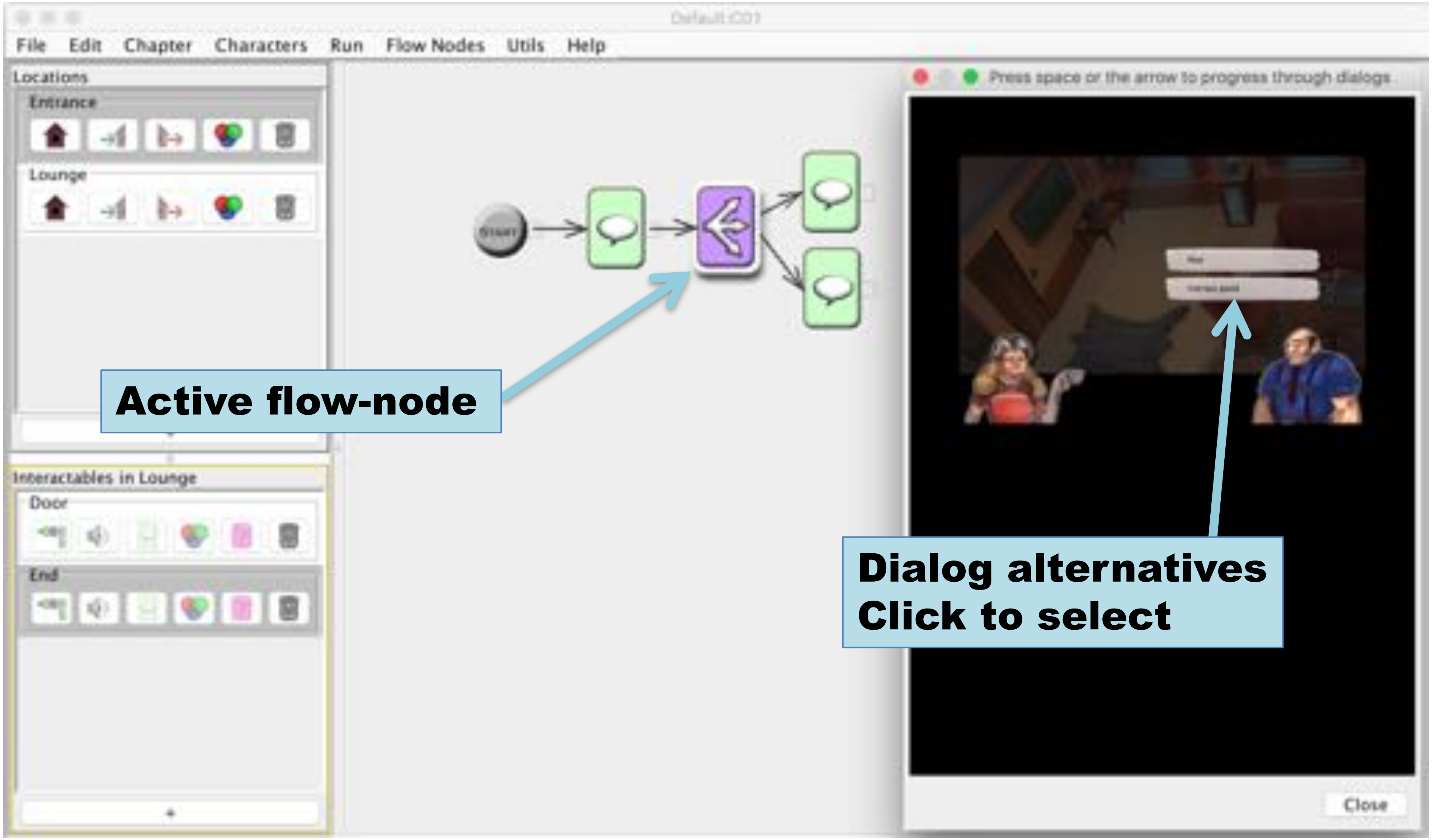
Press space or the arrow to progress through dialogs

Dialog mode
press space or arrow to skip

The active flow node is highlighted


Default:C01
File Edit Chapter Characters Run Flow Nodes Utils Help
Locations
Entrance
Lounge
Interactables in Lounge
Door
End
START
Press space or the arrow to progress through dialogs
Close

Active flow node

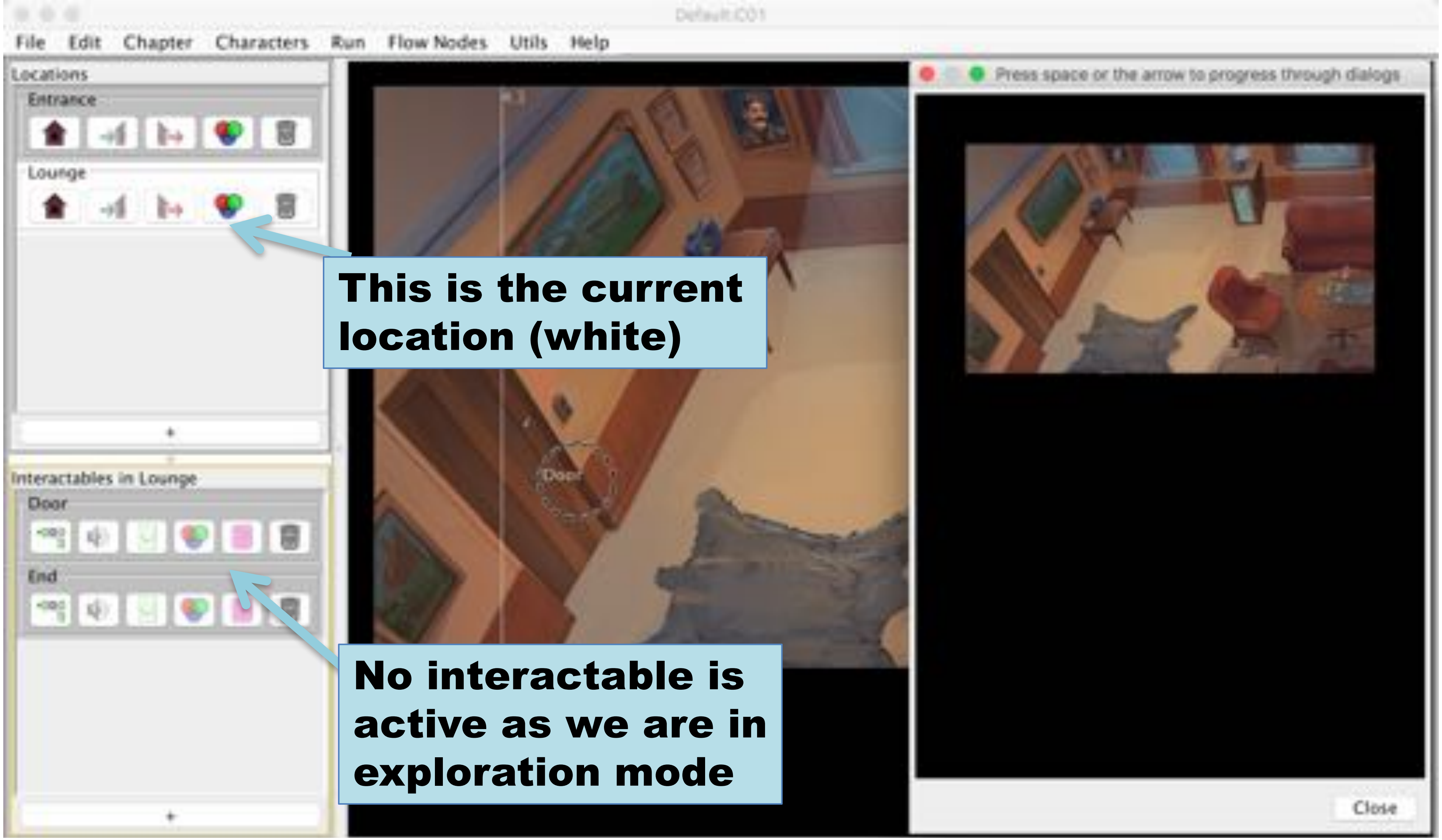


Press space or the arrow to progress through dialogs

Active flow-node

Dialog alternatives
Click to select

Interactables and locations are also highlighted



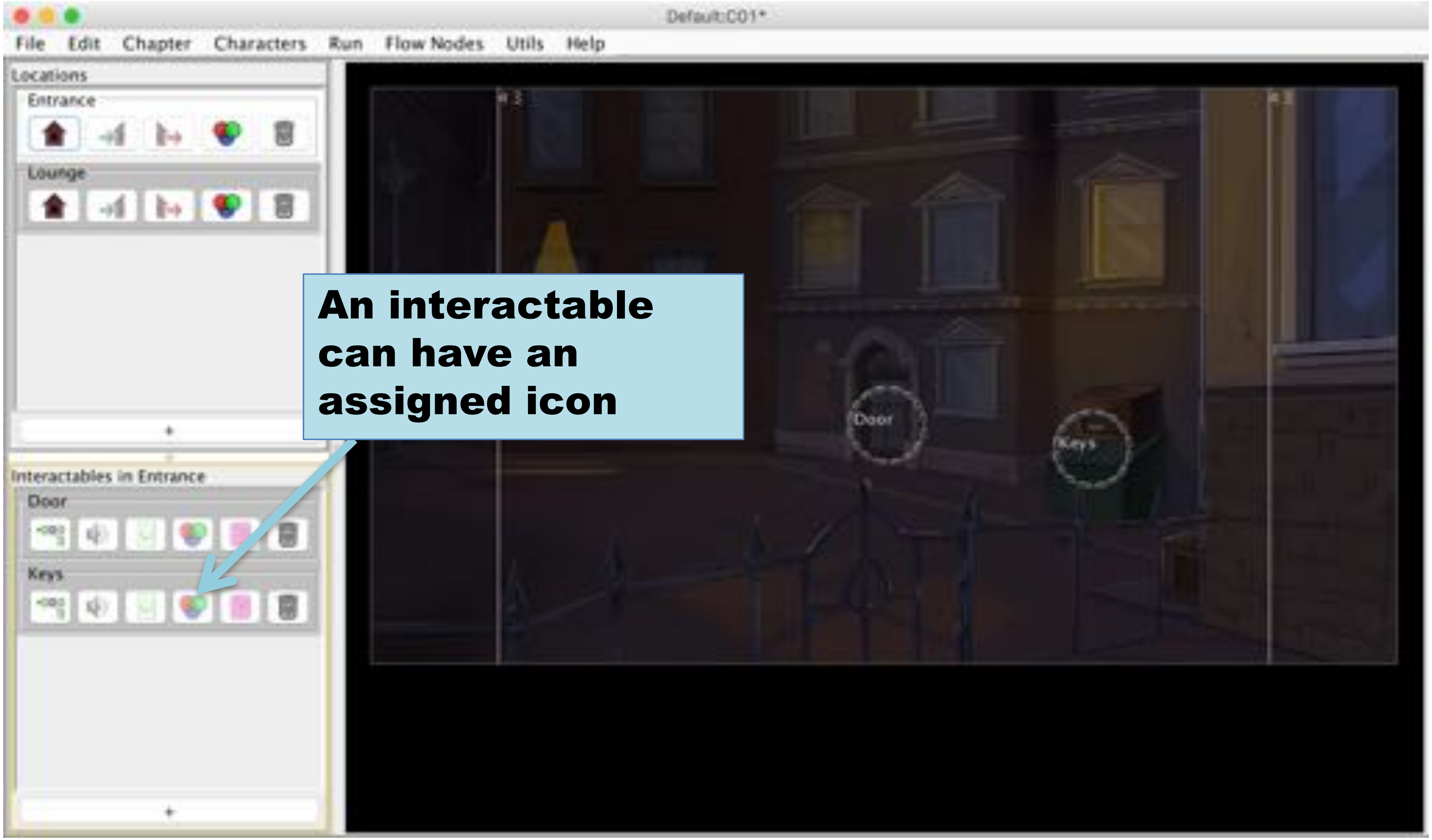
This is the current location (white)

No interactable is active as we are in exploration mode

Interactables’ Icon and Audio

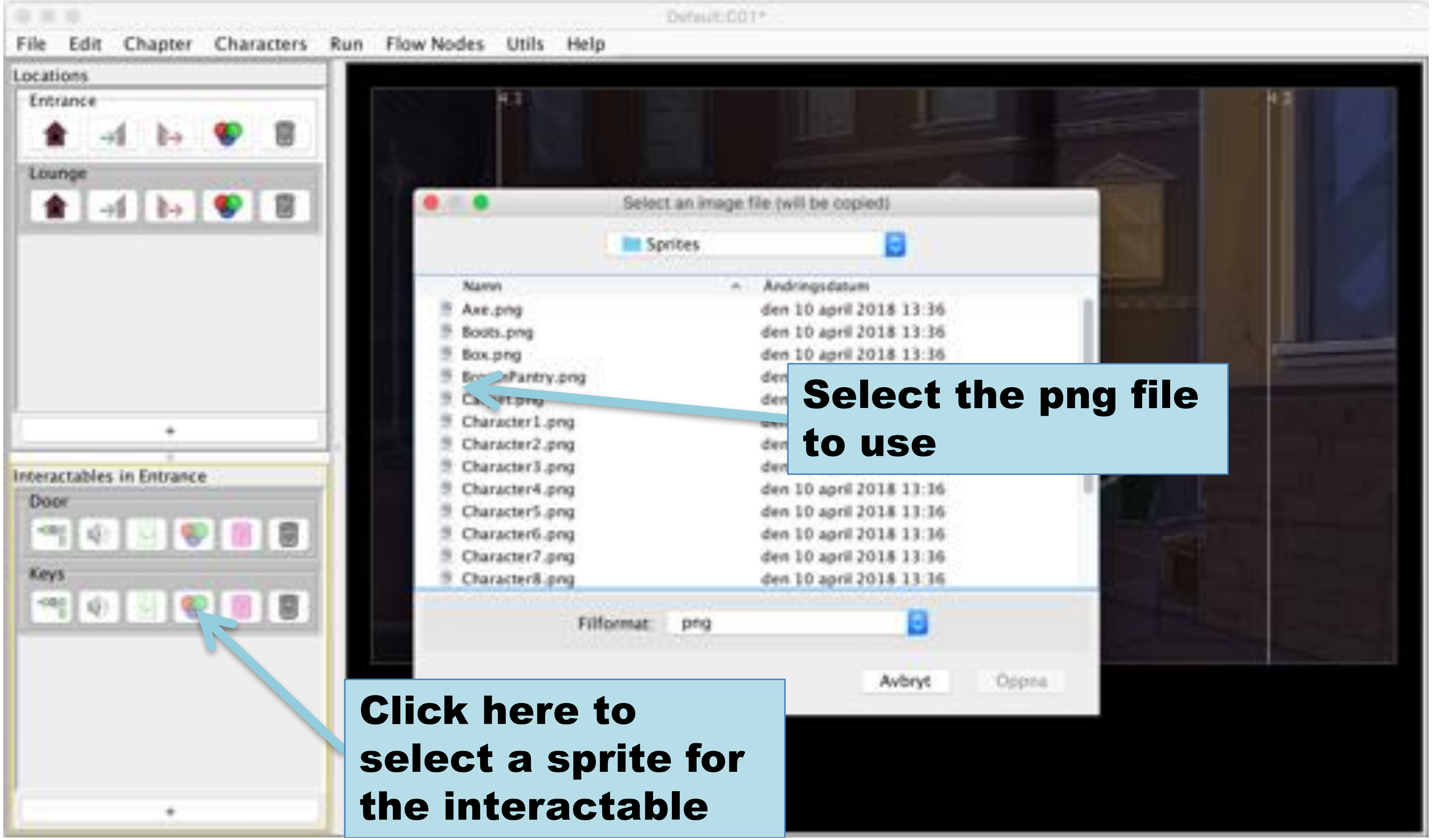
If each interactable is given a unique auditory icon the game can be played by visually impaired

Select a icon for an interactable



An interactable can have an assigned icon

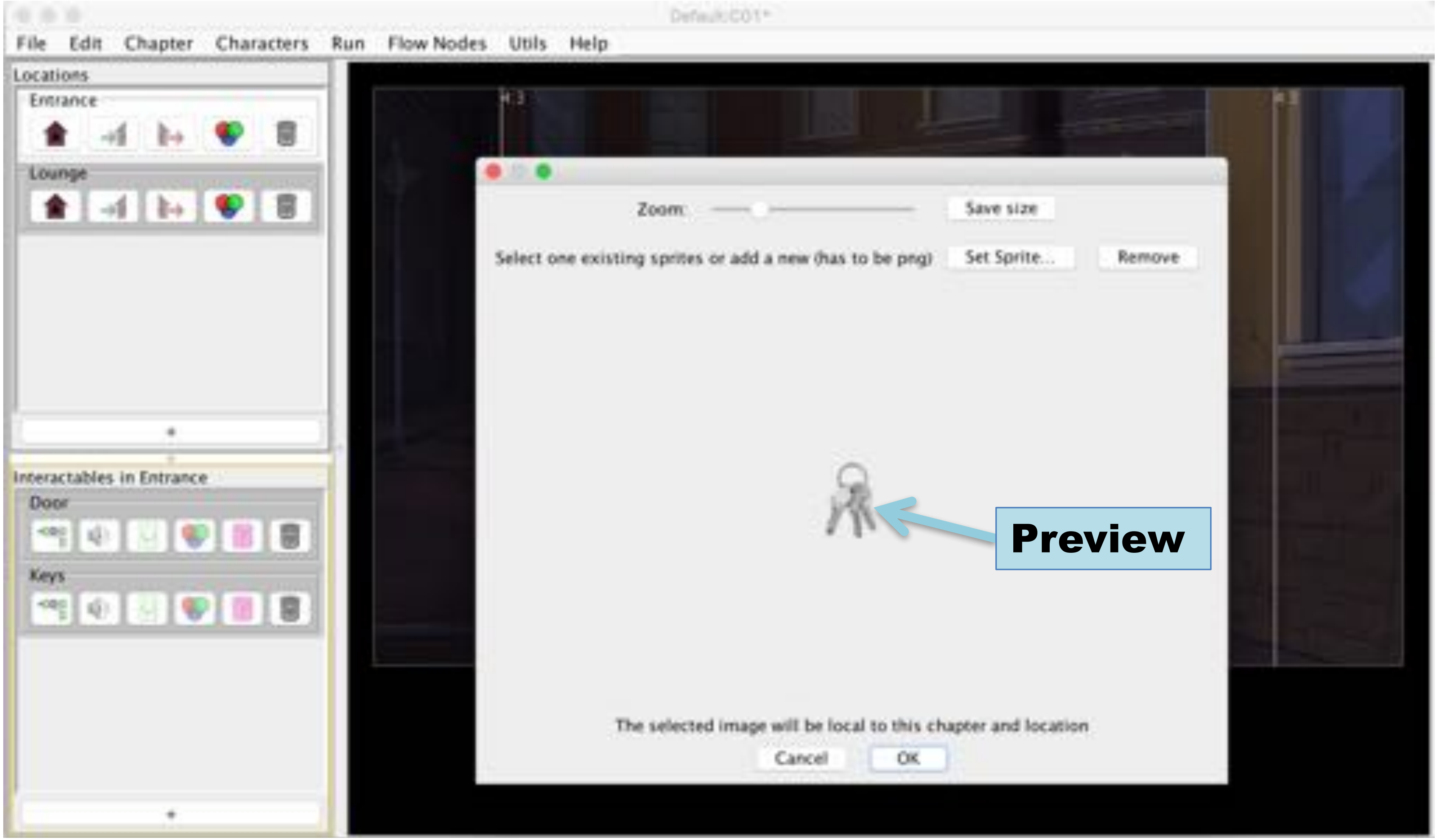
Select sprite



Namn	Ändringsdatum
Axe.png	den 10 april 2018 13:36
Boots.png	den 10 april 2018 13:36
Box.png	den 10 april 2018 13:36
BroomPantry.png	den
Carpet.png	den
Character1.png	den
Character2.png	den
Character3.png	den
Character4.png	den 10 april 2018 13:36
Character5.png	den 10 april 2018 13:36
Character6.png	den 10 april 2018 13:36
Character7.png	den 10 april 2018 13:36
Character8.png	den 10 april 2018 13:36

Select the png file to use

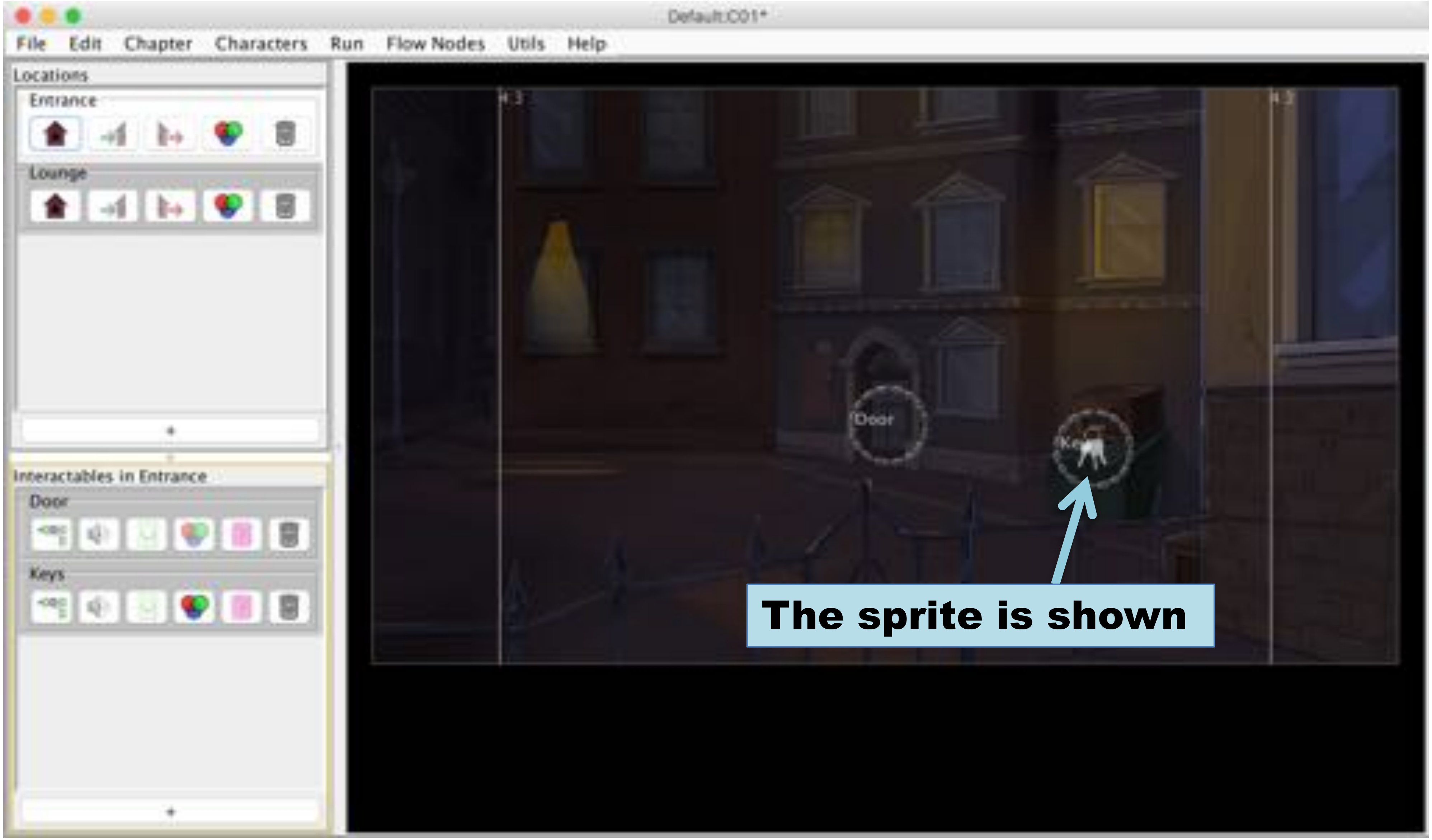
Click here to select a sprite for the interactable



Select one existing sprites or add a new (has to be png)

