

Build an Example Self-Service

Introduction

Have you ever thought about how you can reduce the workload of your employees and still achieve a high level of customer satisfaction?

Self services are the answer! These can help you automate processes and enable customer service even out of normal hours.

As an example, we show you how to build a self service application for recording electricity meter readings.

Neccesary prompts

First of all, the necessary prompts are created.

The following table shows the prompts required.

Prompt	Contents
Welcome	Welcome to your energy provider! This automatic service allows you to provide us with your current meter reading.
Input Meter Number	Please enter your meter number
Input Meter Number Error	We couldn't find your meter number. Please wait one moment, we will connect you to the next available agent.
Current Meter Reading	Please enter your current meter reading in single digits.
Repeat Current Meter Reading	The current meter reading is
Confirm Meter Reading Menu	If the meter reading is correct please press 1, otherwise press 9 to enter the reading again.
Thank You Goodbye	We have recorded your current meter reading. Thank you for using our service and goodbye.

TTS

You can create the prompts quickly and easily using a TTS engine if you have subscribed to our TTS service. This is shown in the screenshot below.



Prompt "SelfService - Current Meter Reading" - Edit File

ID : 1672

Language : English (United Kingdom) ▼

Please enter your current meter reading

Contents :

TTS : ☒

TTSEngine : Standard, en-GB, Female, Amy_8000 ▼

Save

Cancel

List - Checking Meter Numbers and Recording Results

A list is used to check the meter numbers and store the results.

The list is pre-loaded with all existing meter numbers. This can, for example, be manually loaded into the system, or imported using an FTP job.

The results in the list could be automatically processed by exporting the list to an FTP server.

The fields in the list are as follows:

Field	Meaning	Comments
Field 1	Meter Number	This is the only field which contains data when the meter numbers are loaded into the system.
Field 2	Meter Reading	This field only contains a value, if a meter reading has been made using the automated service.
Field 3	Date of Meter Reading	This field only contains a value, if a meter reading has been made using the automated service.
Field 4	Time of Meter Reading	This field only contains a value, if a meter reading has been made using the automated service.

This is shown in the screenshot below.

Input Digits DTMF

Object Name :	<input type="text" value="Enter Meter Number (57)"/>
Voice Prompt Type :	<input type="text" value="SelfService"/> ▼
Voice Prompt :	<input type="text" value="SelfService - Input Meter Number"/> ▼
Play Tone :	<input checked="" type="checkbox"/>
Barge-In :	<input checked="" type="checkbox"/>
Minimum Number of Digits :	<input type="text" value="1"/> ▼
Maximum Number of Digits :	<input type="text" value="10"/> ▼
# stops input :	<input checked="" type="checkbox"/>
Timeout no Digit :	<input type="text" value="4000"/> ▼
Timeout between Digits :	<input type="text" value="3000"/> ▼

Close

An audio beep is played after the prompt, to inform the caller that now is the time to start typing in the meter number (Play Tone). However, Barge-In is also selected so the announcement does not have to be listened to completely, but can be interrupted by starting to type in the meter number.

The minimum and maximum number of digits can be used for a plausibility check, for example, if the meter number may have a maximum of 10 digits then this can be specified as the upper limit.

Further details on this object can be found here: [Input Digits DTMF](#)

Check Meter Number

The meter number is checked for validity by looking up the value - **\$input** - in the List "Meter Readings". All meter numbers should be loaded into this list in order that the service may work as built here.

List Lookup

Object Name :

Check Meter Number (62)

List :

Meter Readings

Key Column :

1

Key Value :

\$input

Value Column 1 :

1

Save to Variable 1 :

Value Column 2 :

1

Save to Variable 2 :

Value Column 3 :

1

Save to Variable 3 :