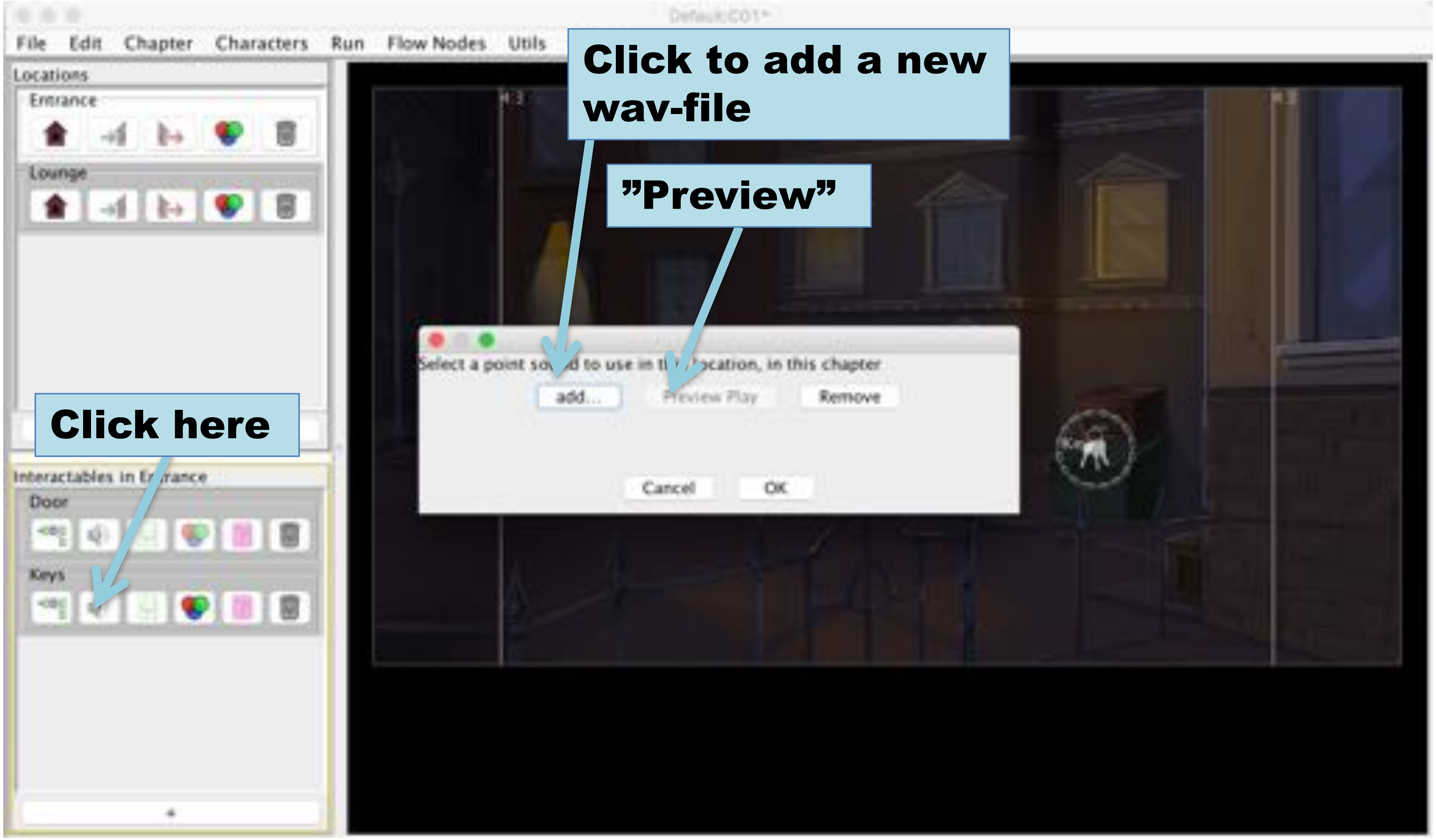
The selected image will be local to this chapter and location

Preview



The sprite is shown

Select auditory icon for an interactable



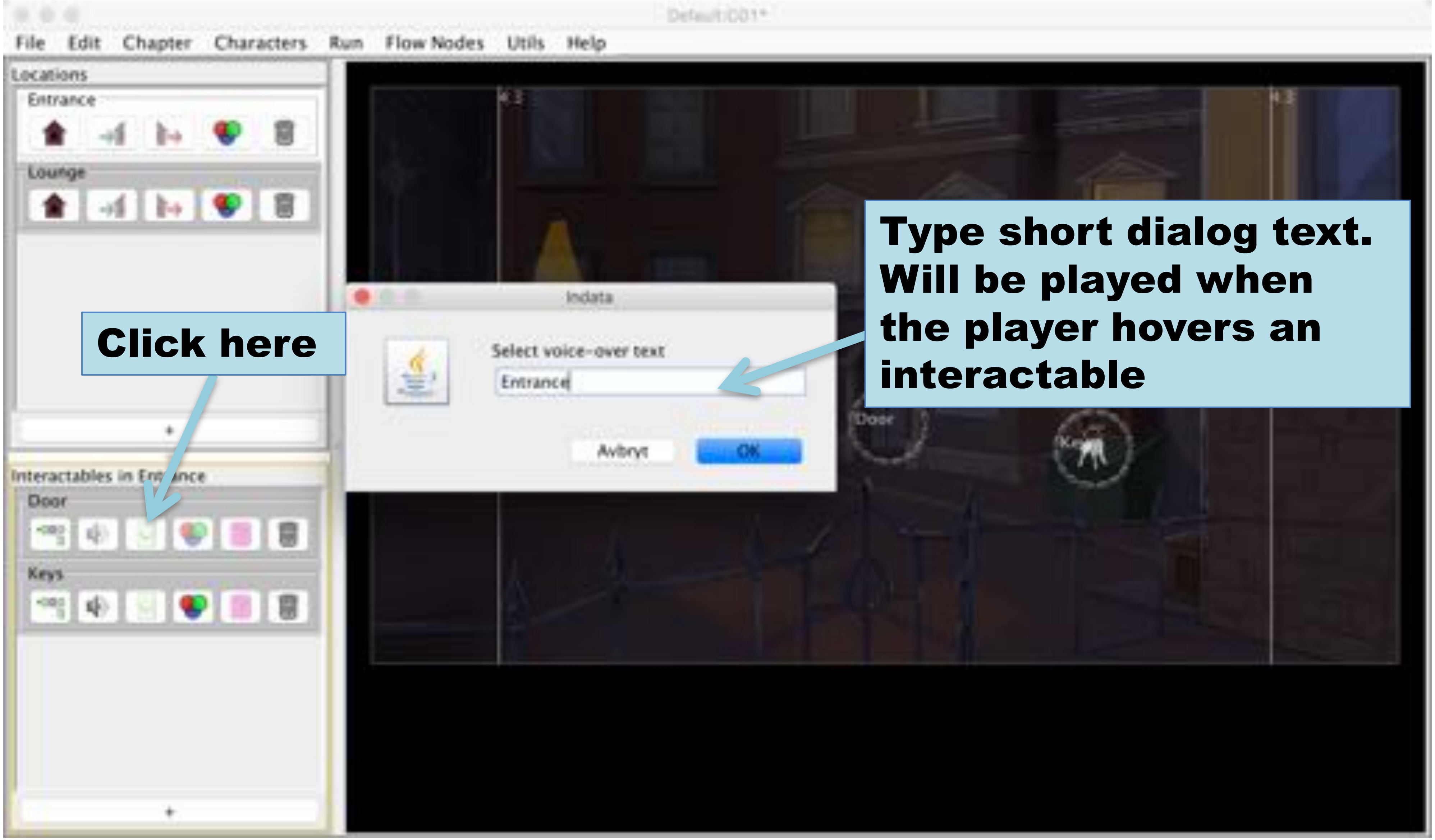
Select a point sound to use in this location, in this chapter

Click to add a new wav-file

”Preview”

Click here

Voice-over for interactables



Select voice-over text

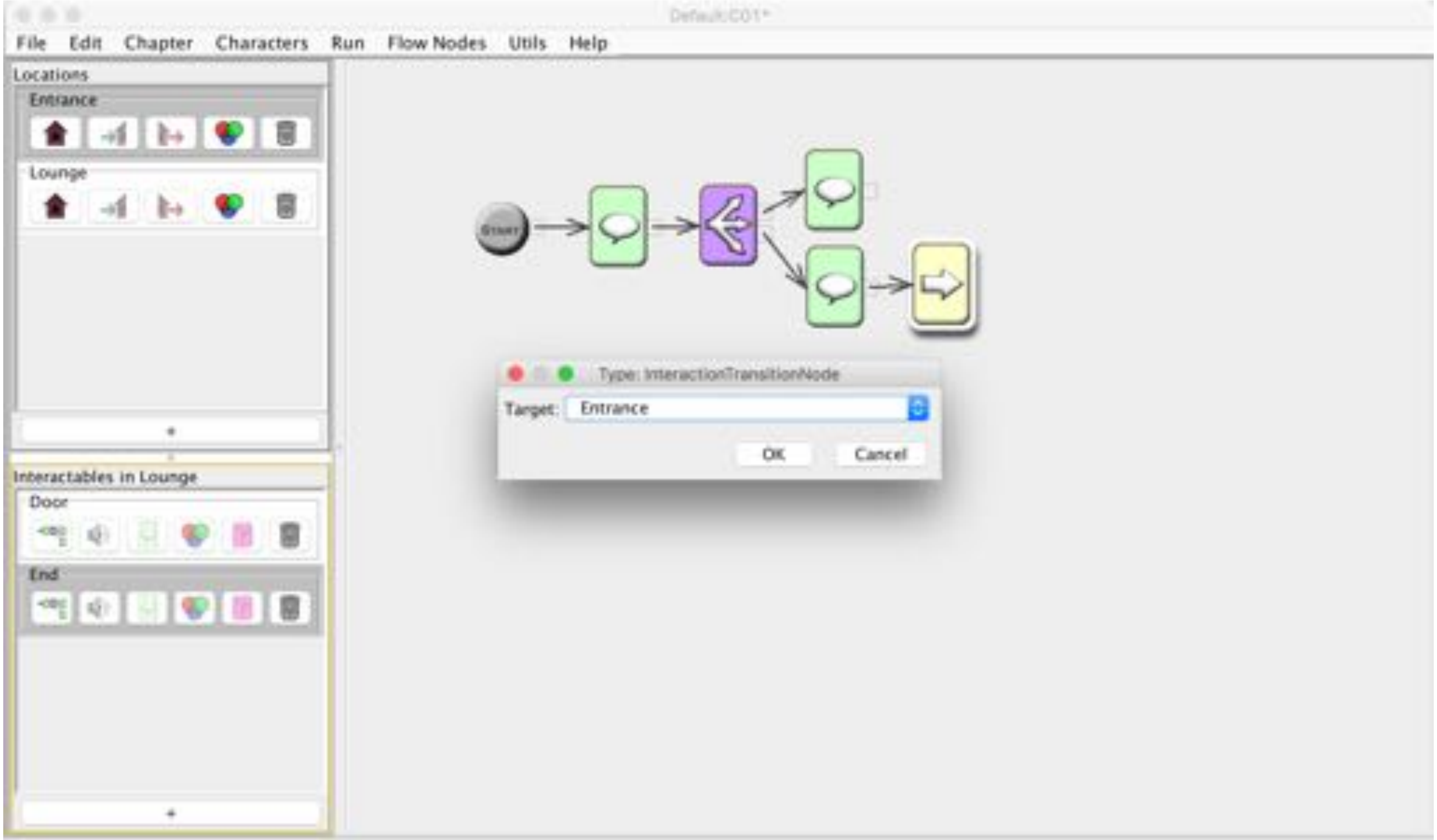
Entrance

Click here

Type short dialog text. Will be played when the player hovers an interactable

More Flow Nodes

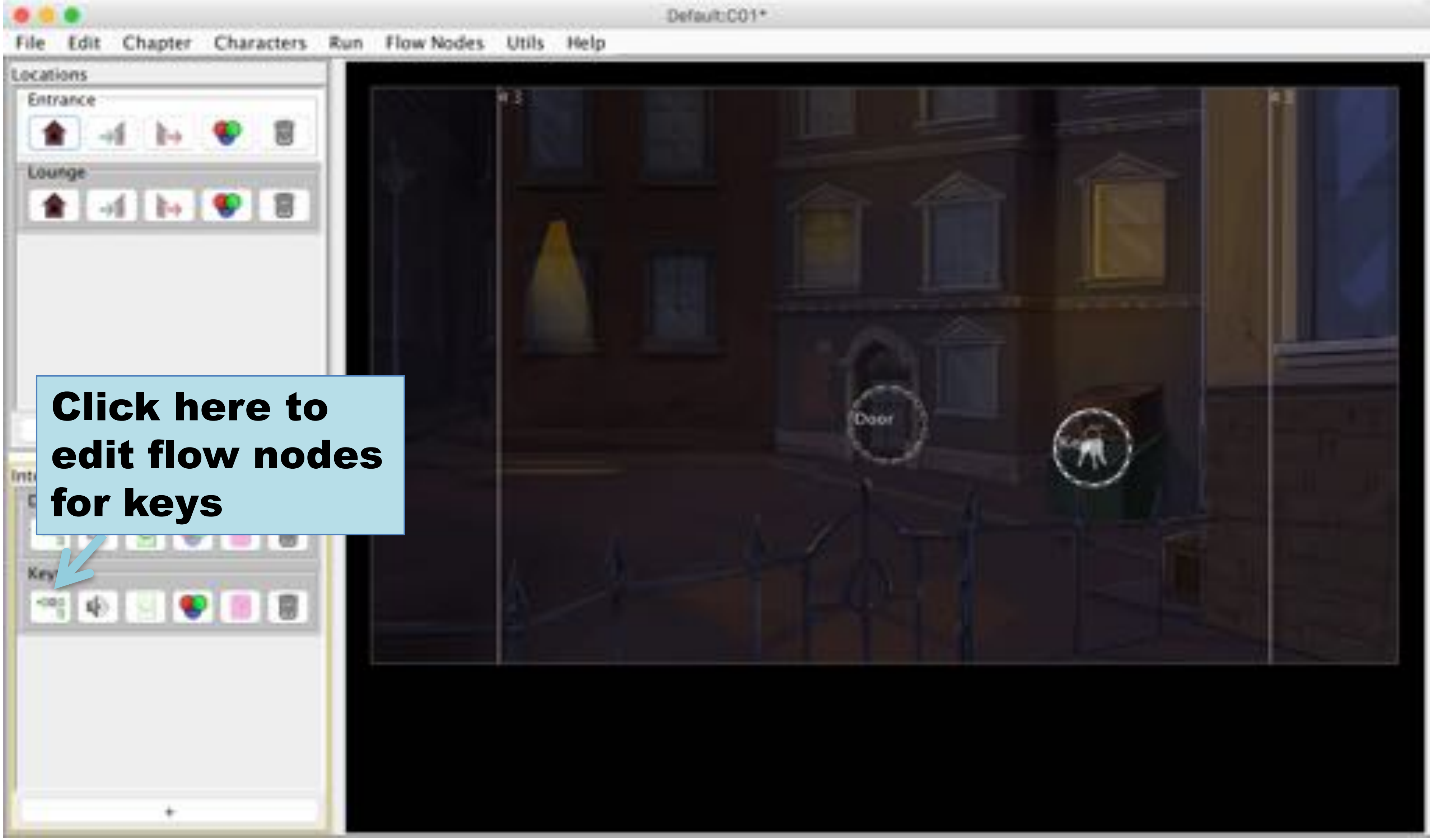
Transition Node
to change location



Type: InteractionTransitionNode

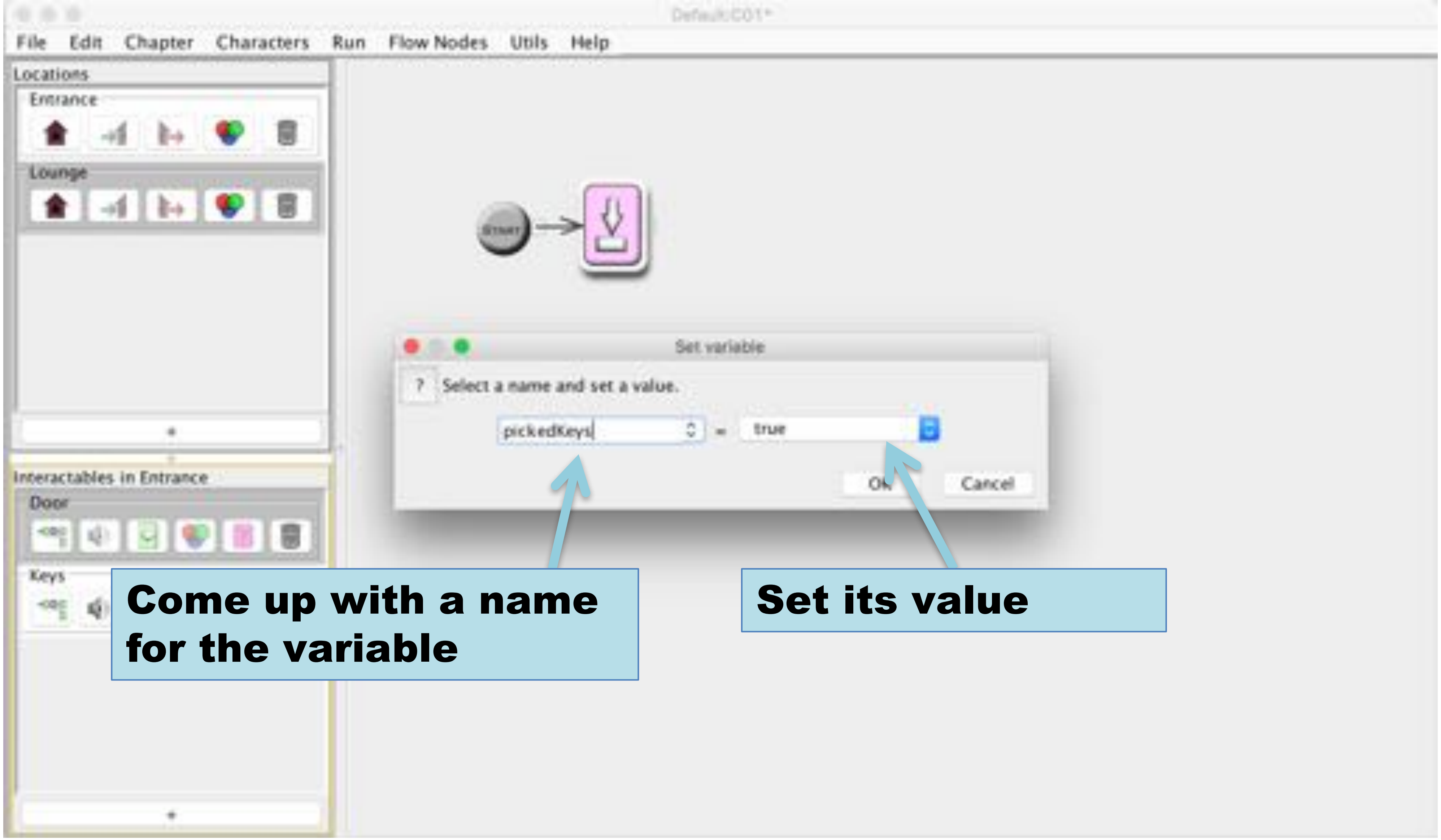
Target: Entrance

Condition example – use key



Click here to edit flow nodes for keys

Set Variable Node



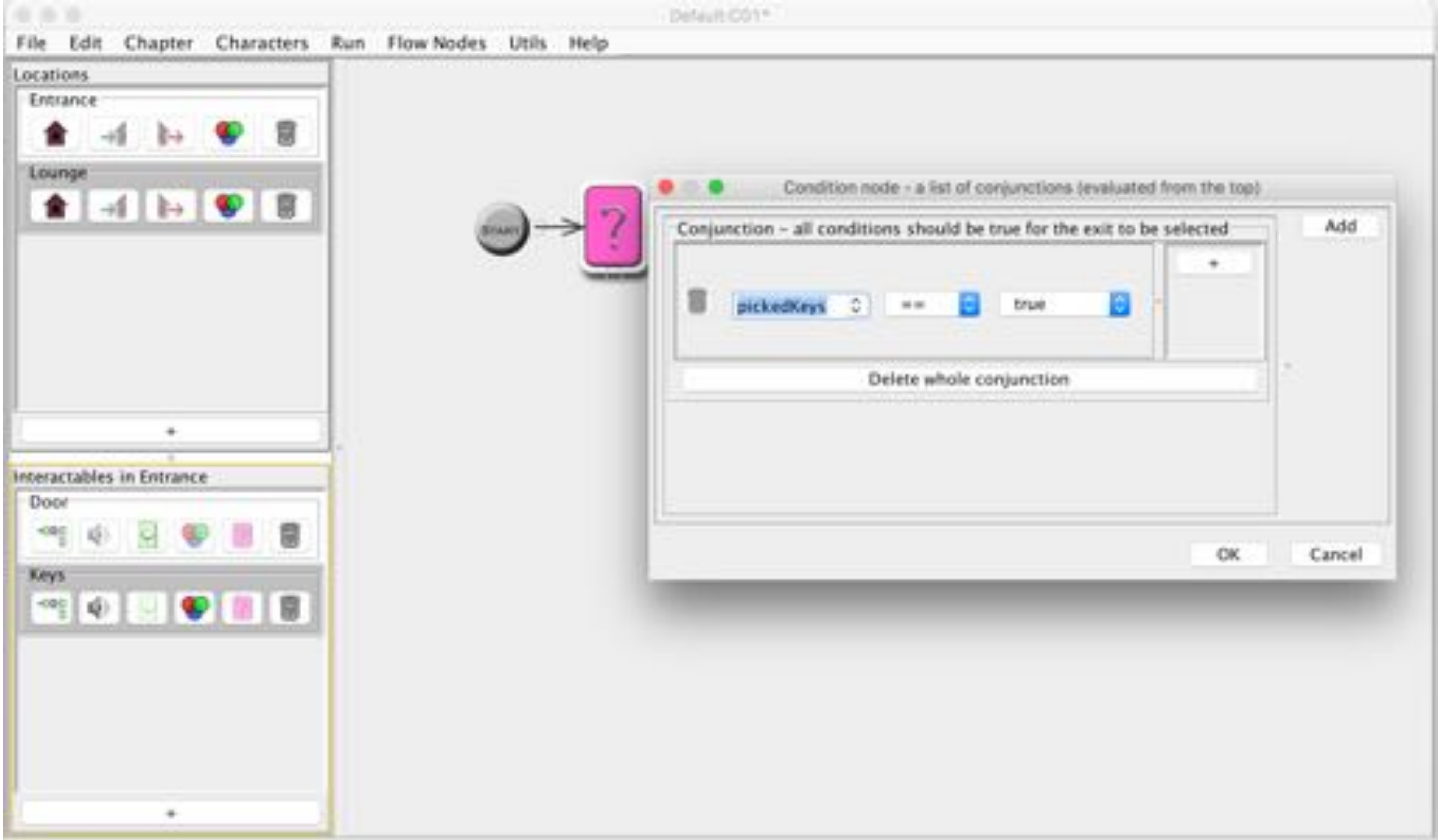
Select a name and set a value.

pickedKeys = true

Come up with a name for the variable

Set its value

? Condition Node
to guide the flow with conditions

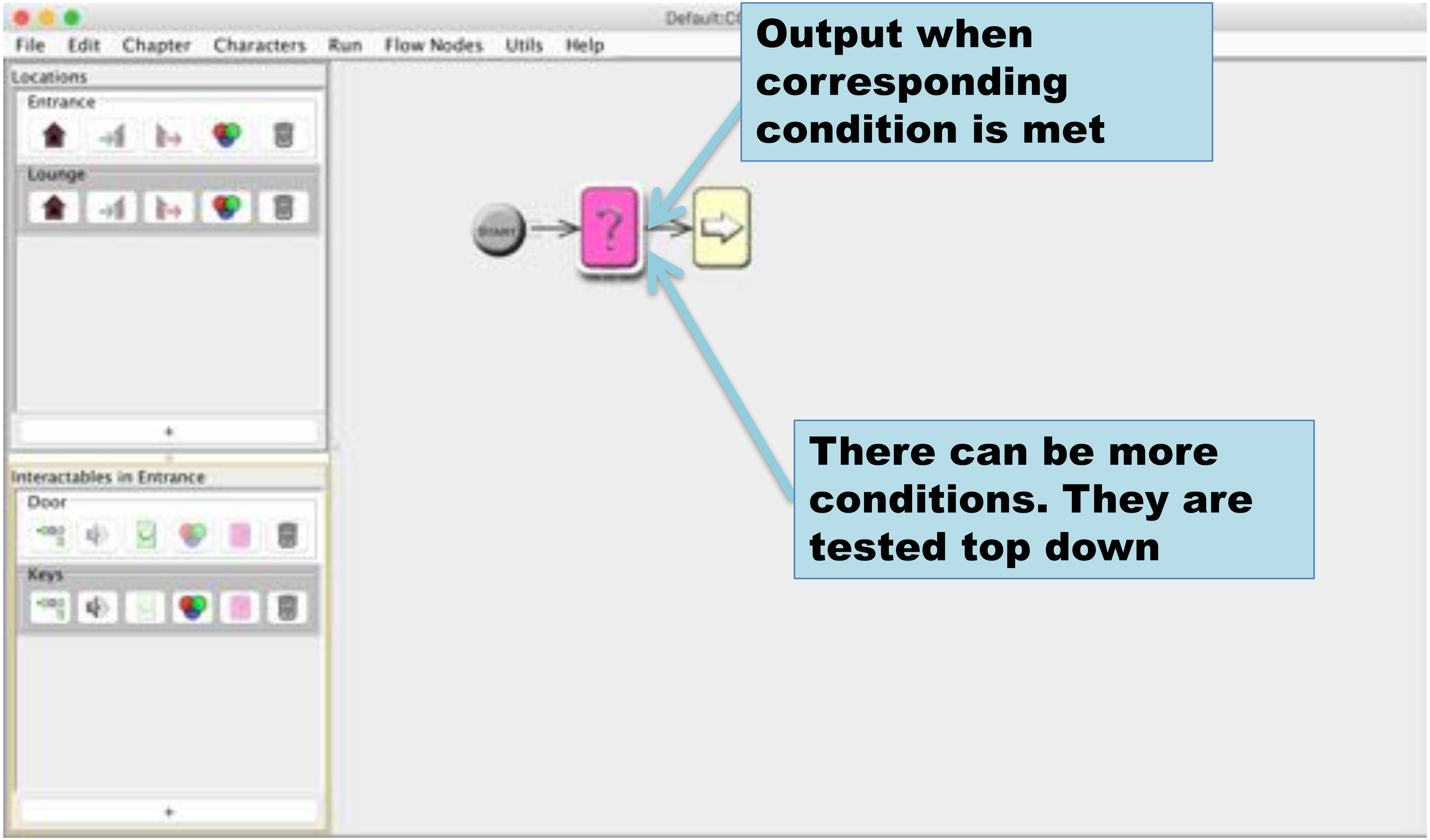


Condition node - a list of conjunctions (evaluated from the top)

Conjunction – all conditions should be true for the exit to be selected

pickedKeys == true

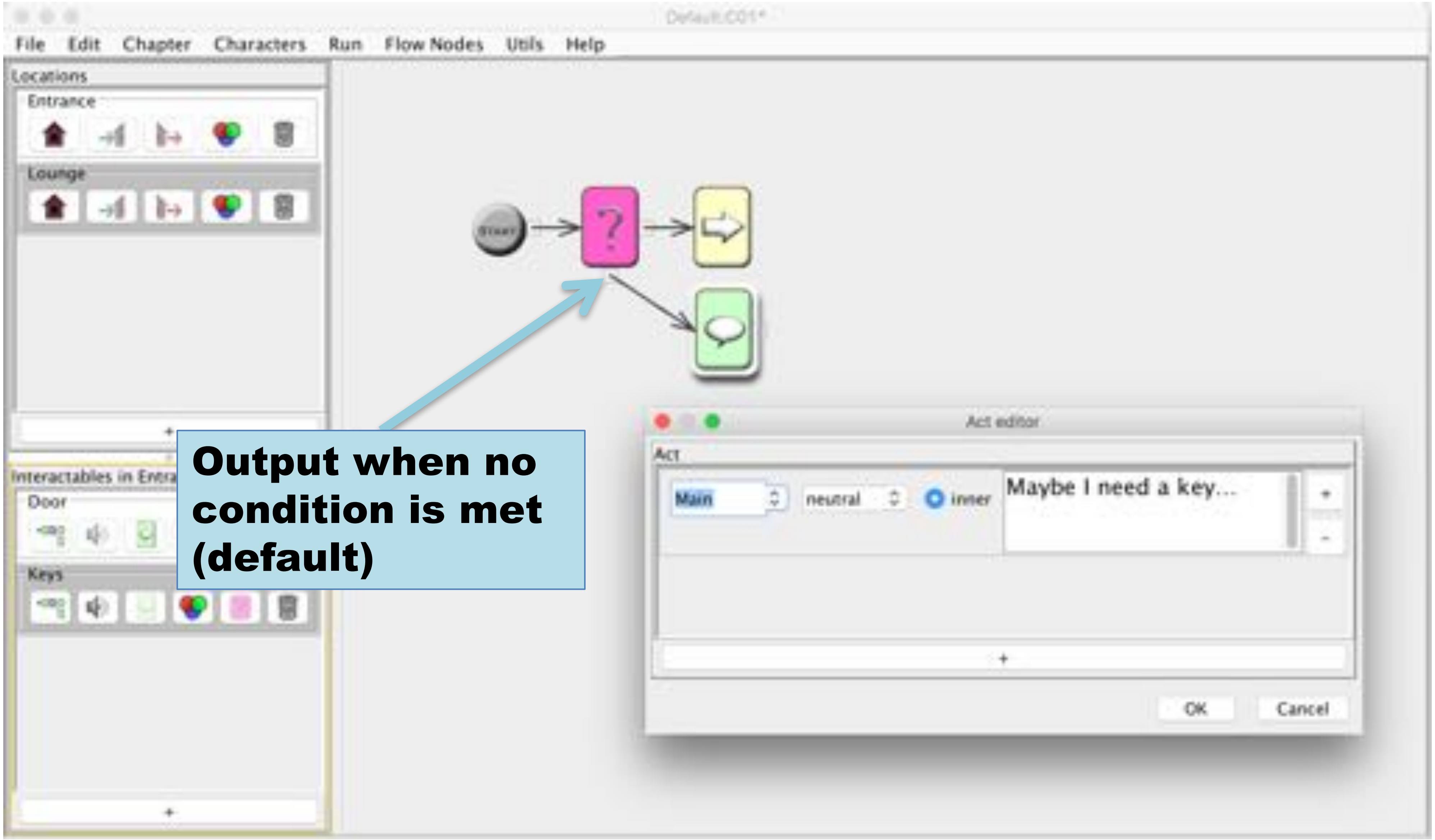
Condition true → change location



Output when corresponding condition is met

There can be more conditions. They are tested top down

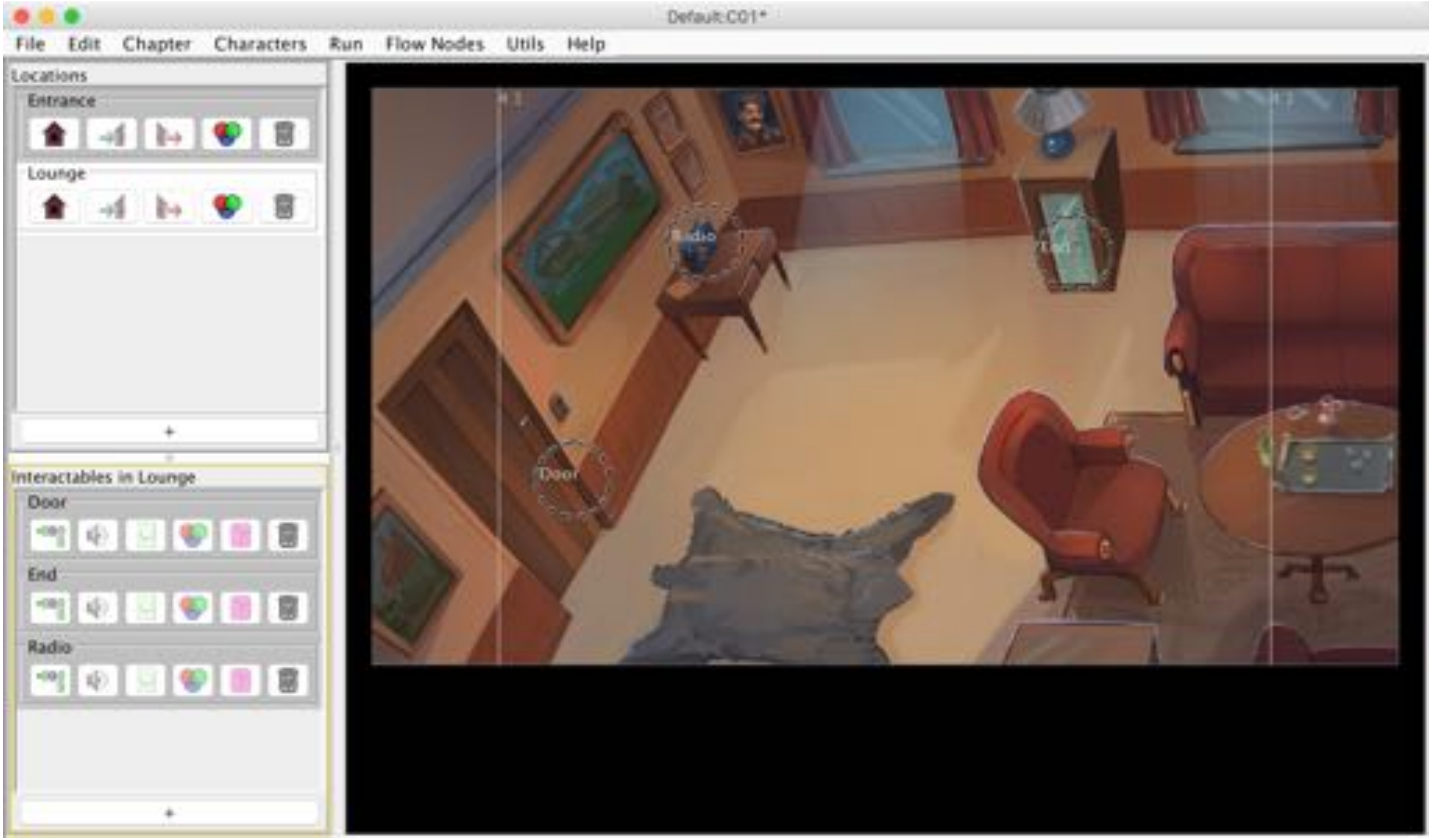
Condition false – give an hint



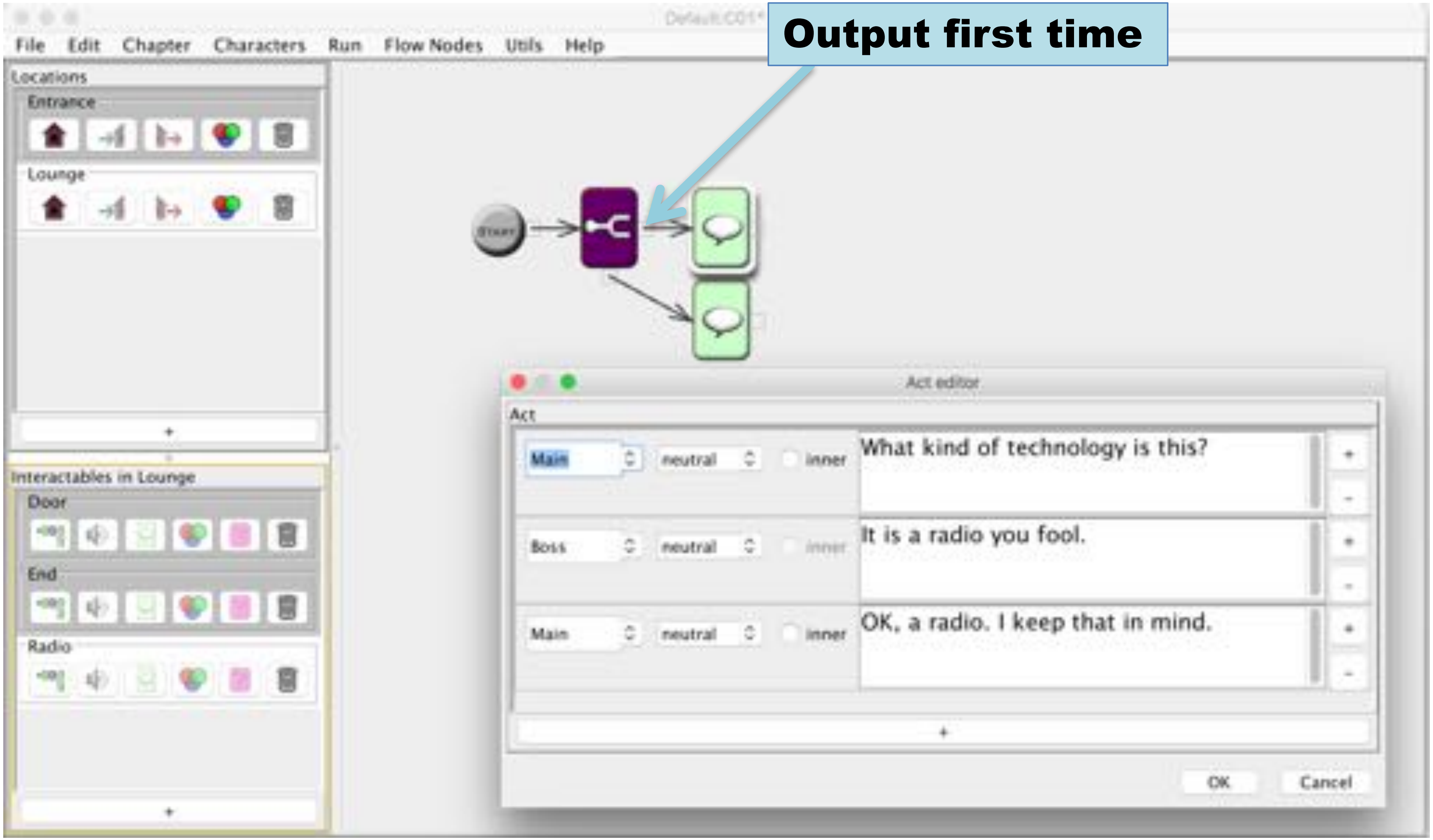
Main — neutral — ● inner — Maybe I need a key...

Output when no condition is met (default)

Fork node example – the radio



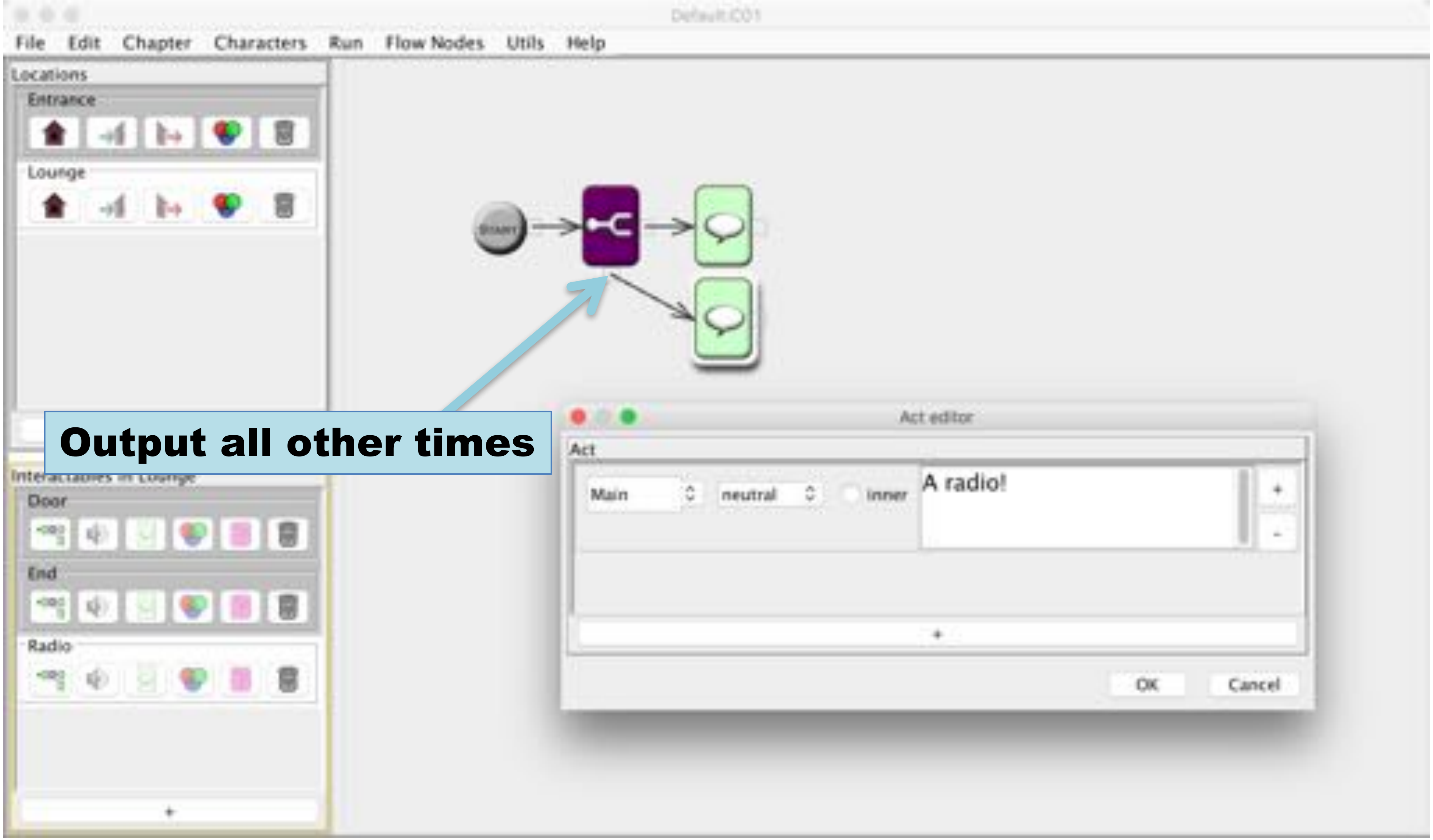
First interaction →present the item



Output first time

Main	neutral	○ inner	What kind of technology is this?
Boss	neutral	○ inner	It is a radio you fool.
Main	neutral	○ inner	OK, a radio. I keep that in mind.

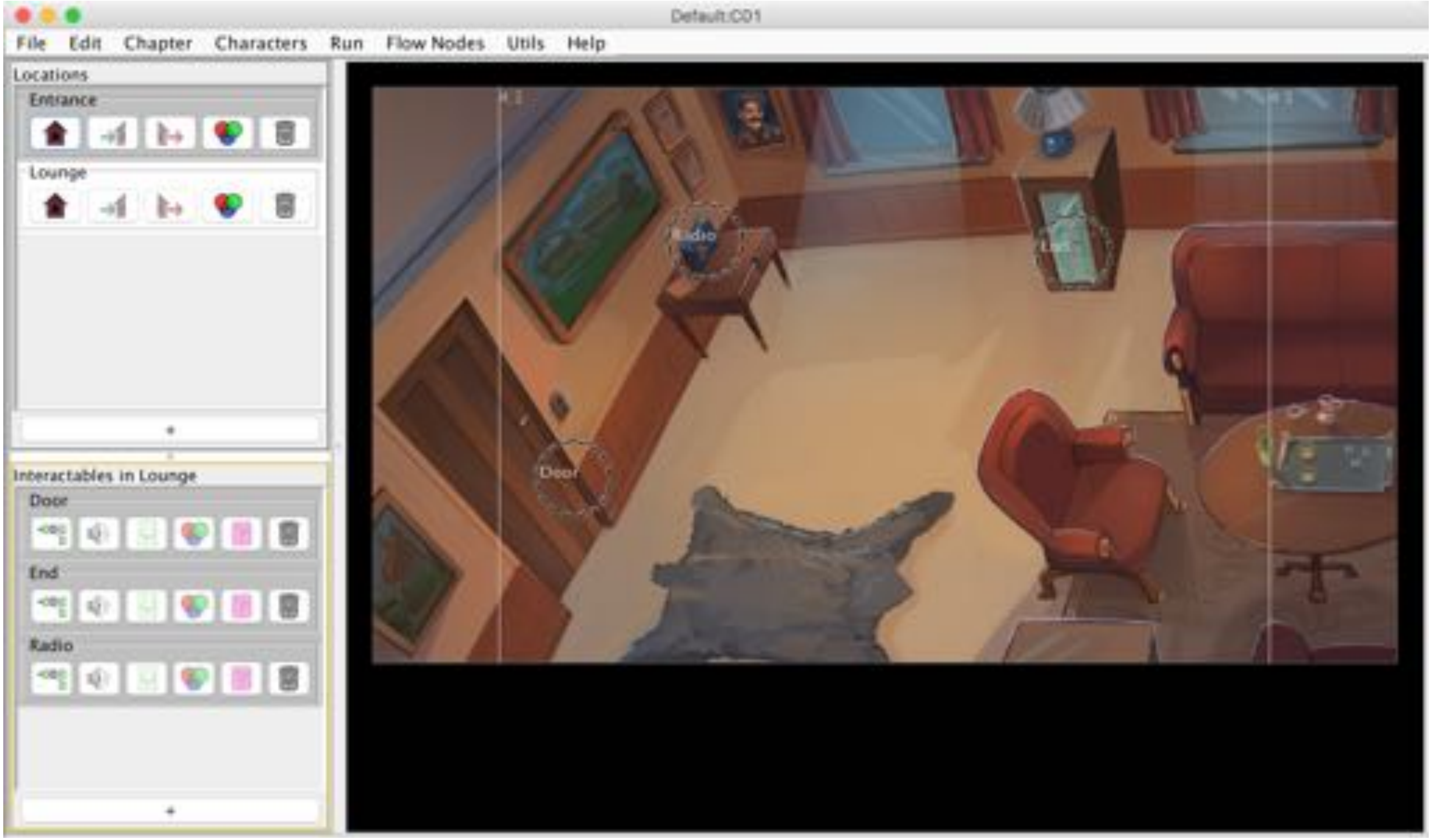
All other times → give a short description

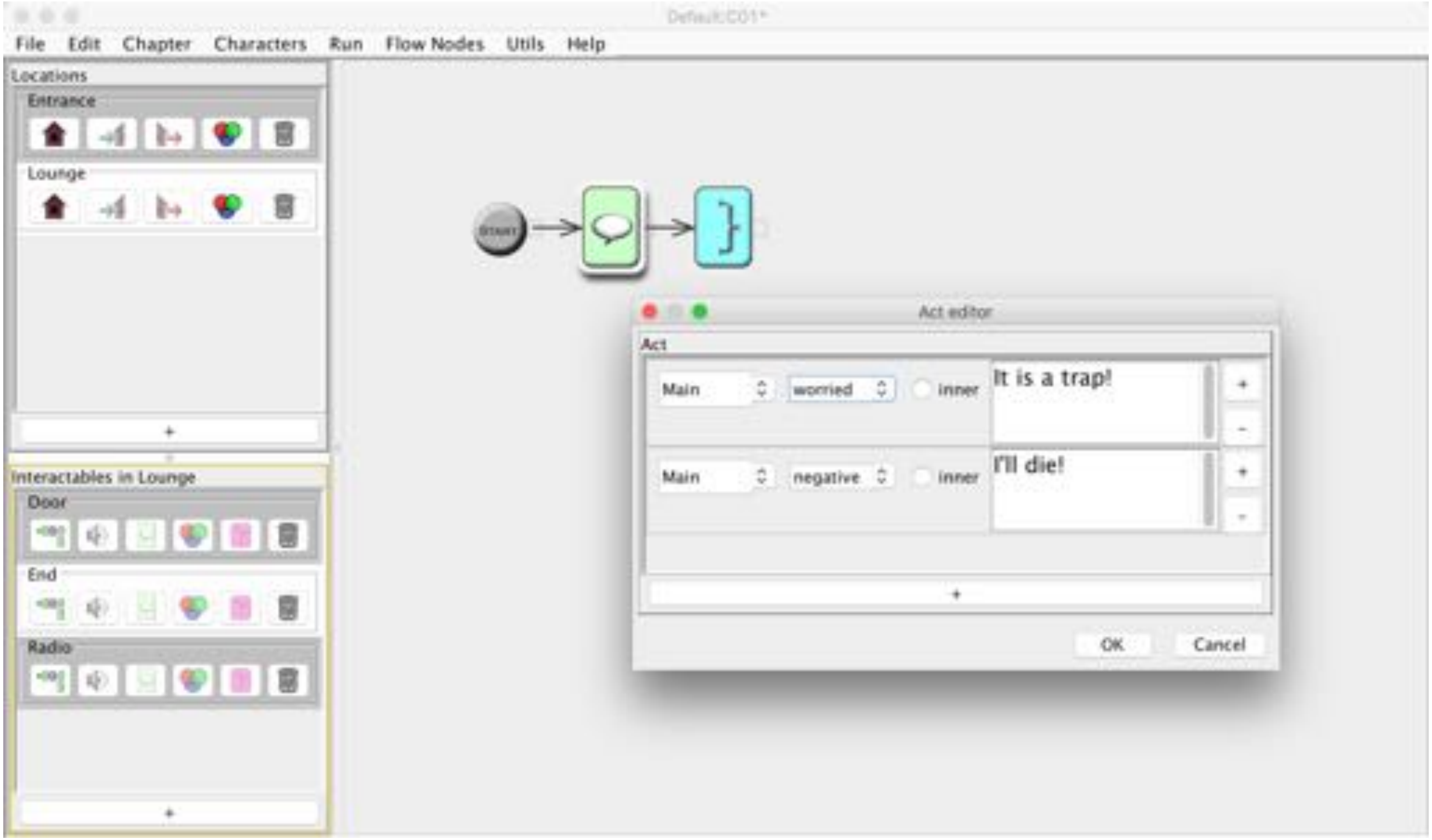


A radio!

Output all other times

Code node example – death trap

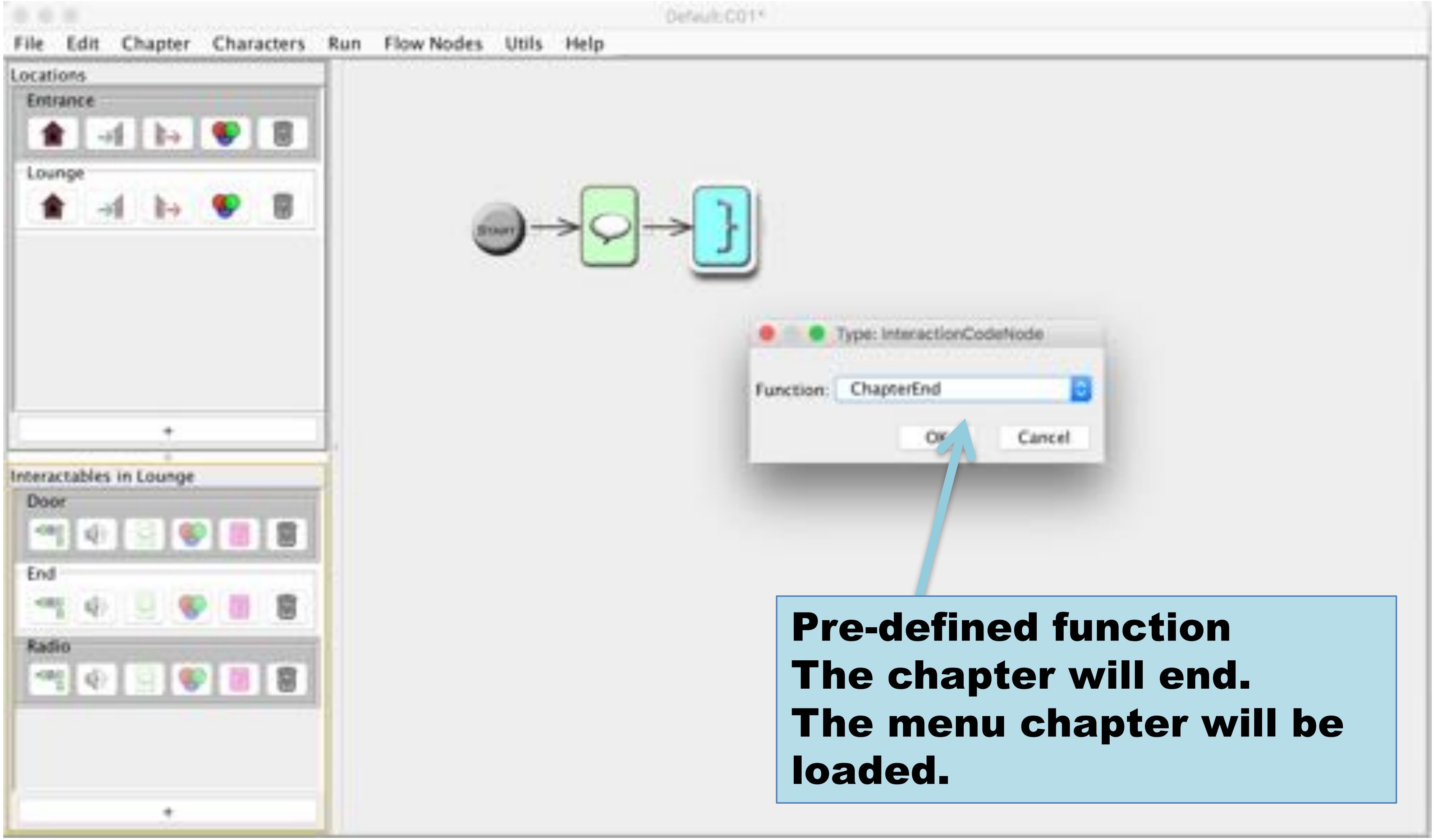




Main | worried | ○ inner | It is a trap!

Main | negative | ○ inner | I'll die!

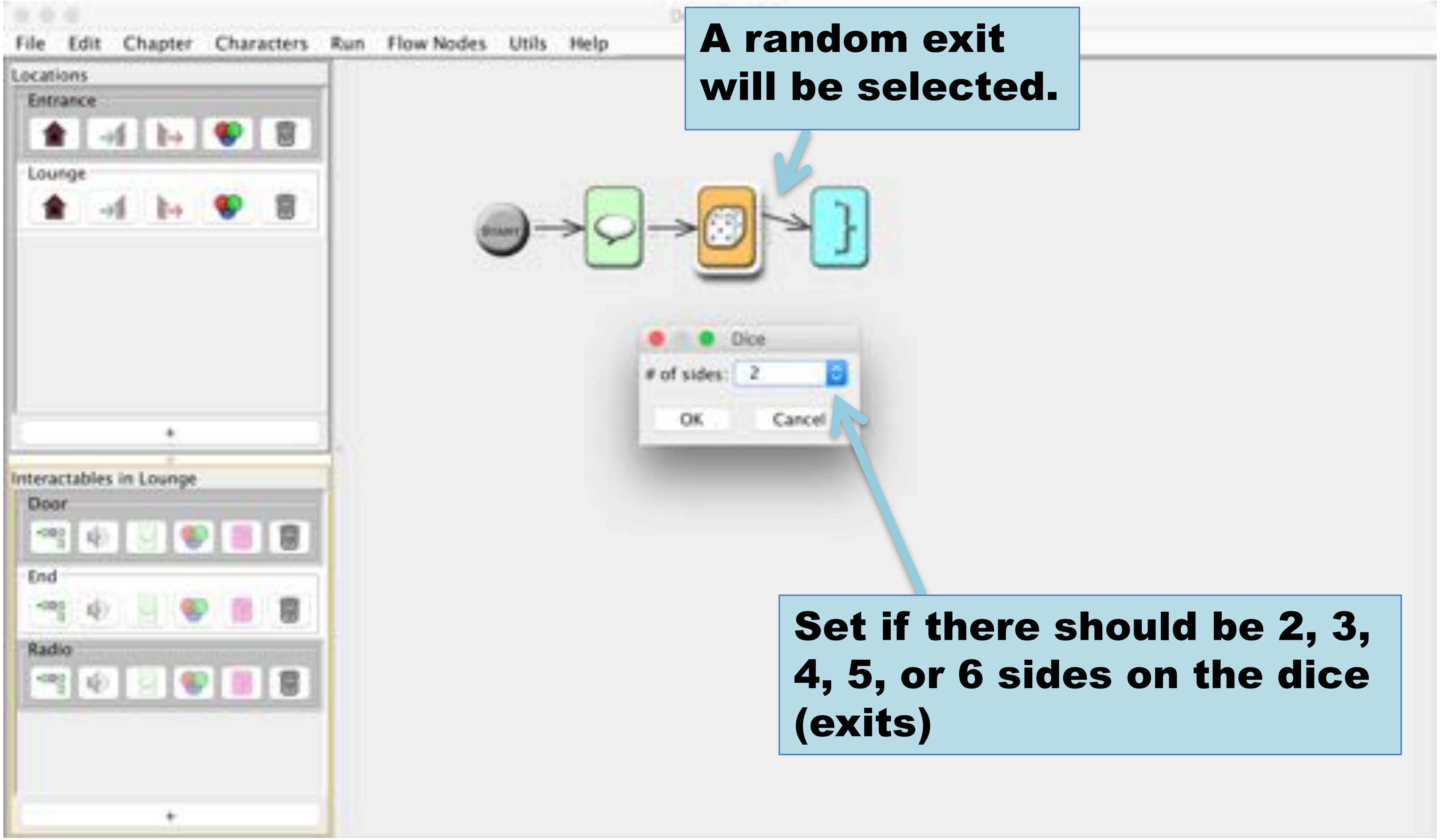
ChapterEnd ends the chapter



Function: ChapterEnd

Pre-defined function
The chapter will end.
The menu chapter will be loaded.

Dice node

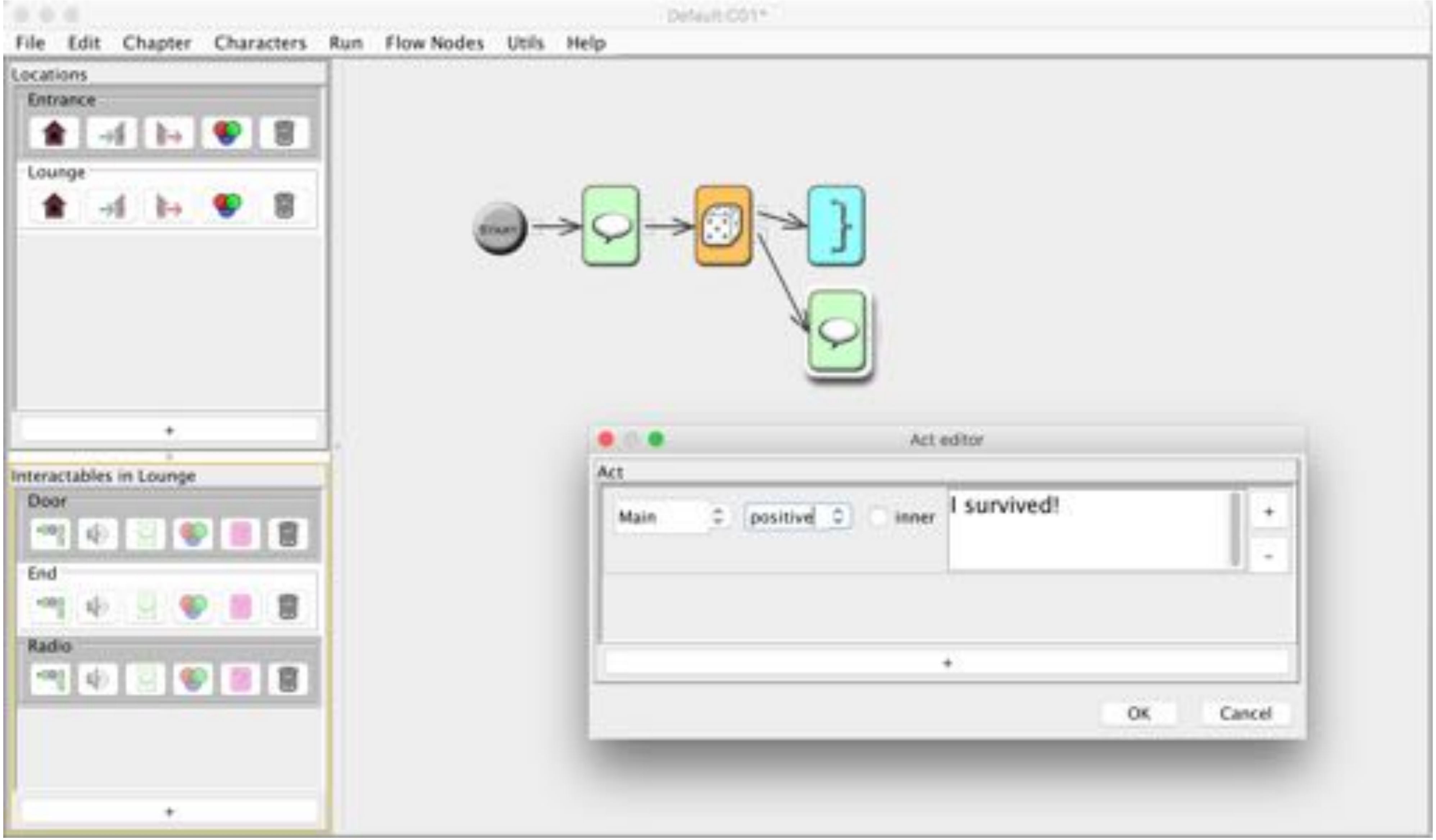


# of sides: 2

A random exit will be selected.

Set if there should be 2, 3, 4, 5, or 6 sides on the dice (exits)

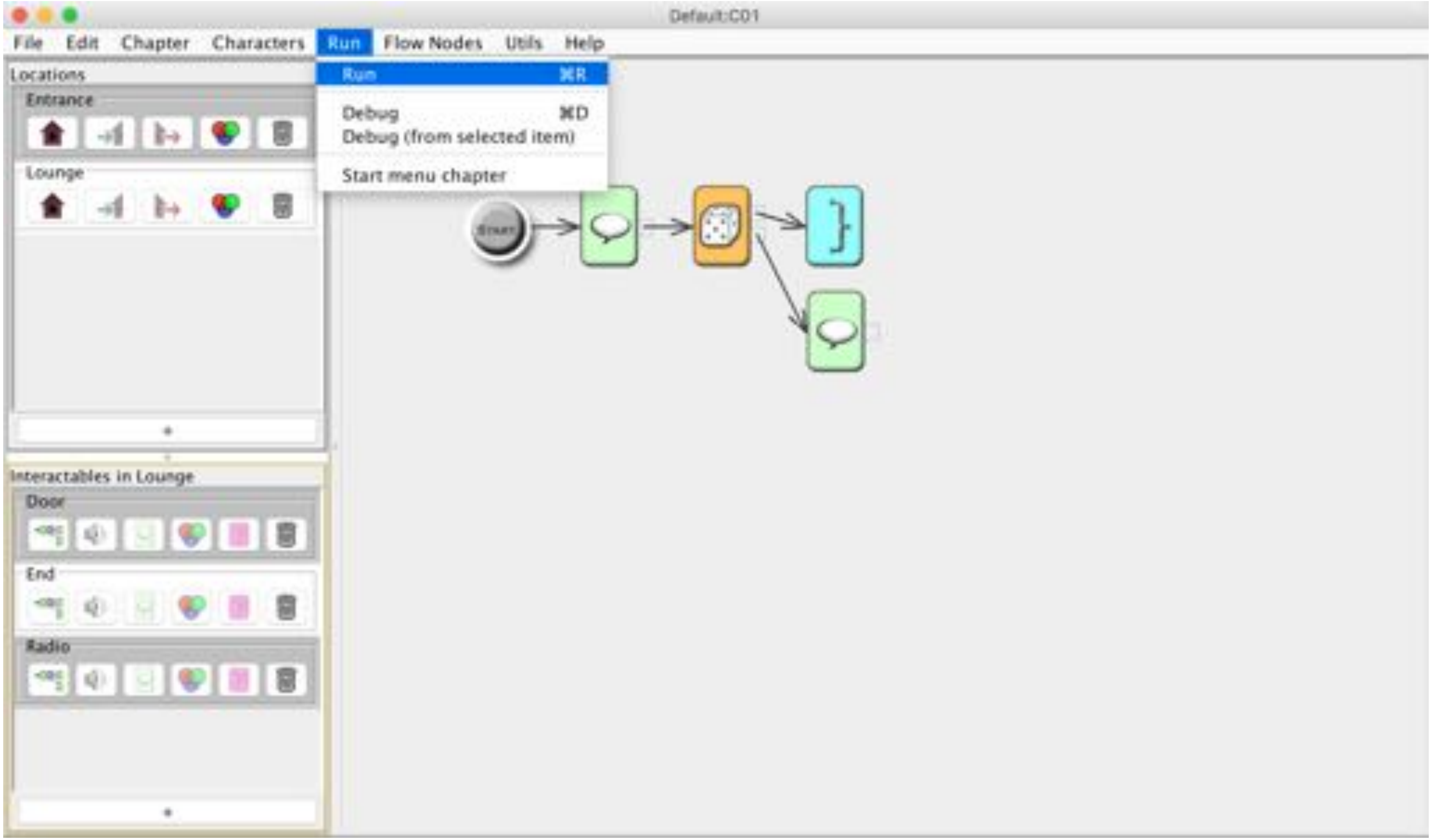
The death trap is now less lethal



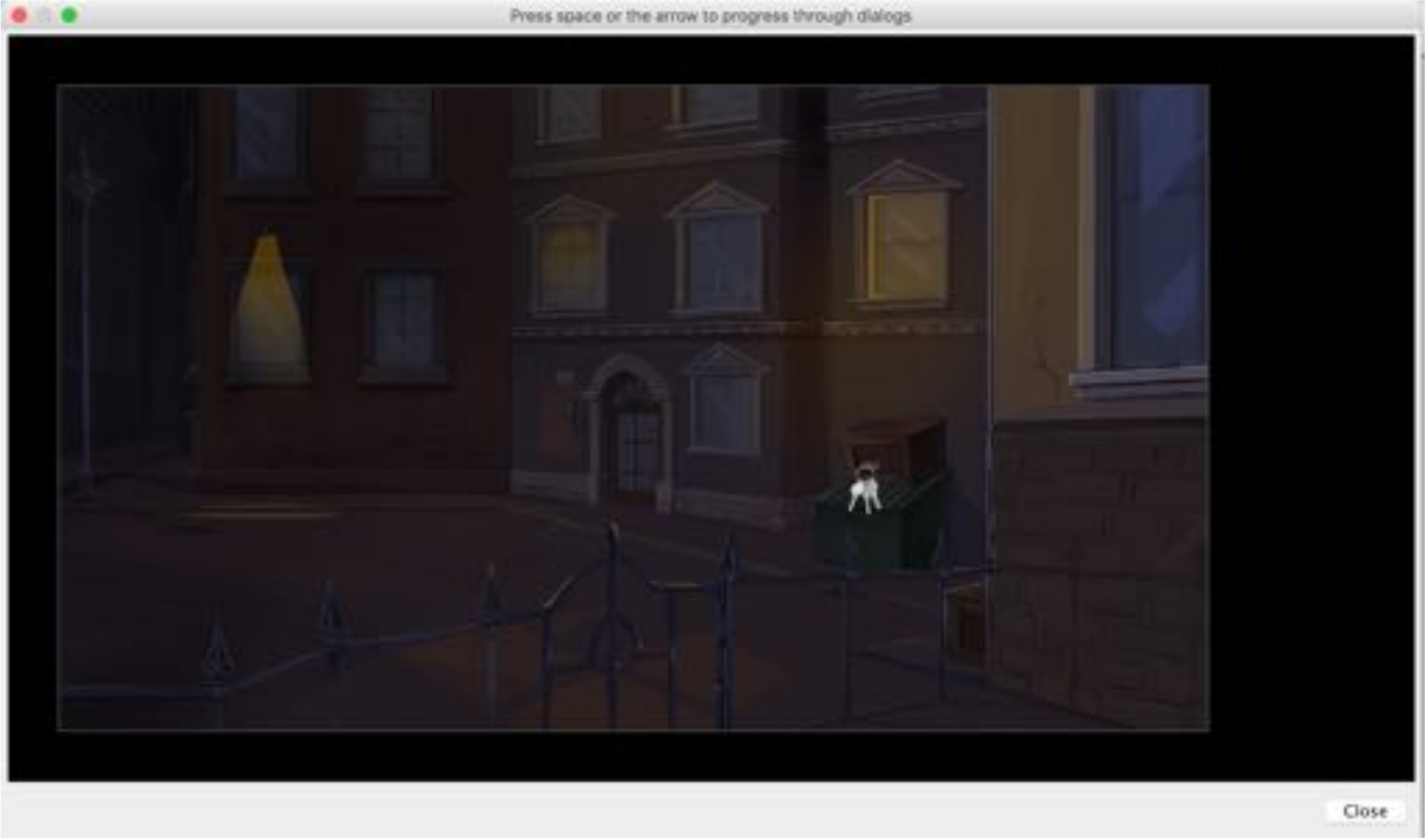
Main positive ○ inner I survived!

Run the Game

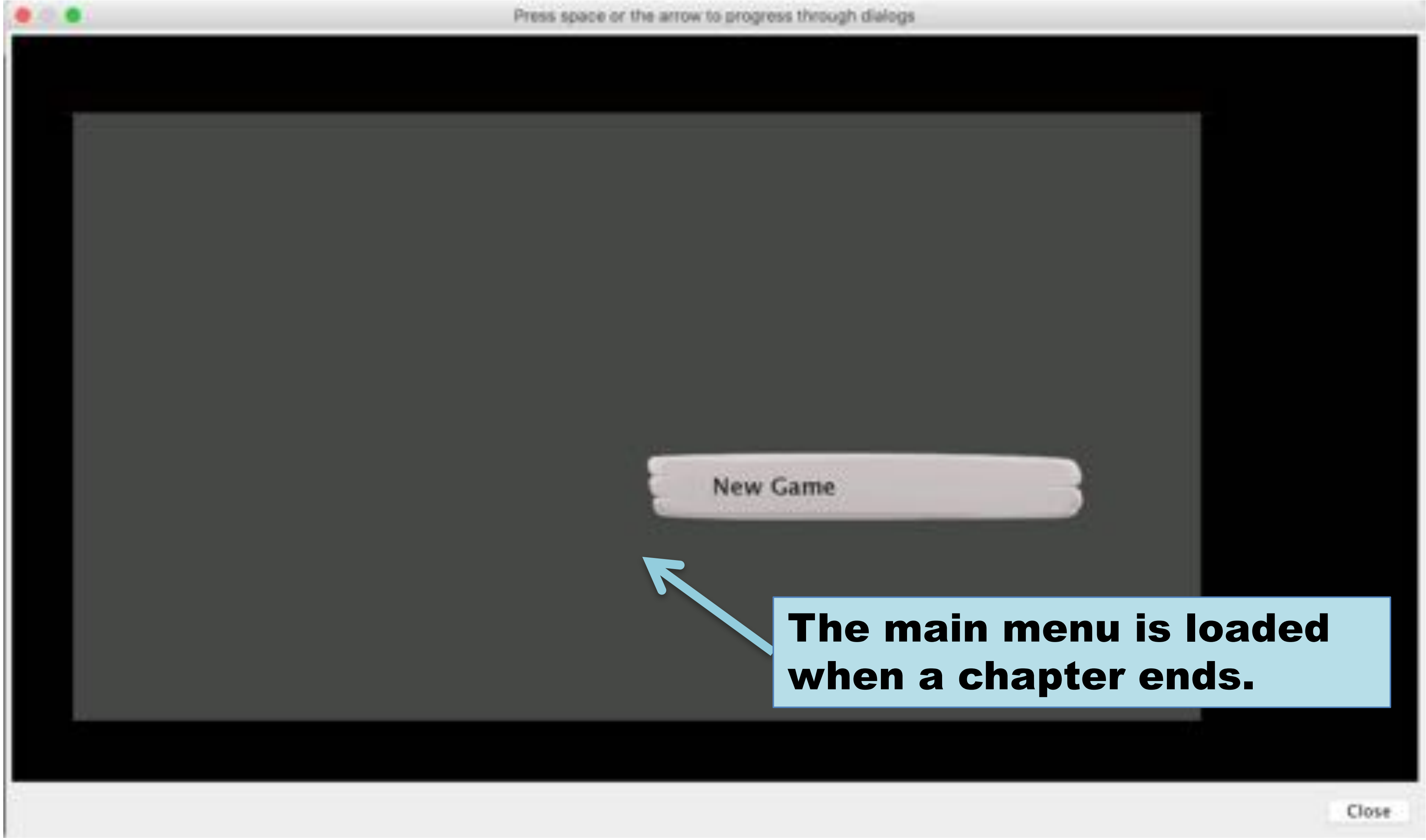
select Run→ Run (or ctrl-R)



Note: no debug information



When the *ChapterEnd* codeNode is reached



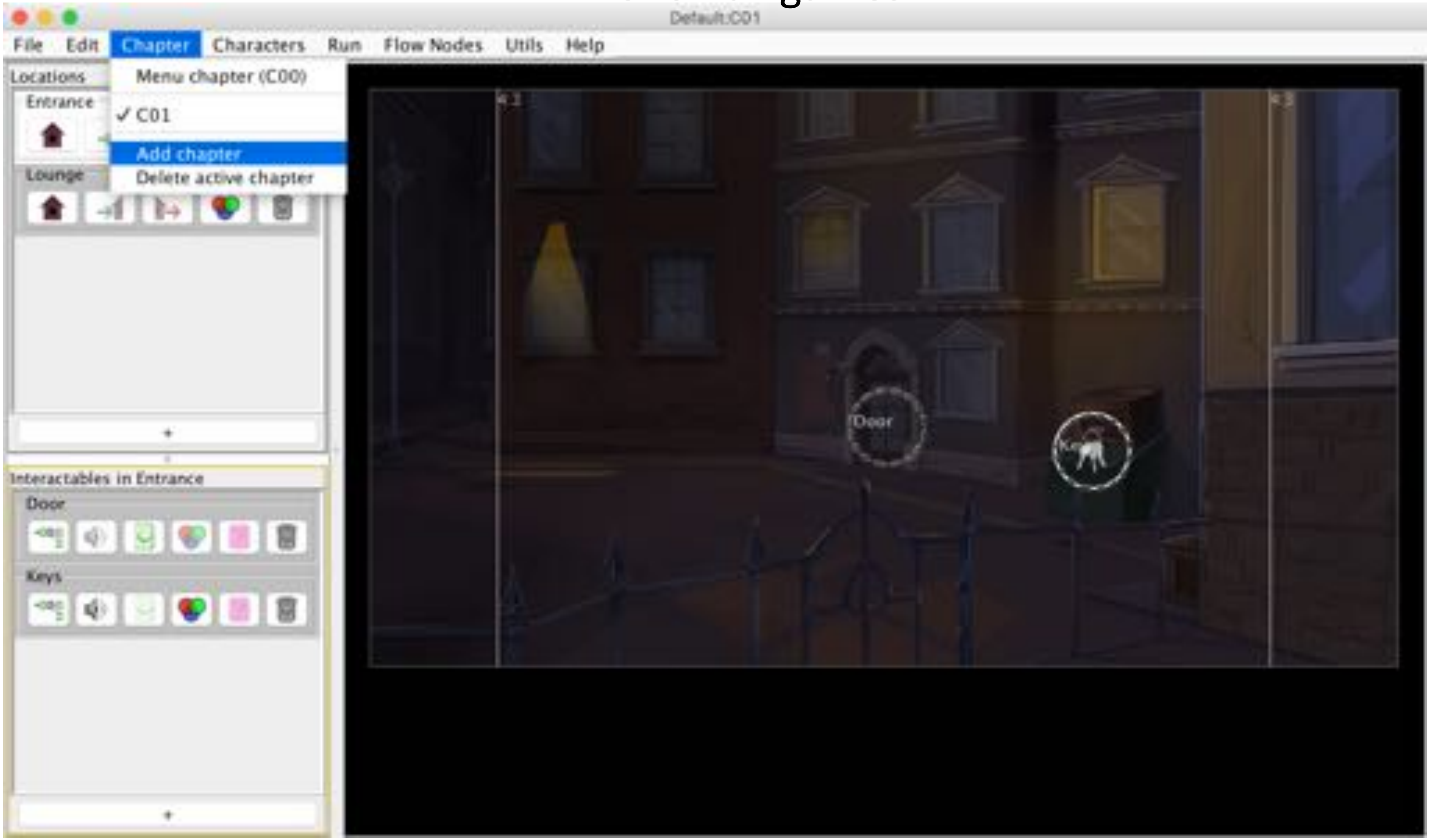
The main menu is loaded when a chapter ends.

Details

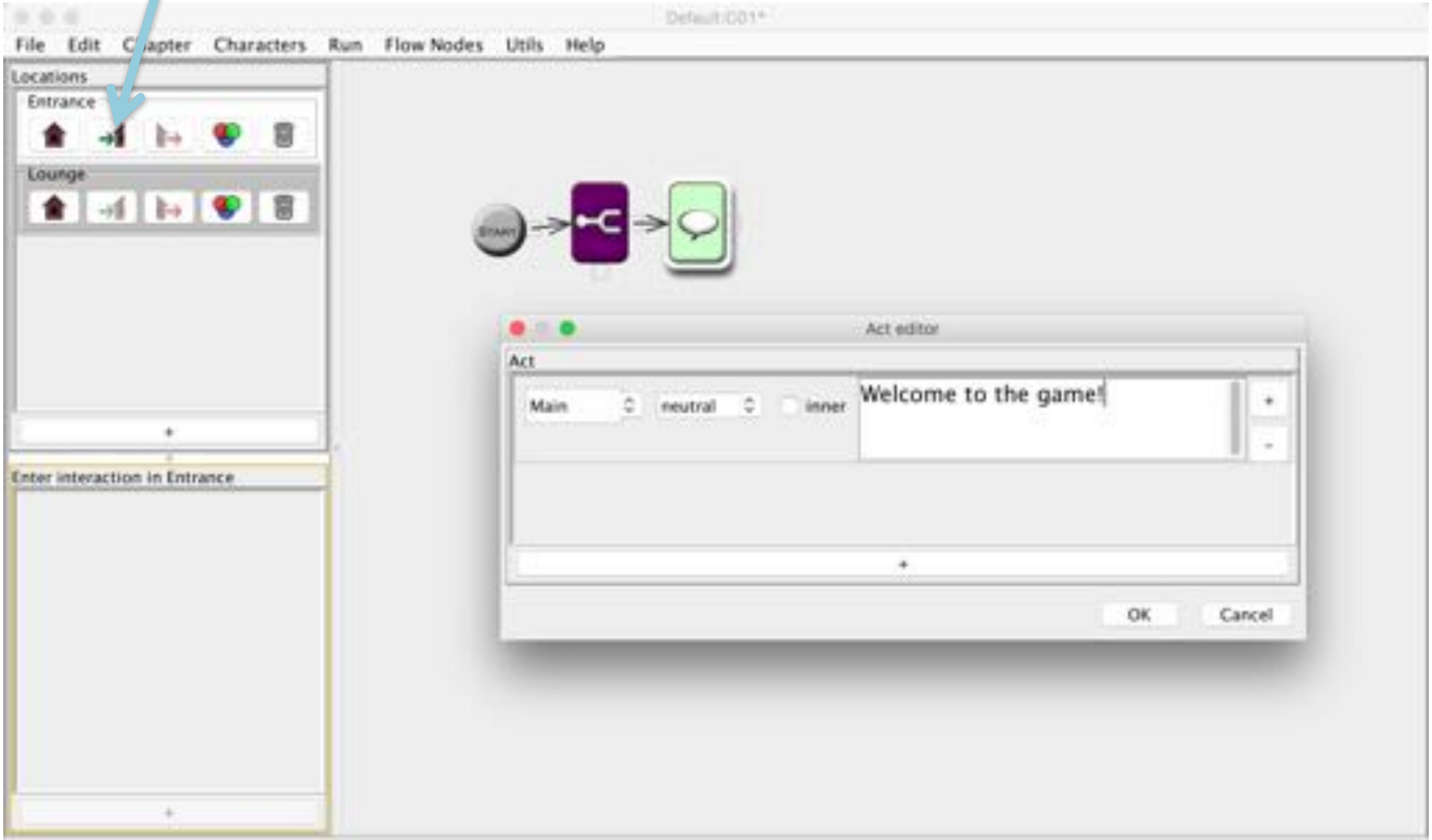
Adding chapters
Enter and exit flow
Conditional dialog alternatives
Conditional interactables

A game can be split in chapters

Note: mostly there is little point having more than one chapter for small games

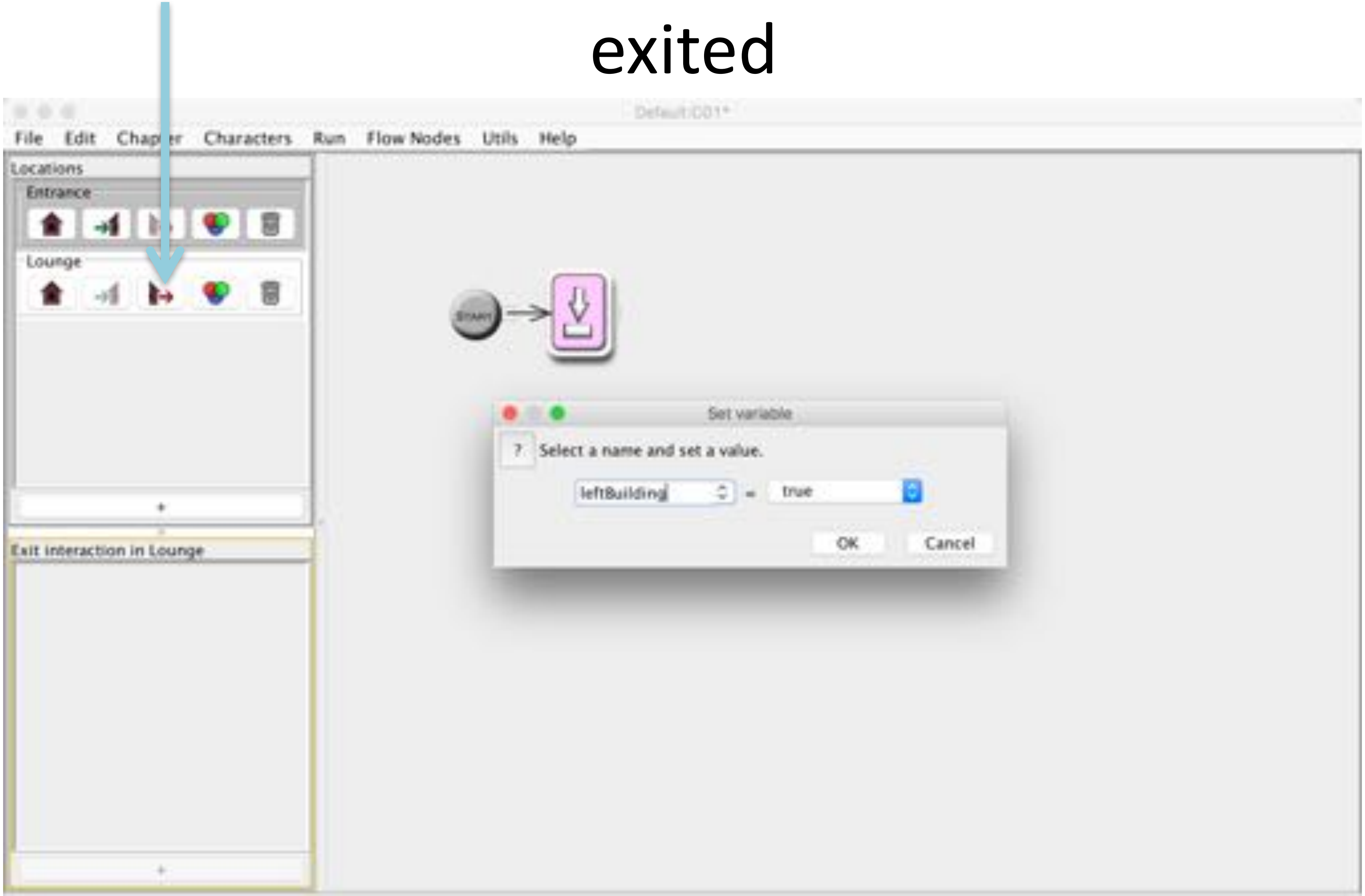


Enter flow is executed when a location is entered


Default:001*
File Edit Chapter Characters Run Flow Nodes Utils Help
Locations
Entrance
Lounge
+
Enter interaction in Entrance
+
START
Act editor
Act
Main
neutral
inner
+
-
+
OK
Cancel

Welcome to the game!

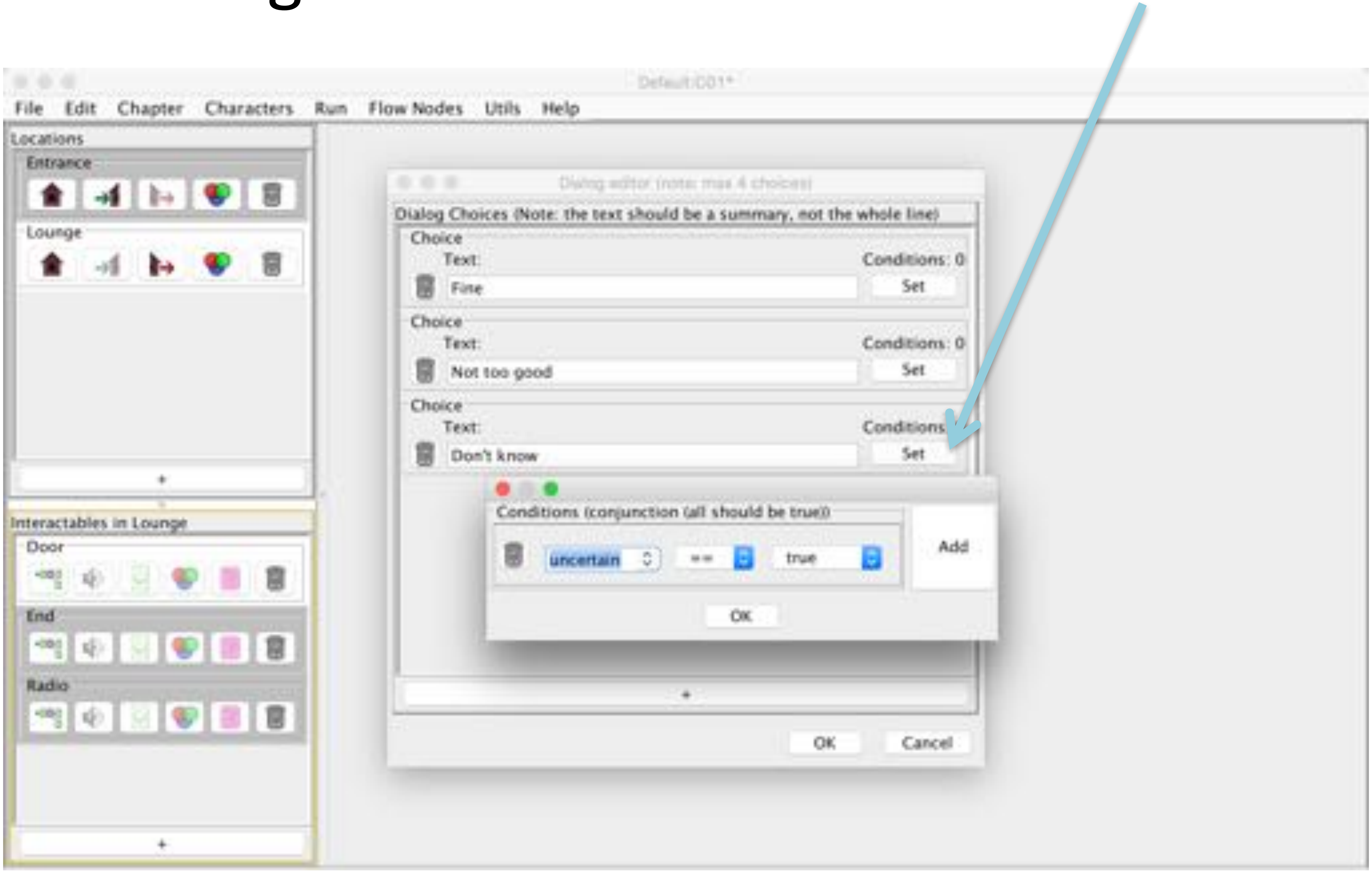
Exit flow is executed when a location is exited



Select a name and set a value.

leftBuilding = true

Dialog alternatives can be conditional



Default:001*
File Edit Chapter Characters Run Flow Nodes Utils Help
Locations
Entrance
Lounge
+
Interactables in Lounge
Door
End
Radio
+
Dialog editor (note: max 4 choices)

Dialog Choices (Note: the text should be a summary, not the whole line)

Choice
Text: Fine
Conditions: 0
Set

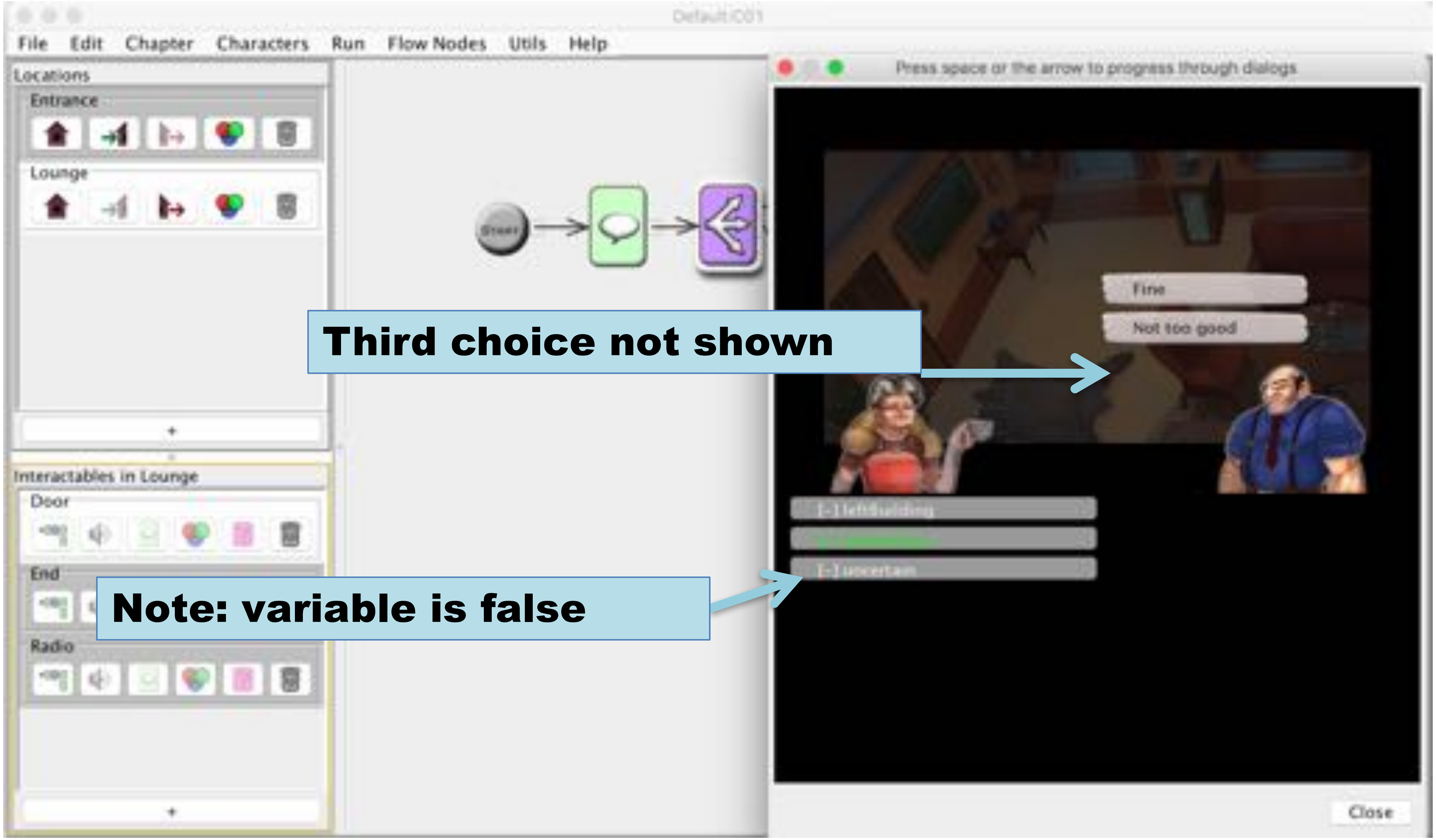
Choice
Text: Not too good
Conditions: 0
Set

Choice
Text: Don't know
Conditions
Set

Conditions (conjunction (all should be true))

uncertain == true

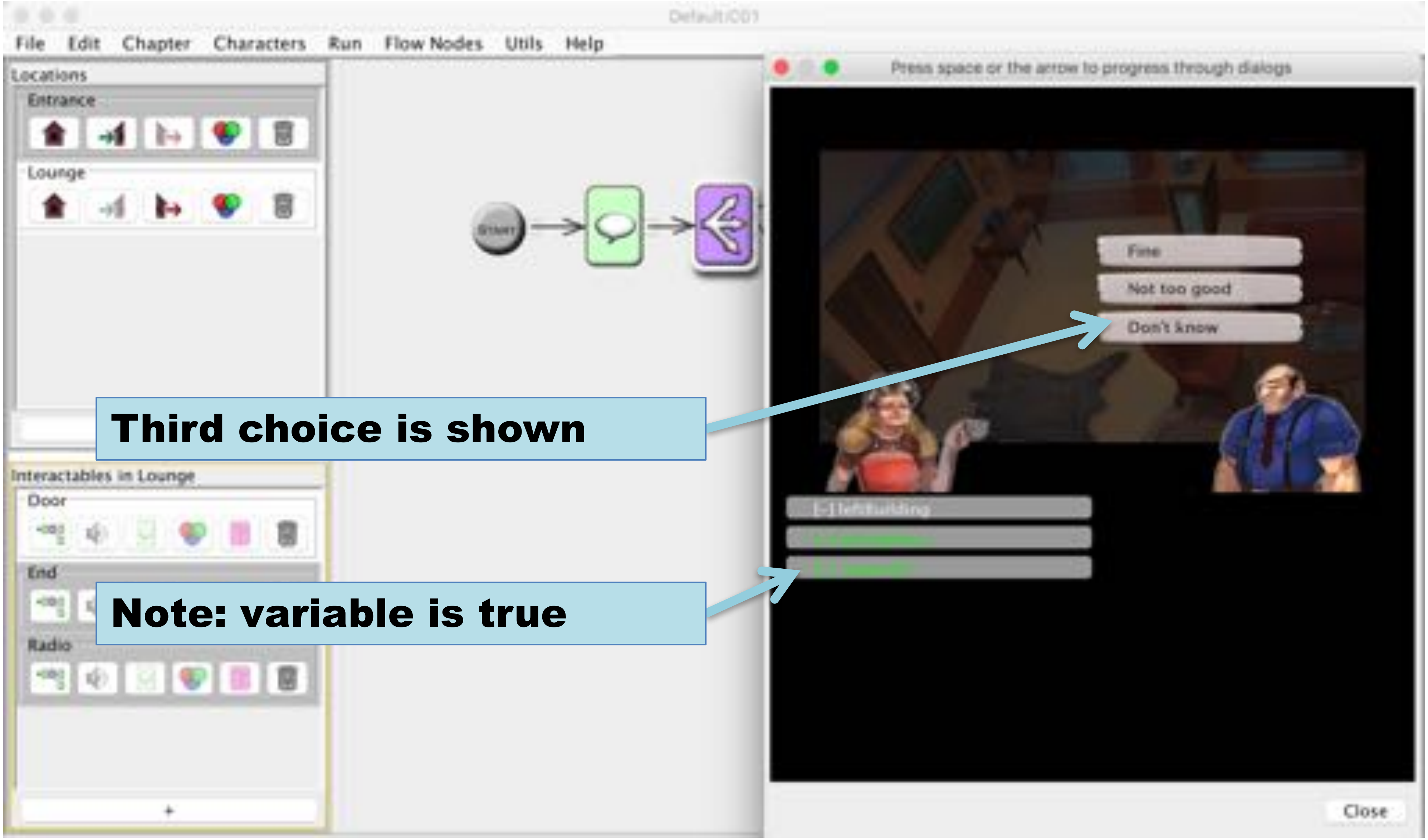
Debug conditional dialog



Third choice not shown

Note: variable is false

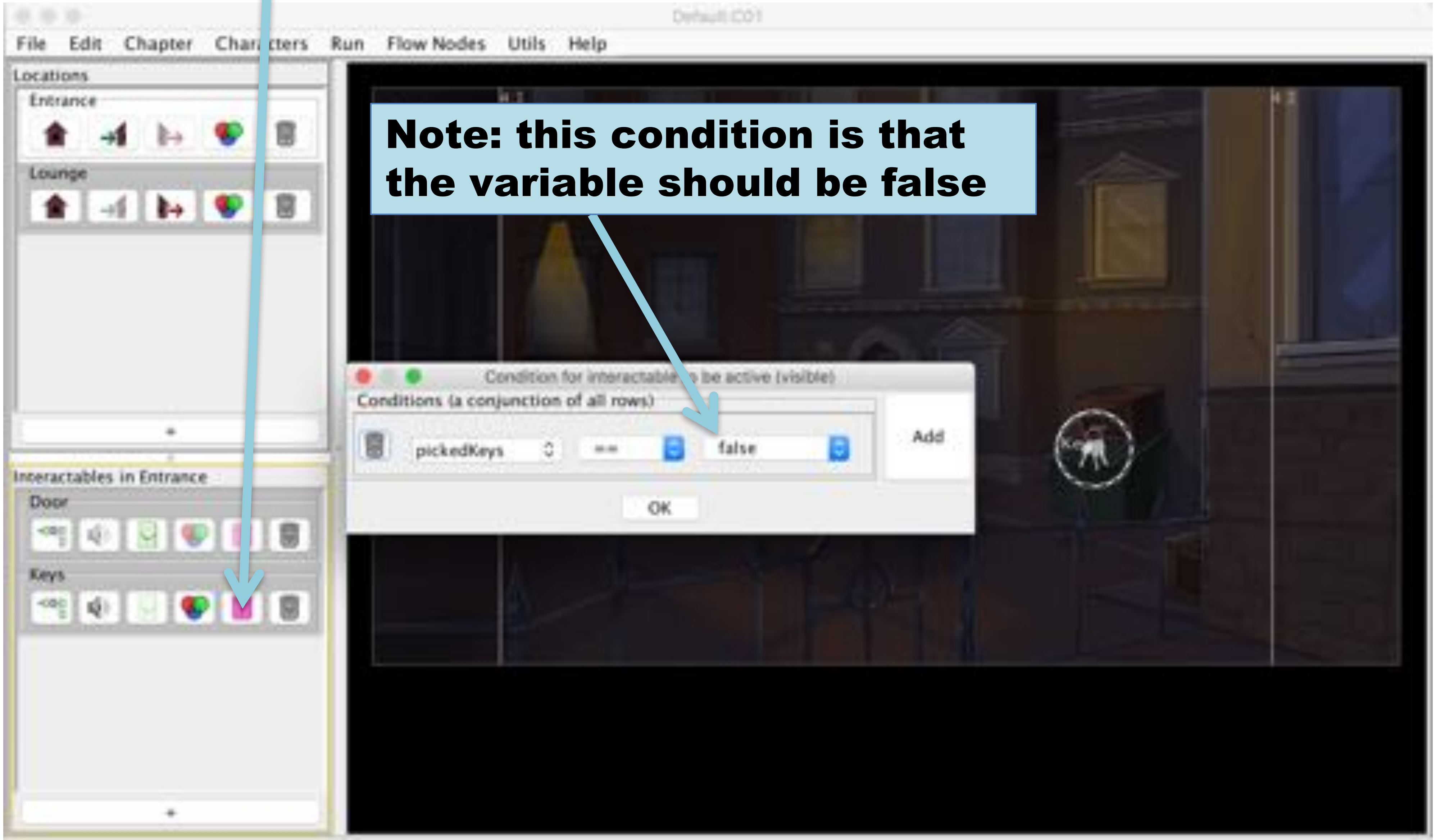
Debug conditional dialog



Third choice is shown

Note: variable is true

Interactables can be conditional

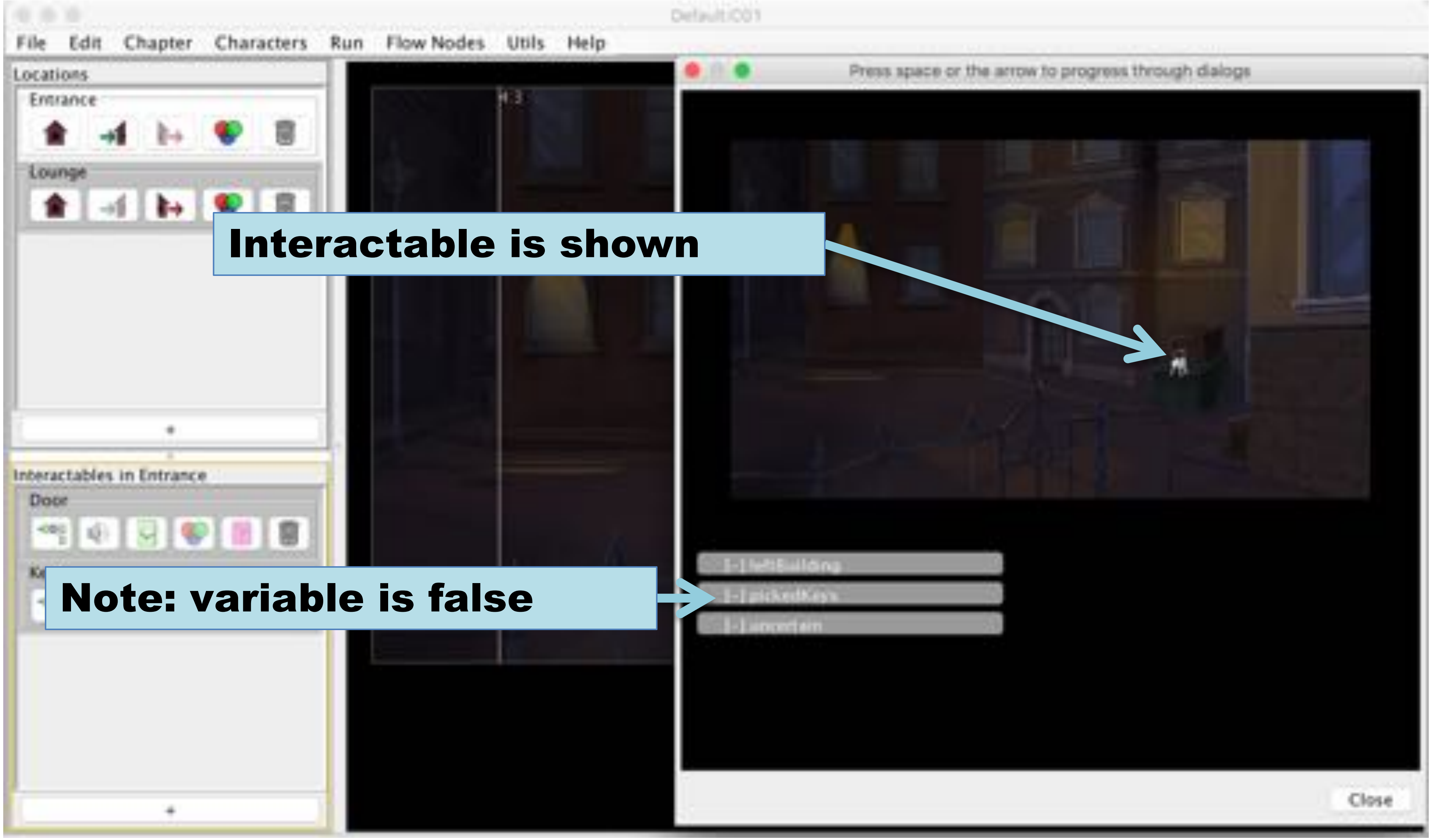


Default.C01
File Edit Chapter Characters Run Flow Nodes Utils Help
Locations
Entrance
Lounge
Interactables in Entrance
Door
Keys
Condition for interactable to be active (visible)
Conditions (a conjunction of all rows)
Add
OK

pickedKeys == false

Note: this condition is that the variable should be false

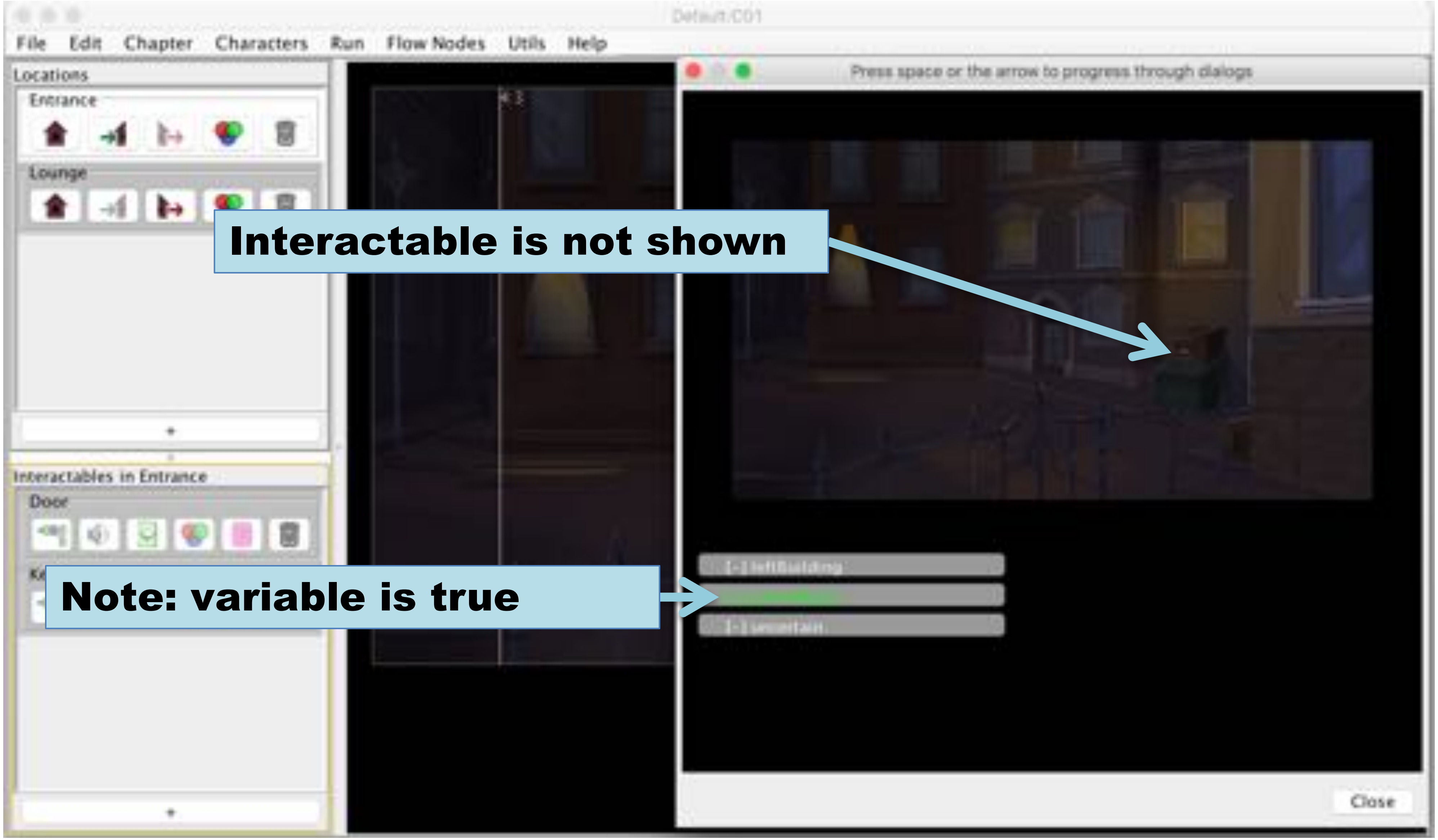
Debug conditional interactable



Interactable is shown

Note: variable is false

Debug conditional interactable



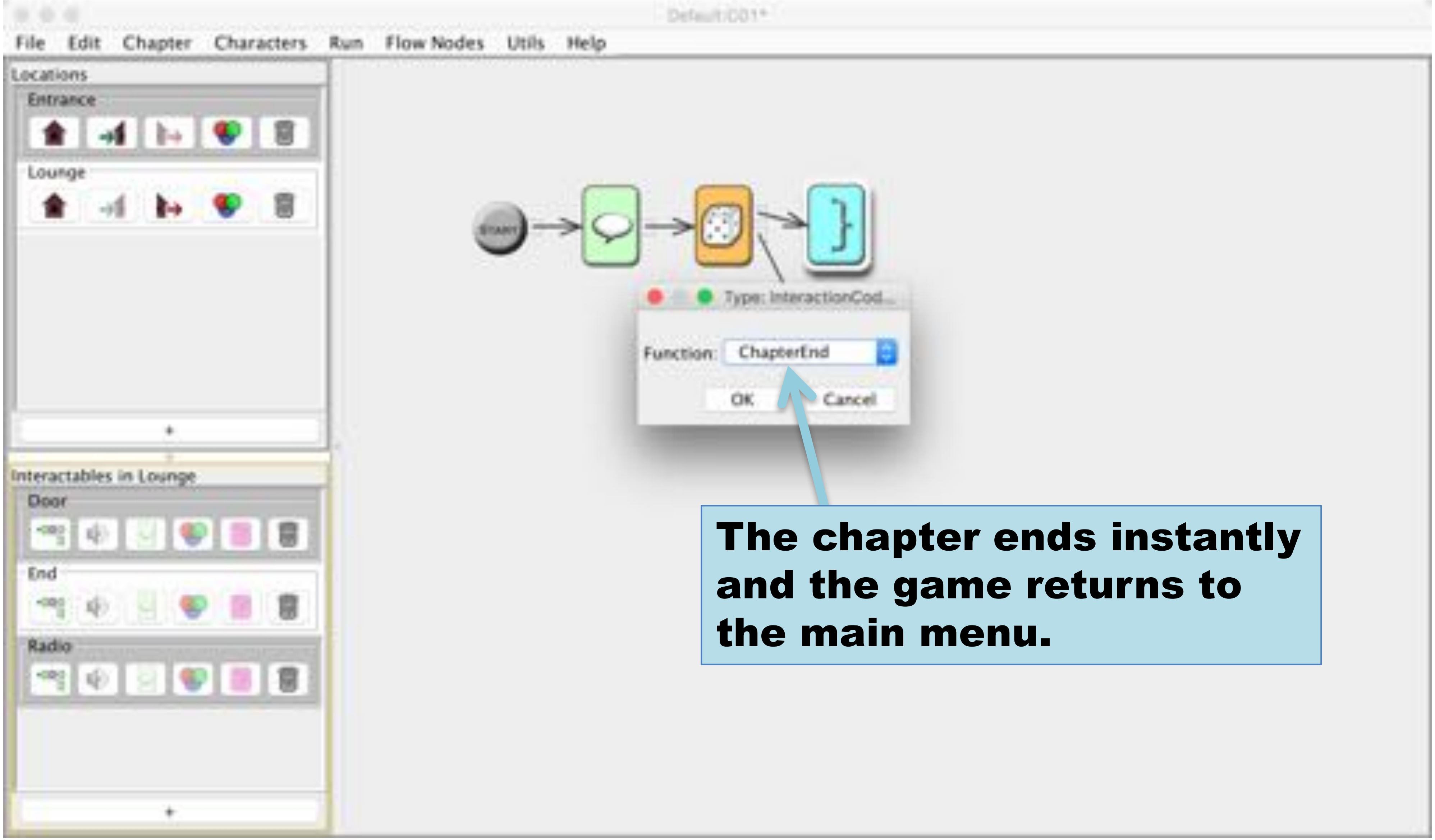
Default:C01
File Edit Chapter Characters Run Flow Nodes Utils Help
Locations
Entrance
Lounge
Interactables in Entrance
Door
Press space or the arrow to progress through dialogs
[-] leftBuilding
[-] uncertain
Close

Interactable is not shown

Note: variable is true

Code Nodes

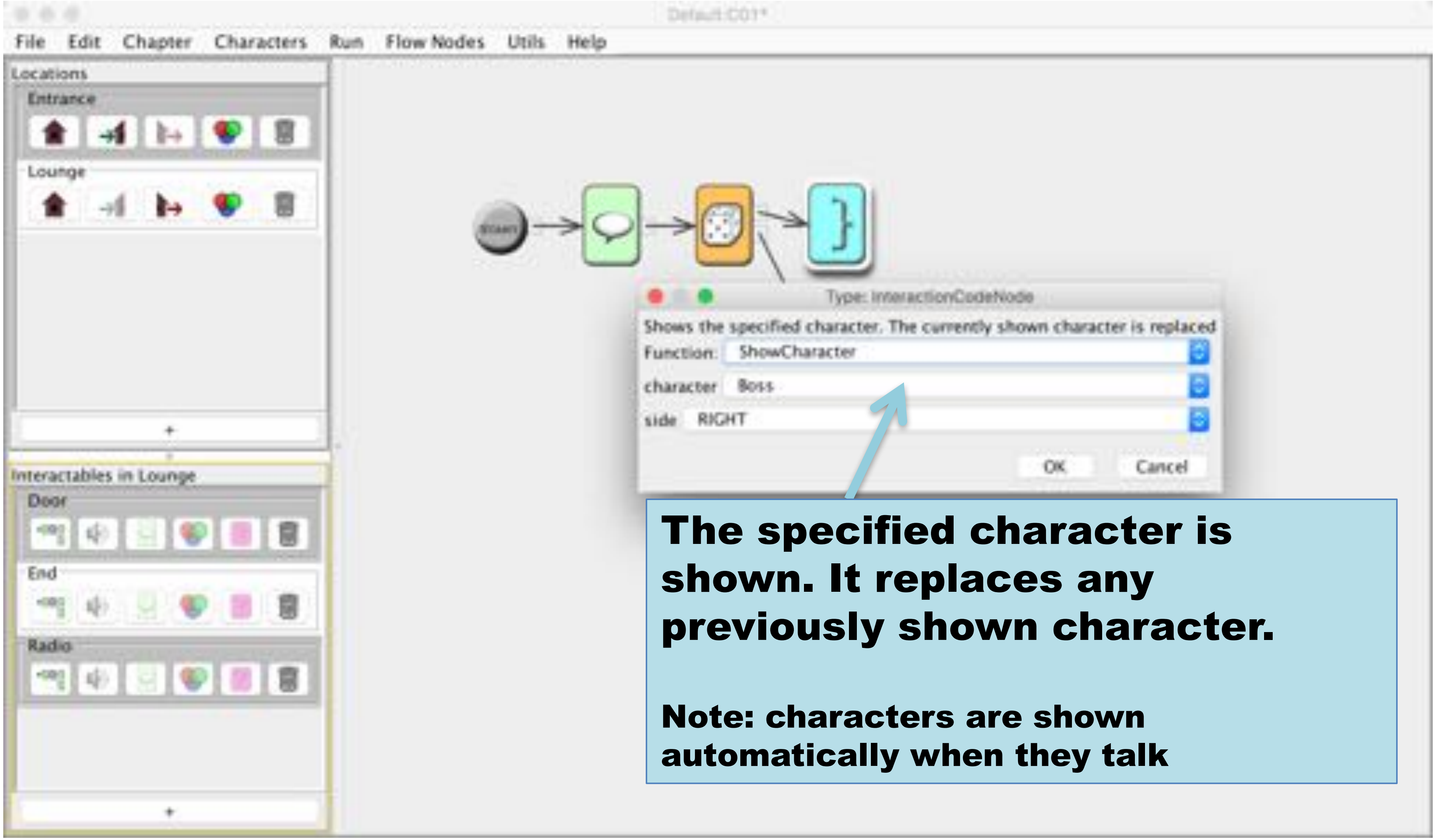
Code node - ChapterEnd



Function: ChapterEnd

The chapter ends instantly and the game returns to the main menu.

Code node - ShowCharacter



Type: InteractionCodeNode

Shows the specified character. The currently shown character is replaced

Function: ShowCharacter

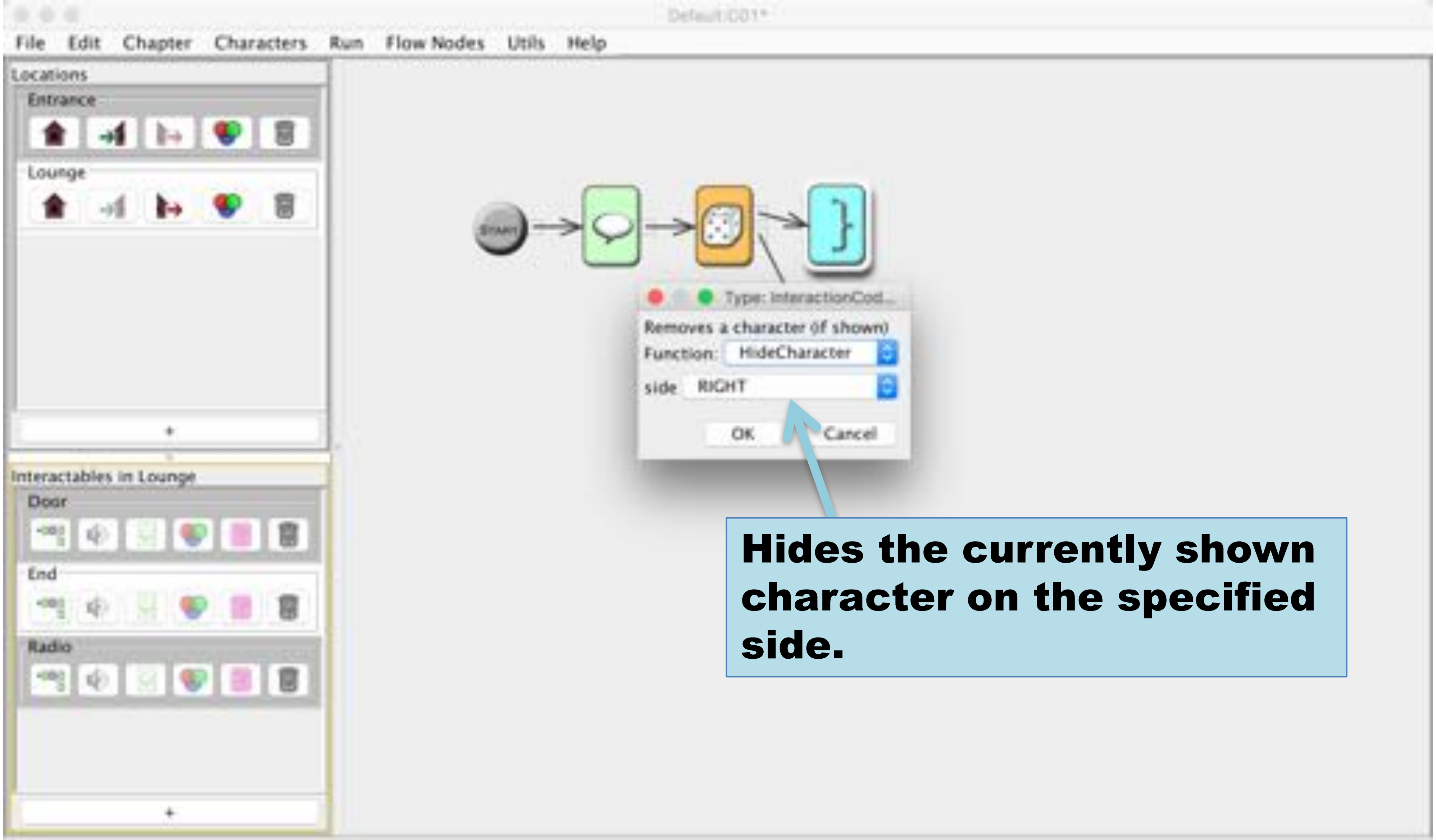
character Boss

side RIGHT

The specified character is shown. It replaces any previously shown character.

Note: characters are shown automatically when they talk

Code node - HideCharacter



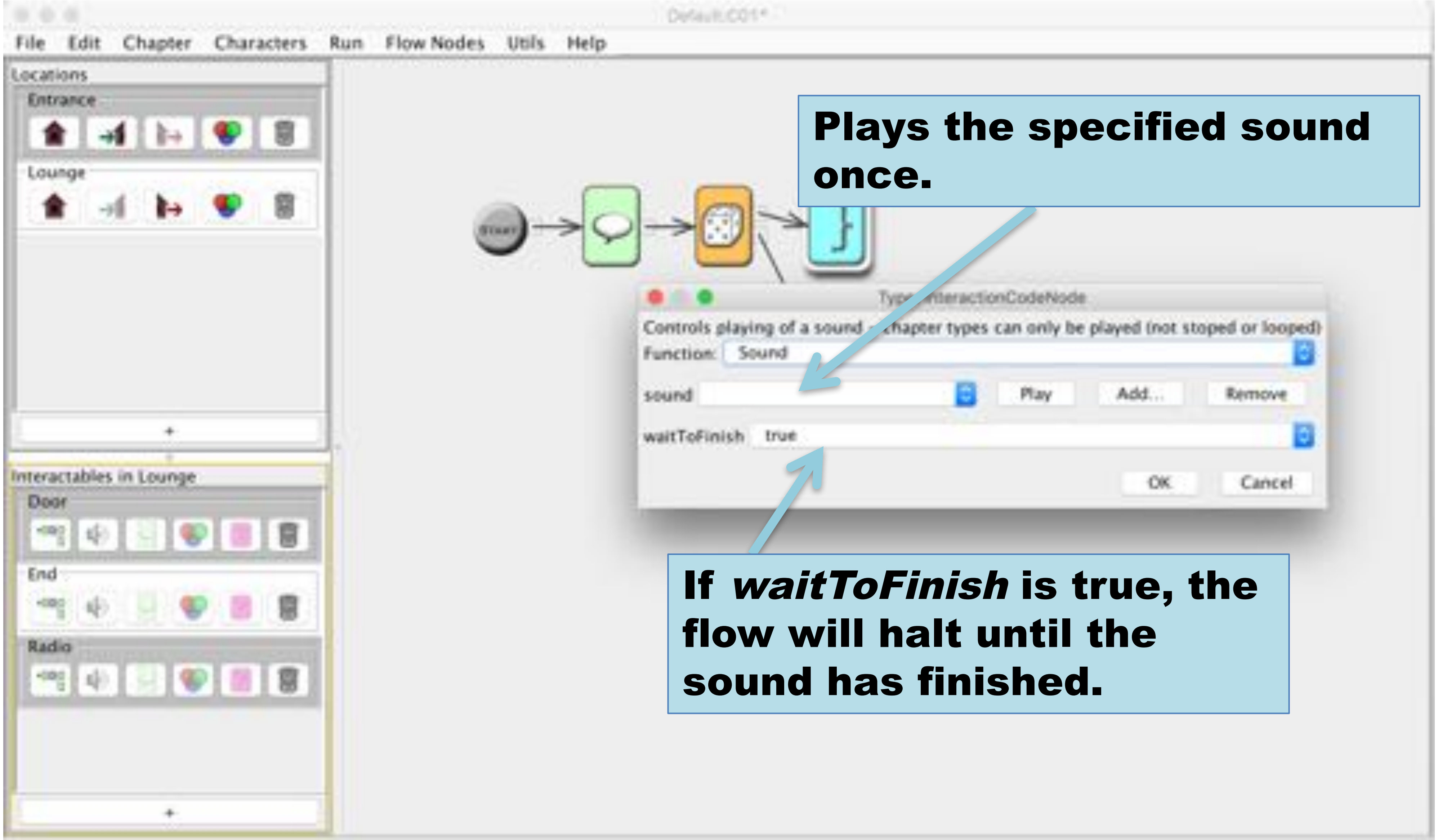
Removes a character (if shown)

Function: HideCharacter

side RIGHT

Hides the currently shown character on the specified side.

Code node - Sound



Type: InteractionCodeNode

Controls playing of a sound - chapter types can only be played (not stoped or looped)

Function: Sound

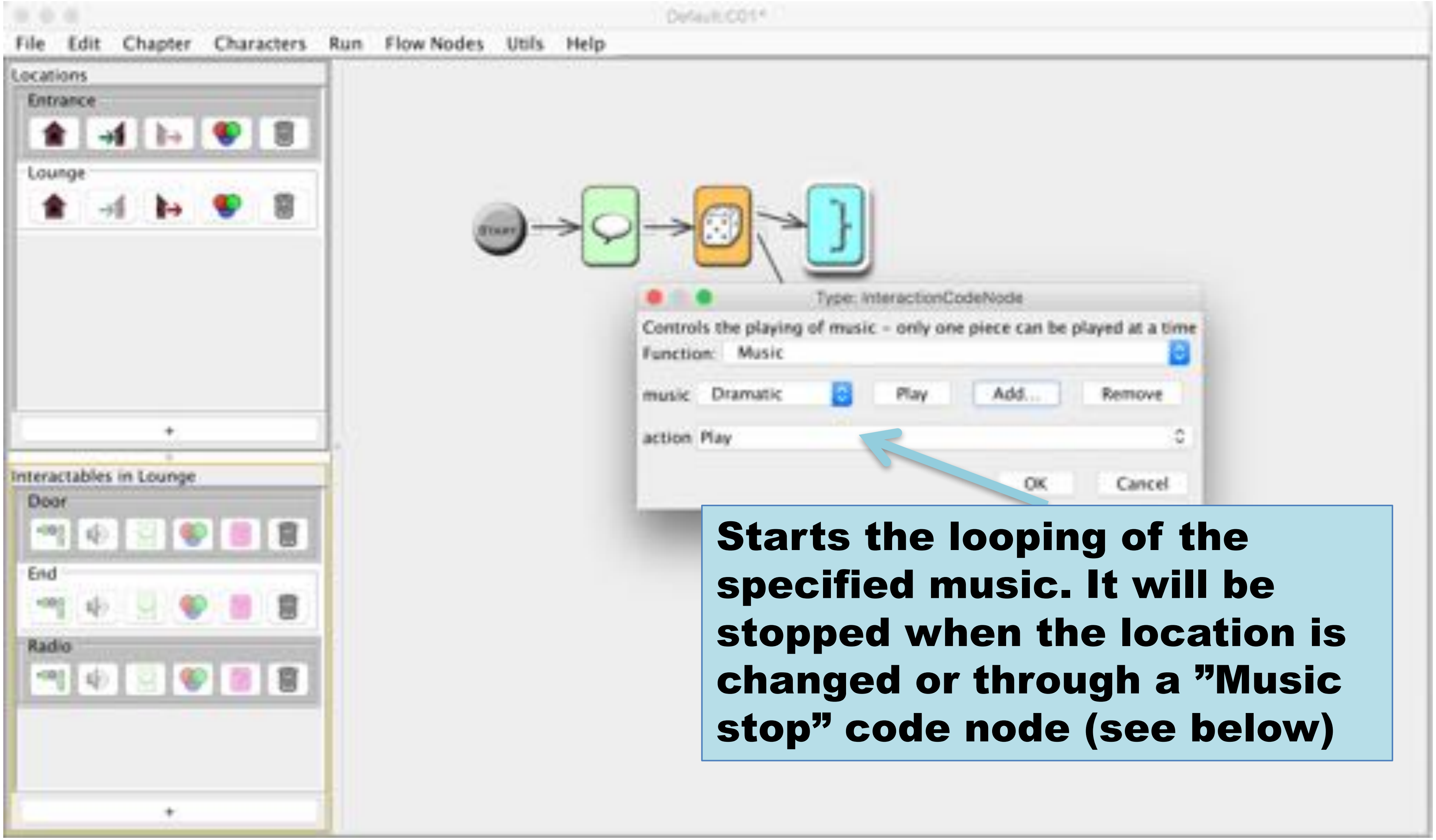
sound

waitToFinish true

Plays the specified sound once.

If *waitToFinish* is true, the flow will halt until the sound has finished.

Code node - Music



Type: InteractionCodeNode

Controls the playing of music - only one piece can be played at a time

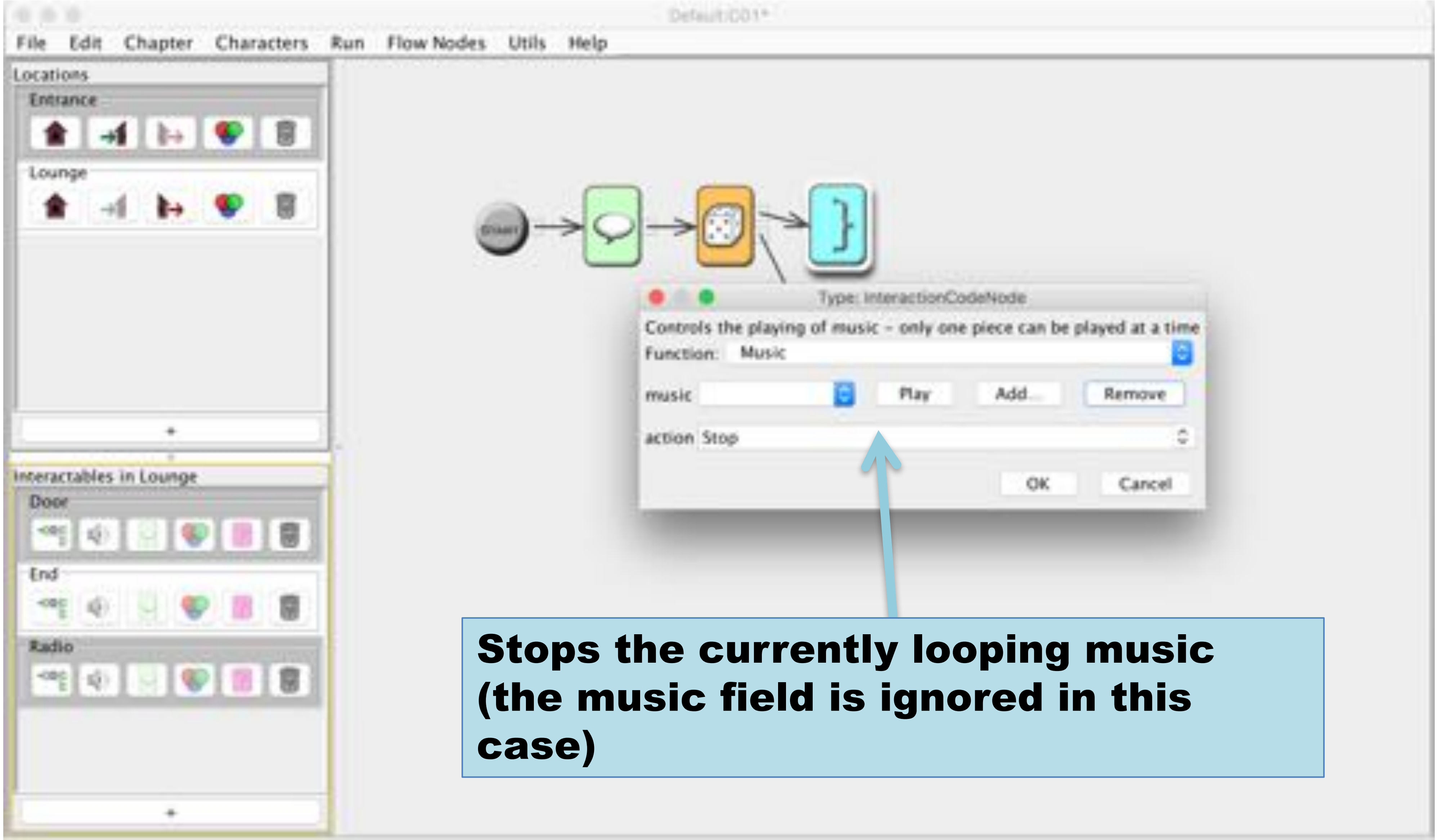
Function: Music

music Dramatic

action Play

Starts the looping of the specified music. It will be stopped when the location is changed or through a ”Music stop” code node (see below)

Code node - StopMusic



Controls the playing of music - only one piece can be played at a time

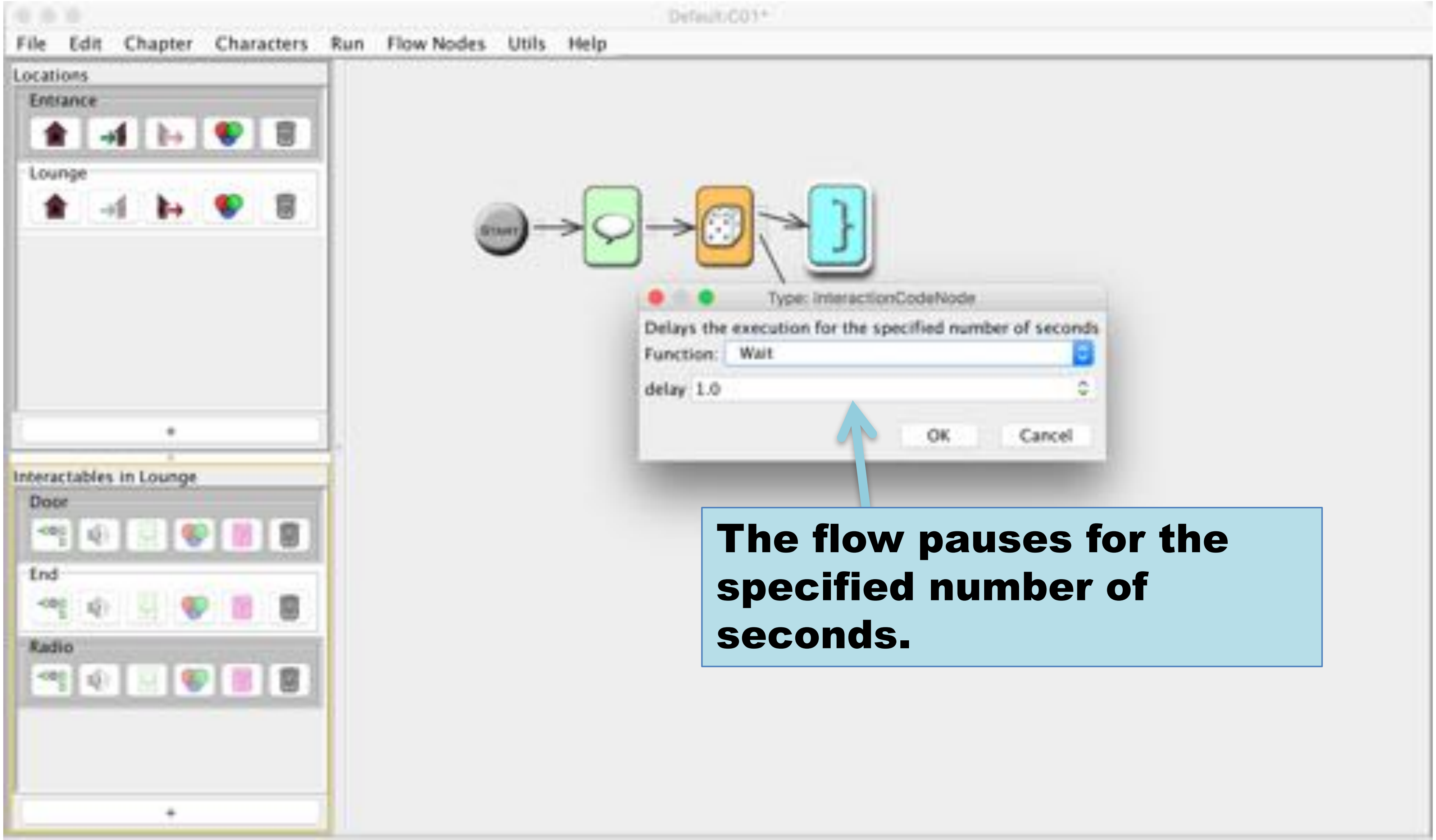
Function: Music

music

action Stop

Stops the currently looping music (the music field is ignored in this case)

Code node - Wait


Default:C01*
File Edit Chapter Characters Run Flow Nodes Utils Help
Locations
Entrance
Lounge
Interactables in Lounge
Door
End
Radio
START
Type: InteractionCodeNode

Delays the execution for the specified number of seconds

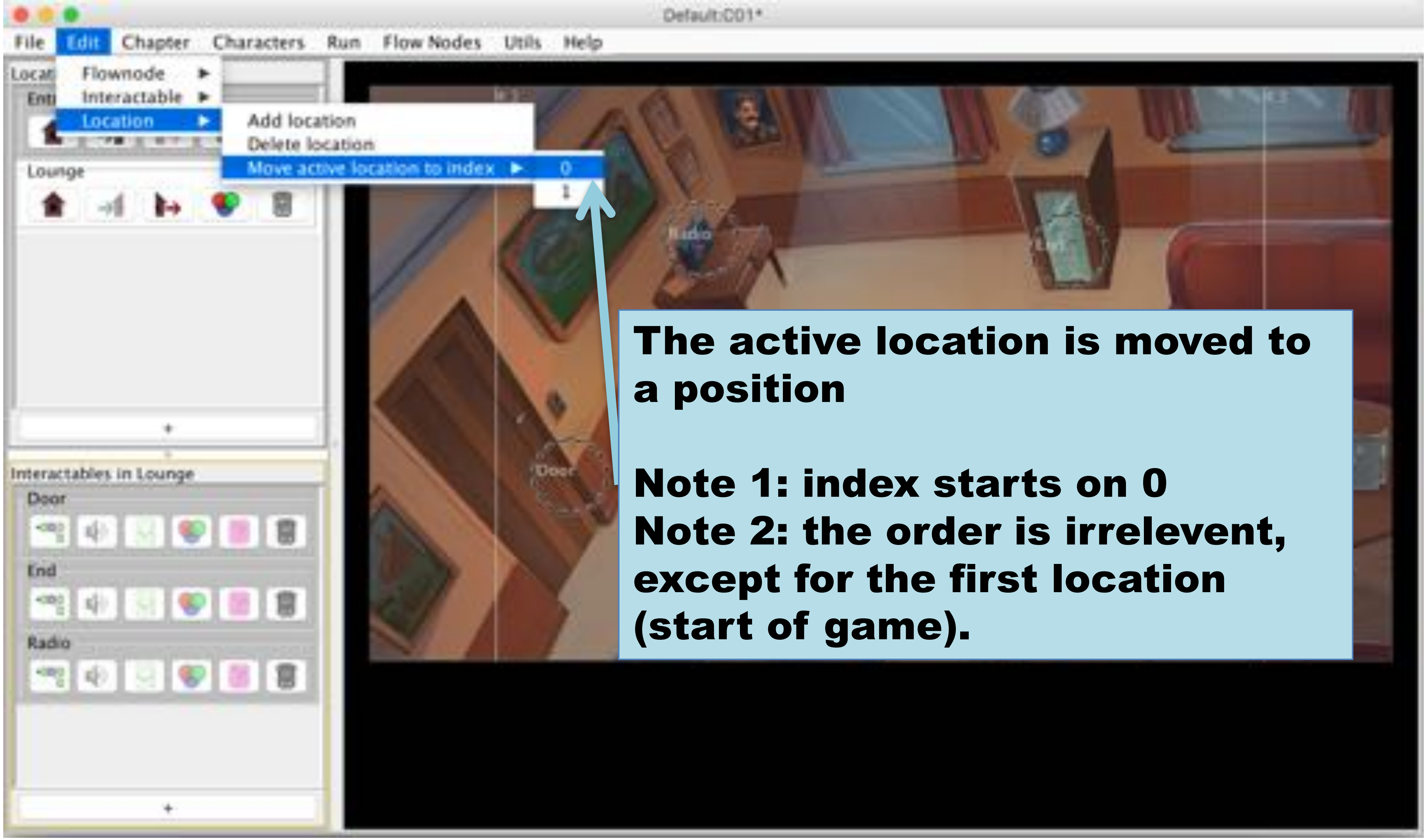
Function: Wait

delay 1.0

The flow pauses for the specified number of seconds.

Menu Choices

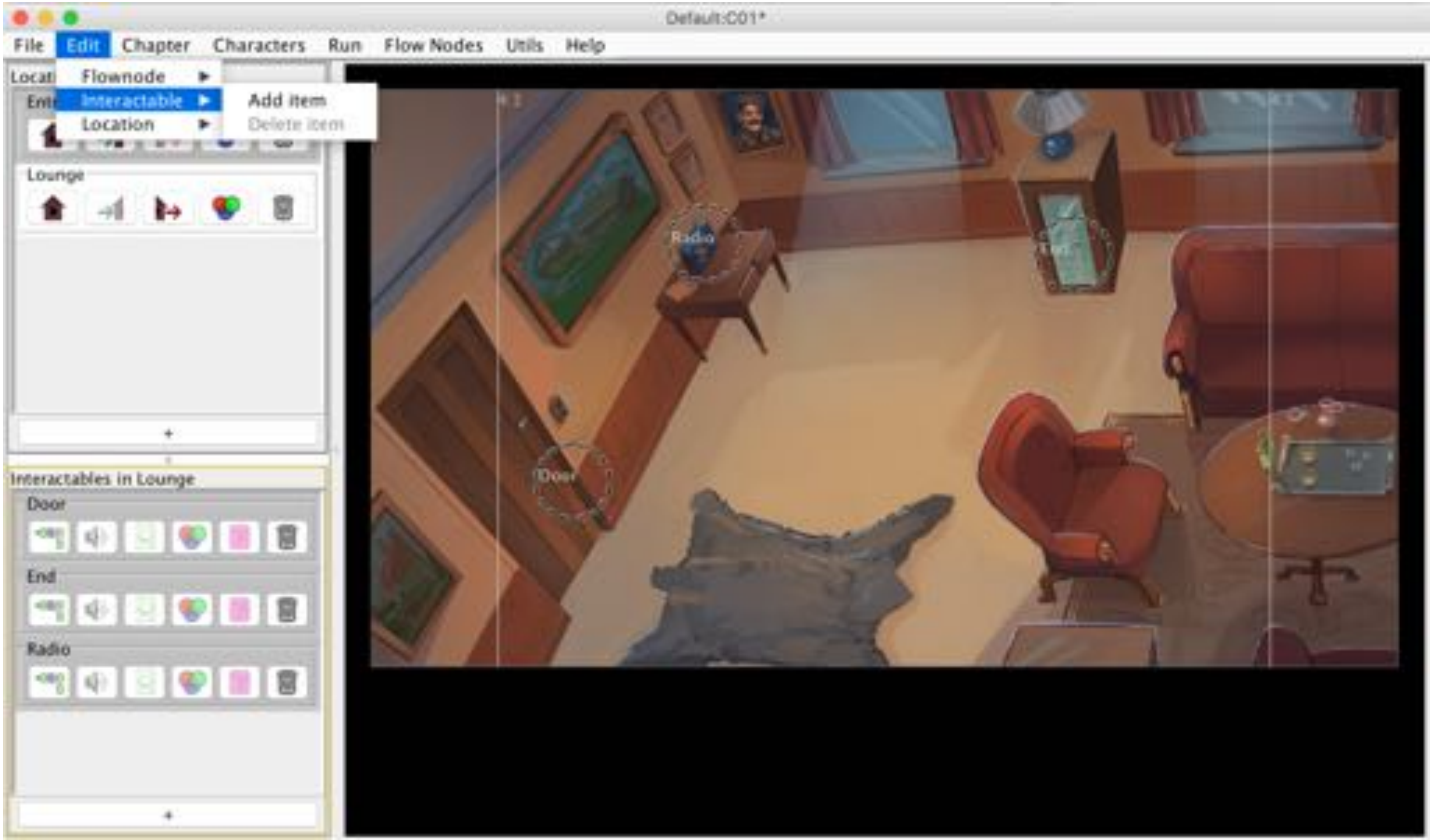
Edit menu alternatives - Locations



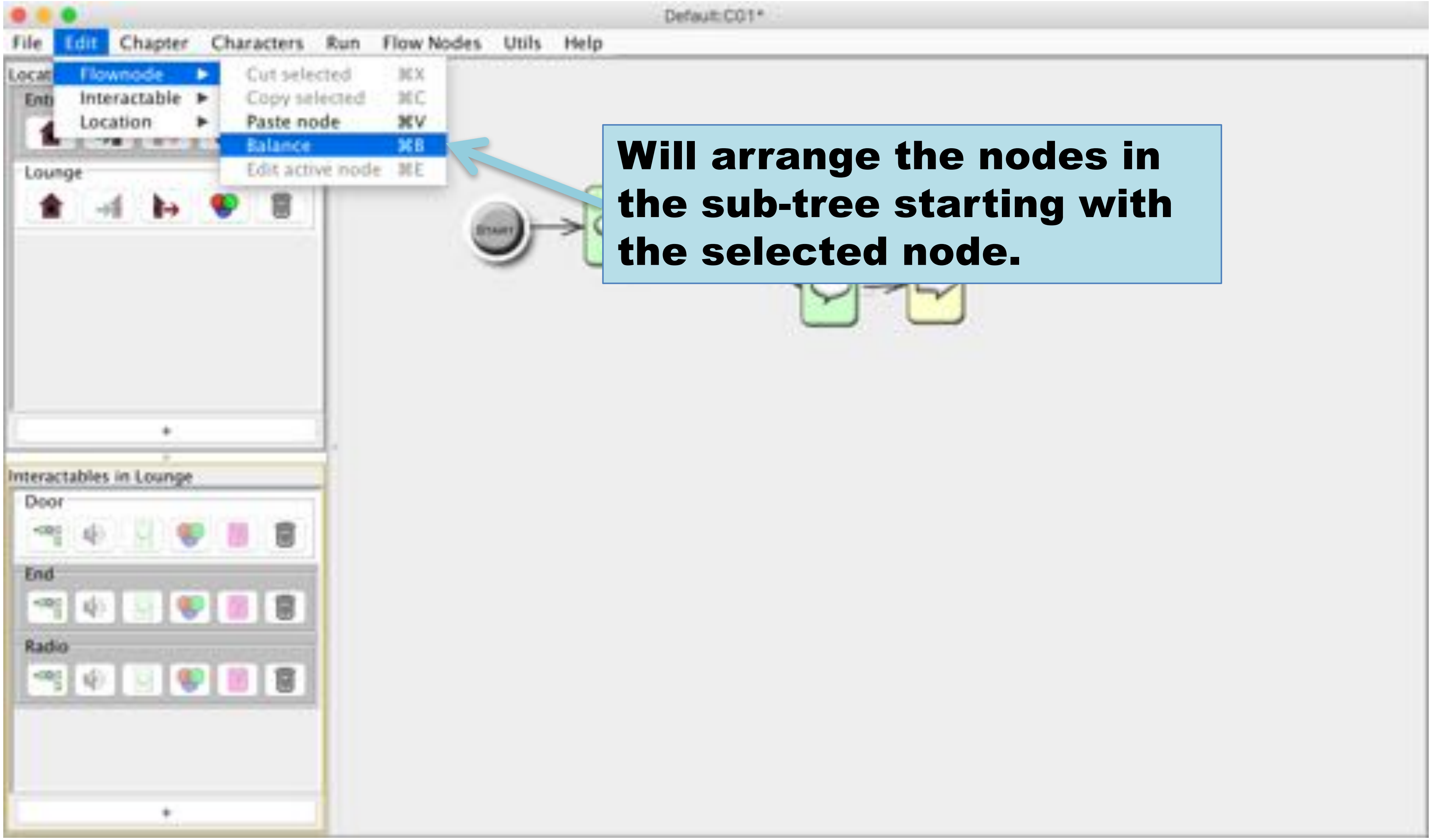
The active location is moved to a position

Note 1: index starts on 0
Note 2: the order is irrelevent, except for the first location (start of game).

Edit menu alternatives - Interactable

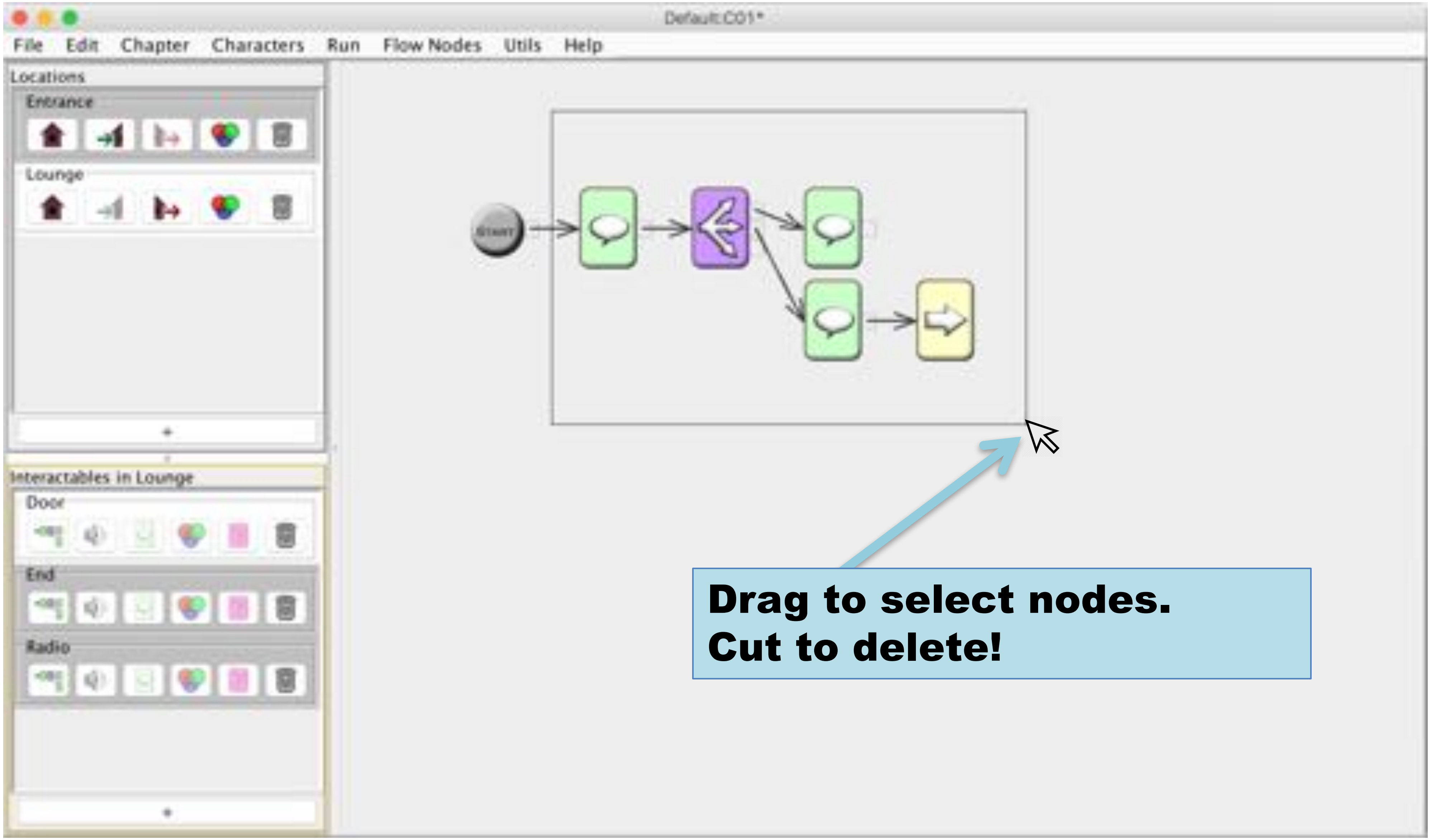


Edit menu alternatives - Flownode



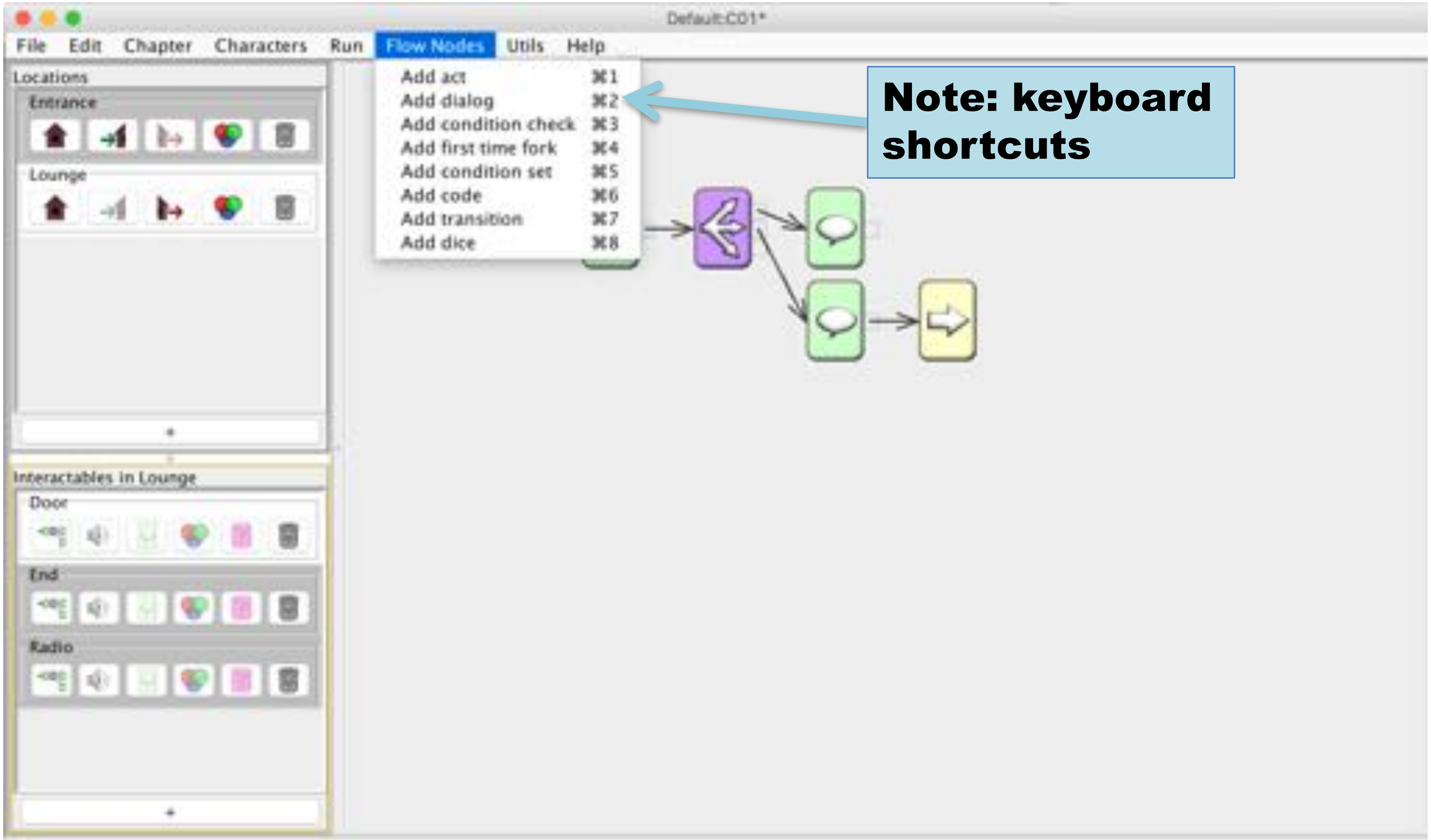
Will arrange the nodes in the sub-tree starting with the selected node.

Cut and paste



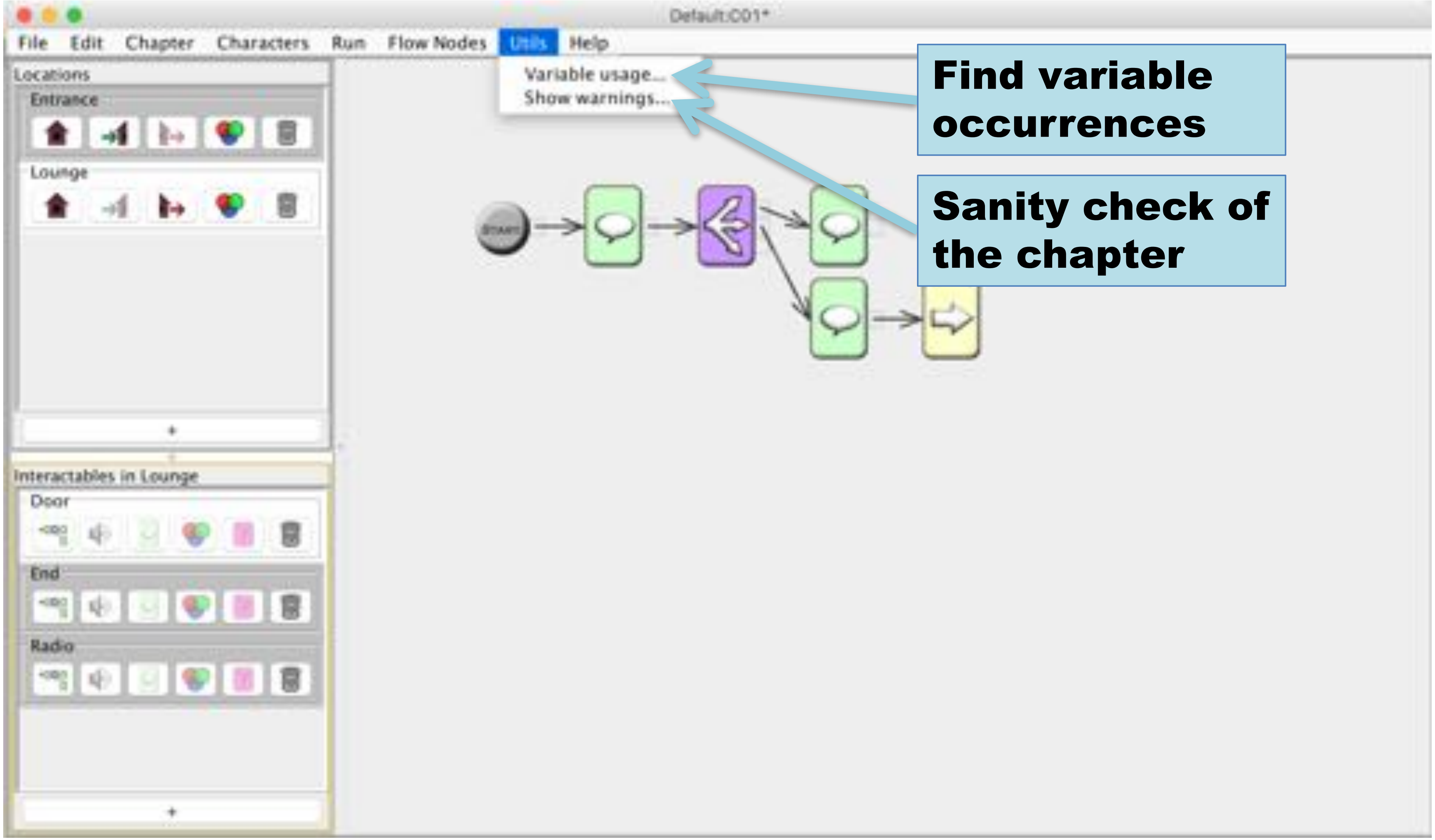
Drag to select nodes.
Cut to delete!

Add flow node



Note: keyboard shortcuts

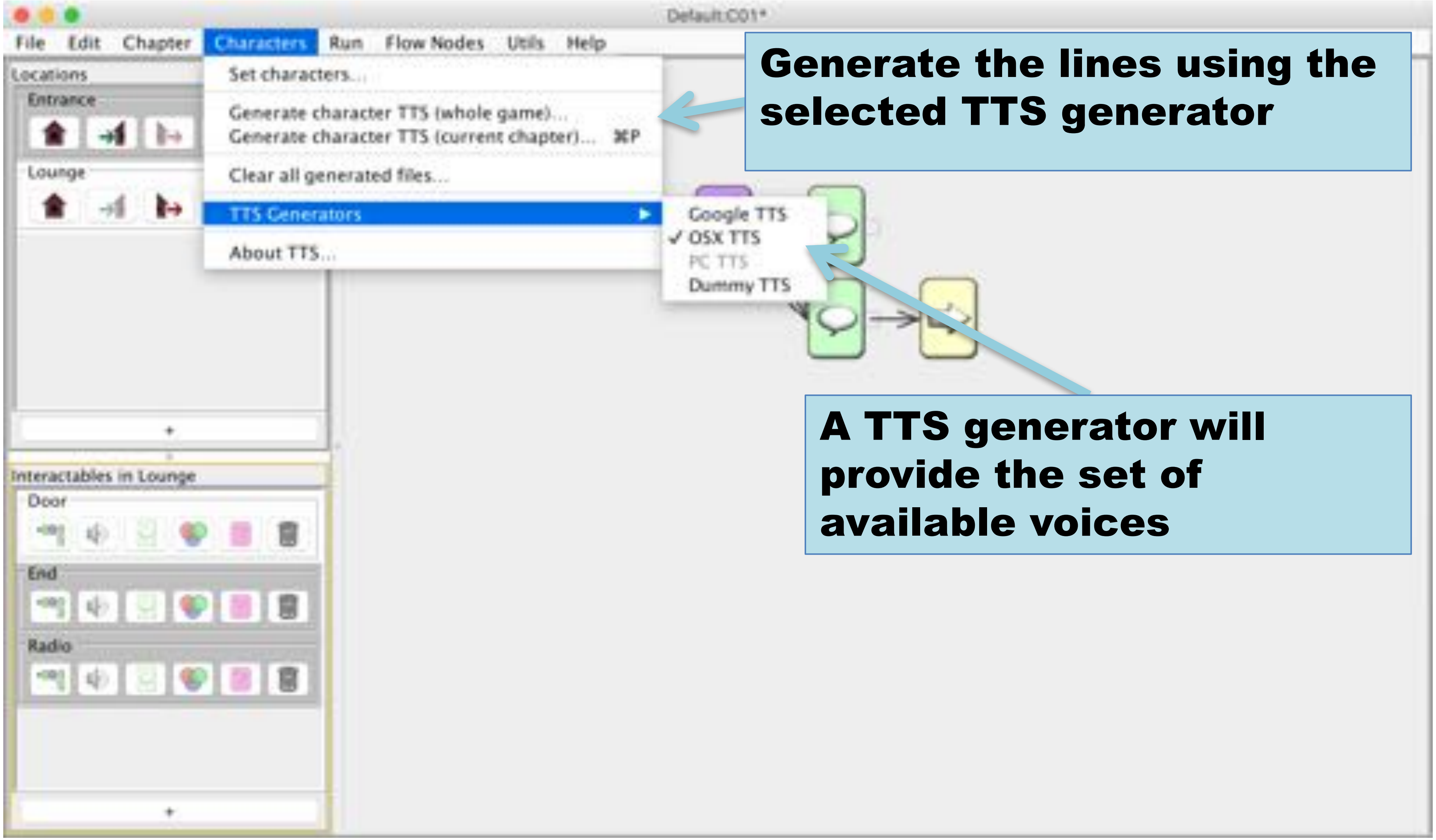
Utils



Find variable occurrences

Sanity check of the chapter

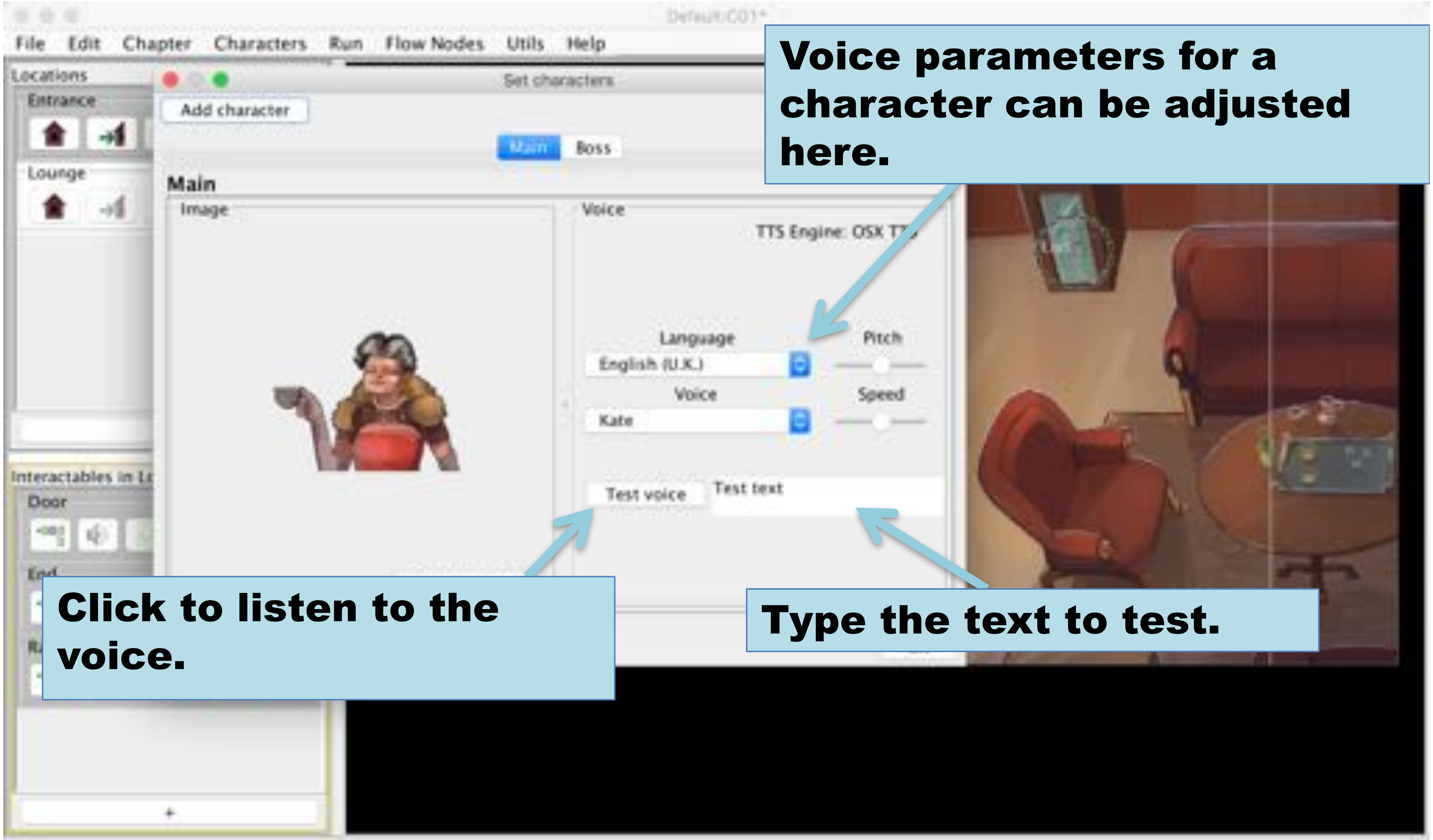
Text-to-speech (TTS)



Generate the lines using the selected TTS generator

A TTS generator will provide the set of available voices

Select voices



TTS Engine: OSX TTS

Language: English (U.K.)

Voice: Kate

Pitch

Speed

Test text

Voice parameters for a character can be adjusted here.

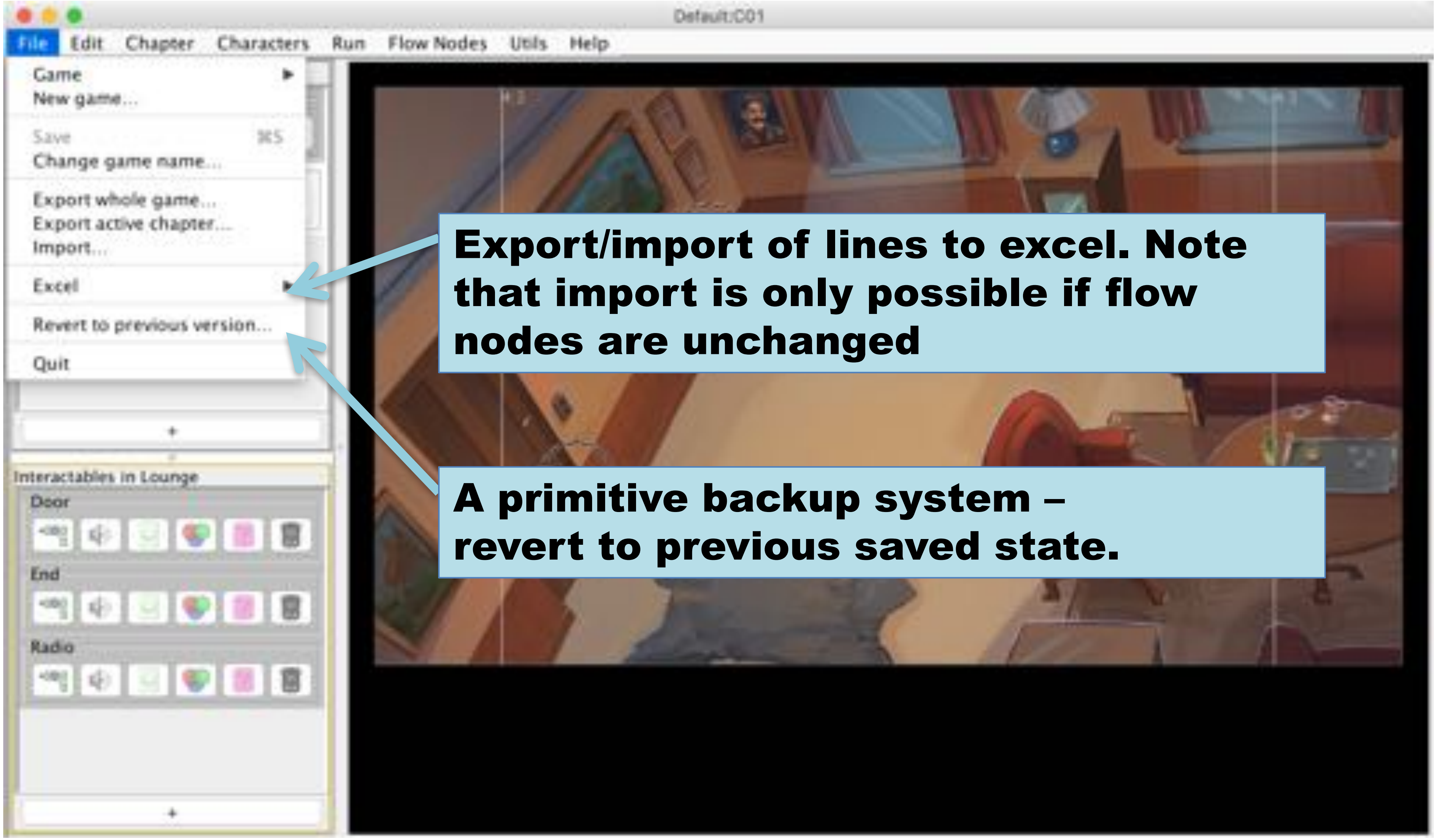
Click to listen to the voice.

Type the text to test.

Important Note!

- The dialog audio files generated can only used for prototyping
- The provided generators are not intended for publication.
- If TTS should be used in a distributed game, a TTS generator that is allowed to use for that purpose has to be obtained.

File Menu



Export/import of lines to excel. Note that import is only possible if flow nodes are unchanged

A primitive backup system – revert to previous saved state.

Games

- It is possible to work with several independent games
- The name is a global identifier
  - choose it with care
  - It is possible to change it

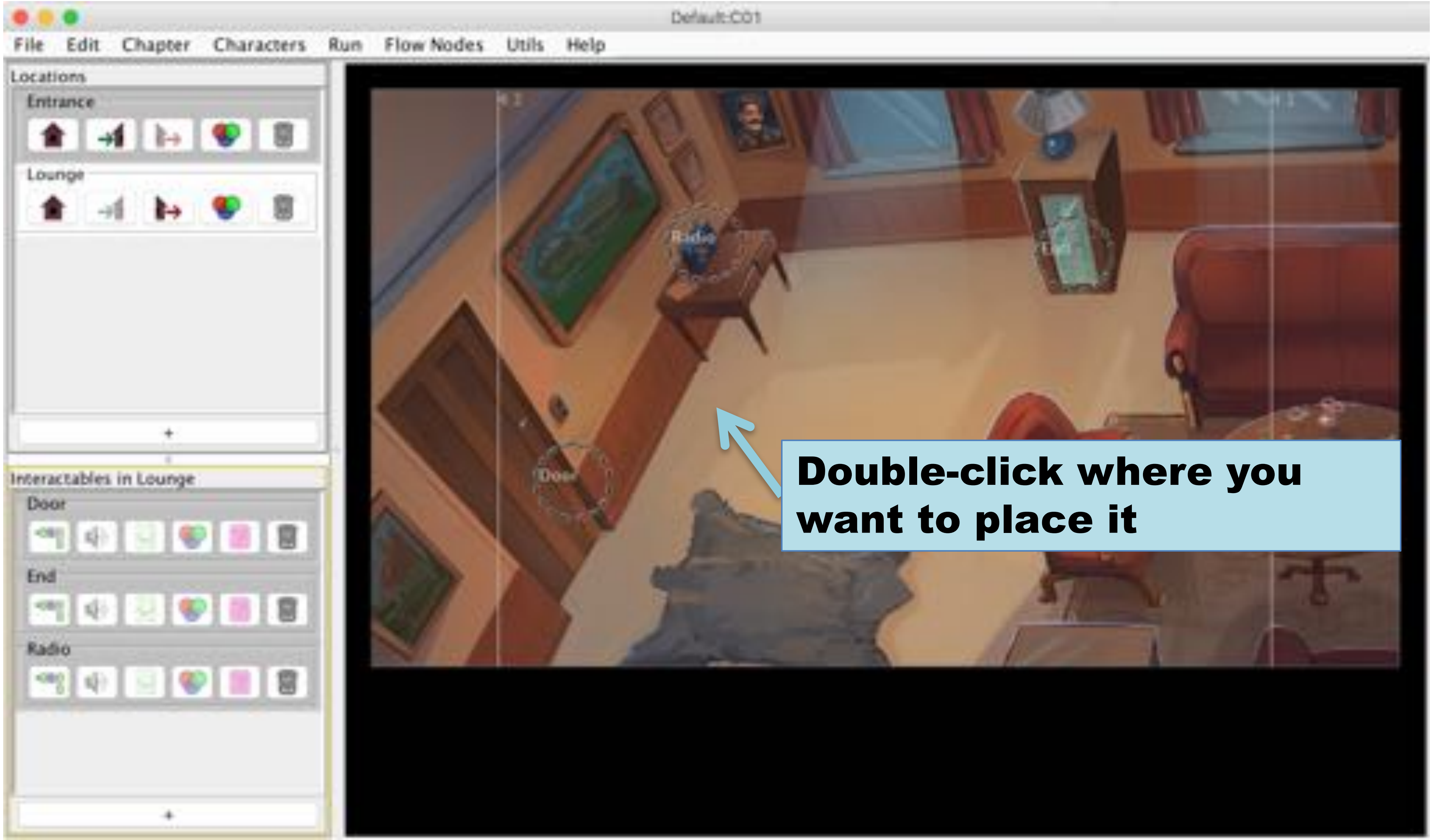
Export/import

- File ->Export whole game
  - will pack all game data (images & sounds) into a single archive
- File ->Export active chapter
  - Exports only the current chapter
  - Should typically not be used
- Import adds a game or a chapter
  - Depends on how it was exported
  - Chapters will be added after active chapter

Some Hints

- Use arrow keys to traverse flow node tree
- Press Ctrl and use arrows to change spacing
- Ctrl-B to balance subtree (the selected node and forward)
- Hold *shift* to move subtrees

Alternative way to add interactable



Double-click where you want to place it

Limitations

- Locations and Interactables can only be deleted
    - No rename or copy-paste
- Editor will not autosave
    - Make sure to save before quit
    - Save frequently (Ctrl-S)

Legal Stuff

- It is not allowed to redistribute this program or use it for commercial purposes.
- Reverse-engineering or repackaging is prohibited.
- The following libraries are used (see lib folder for details)
  - jexcelapi.sourceforge.net
  - simple.sourceforge.net
  - jLayer from javazoom.net
-