Close

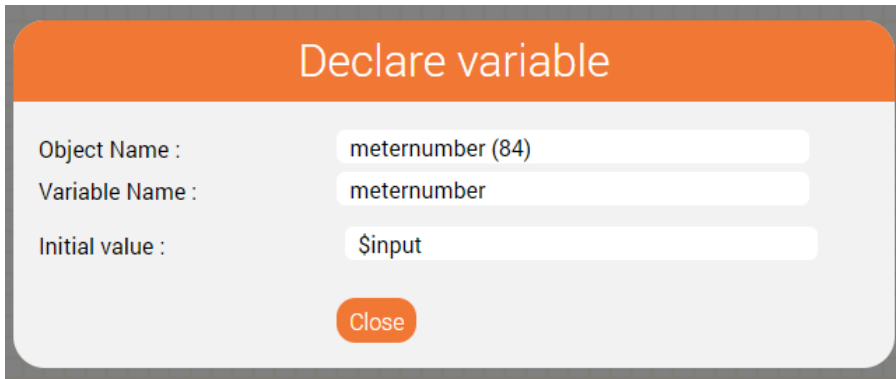
This object has two outputs.

- Found - \$input was successfully found in the list of meter numbers.
- Not found - \$input was not found in the list. In this case, no self service is available and the caller could be connected to an agent.

Further details on this object can be found here: [List Lookup](#)

Remember the inputs: meternumber / meterreading

If the meter number is found, we need to remember this for later. This is achieved by saving \$input to a variable **\$meternumber** using the Declare Variable object **meternumber** in the call flow above.



Declare variable

Object Name : meternumber (84)

Variable Name : meternumber

Initial value : \$input

Close

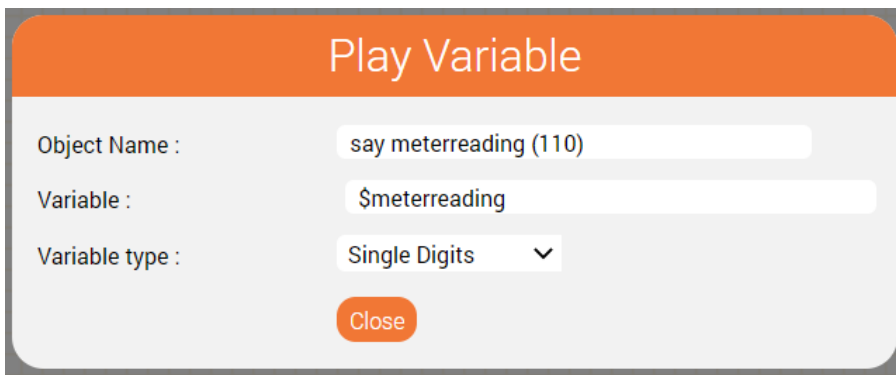
Similarly, when the meter reading is entered, this is saved to a variable \$meterreading in the Declare Variable object **meterreading**.

Further details on this object can be found here: [Declare Variable](#)

Saying the Current Meterreading: say meterreading

This object is used to output the current meter reading as a concatenation of single digits. It is used after the "**Current Reading is**" prompt is played.

It is parameterised like this:



Play Variable

Object Name : say meterreading (110)

Variable : \$meterreading

Variable type : Single Digits ▼

Close

Further details on this object can be found here: [Play Variable](#).

Saving the result: Remove old Reading / Add new Reading

The meter reading is saved to the same list in our example call flow.

This involves deleting the old entry and adding a new entry with the same meter number using two instances of the List Functions object.

Removing the old entry is performed like this:

List Functions

Object Name :

Remove Old Reading (134)

List :

Meter Readings

▼

Function :

Remove Value from List

▼

Key Column :

1

▼

Key Value :

\$meternumber

Close

And the new reading is added like this:

List Functions

Object Name :

Add new Reading (138)

List :

Meter Readings

▼

Function :

Add Value to List

▼

Value 1 :

\$meternumber

Value 2 :

\$meterreading

Value 3 :

\$date

Value 4 :

\$time

Close

Keeping it Tidy: Jump Input Again / Input Again

These two objects are used to define a point in the routing, to which the call flow can jump, and to perform the actual jump from the end of the call flow to the middle.

Of course, one could just connect the two objects directly together, but the number of connectors involved will mean the end result might look somewhat untidy.

Further details on these two objects are found on the following pages: [Jump to Target](#), [Target](#)

Conclusion

We hope this tutorial has given you some insight as to how a simple self service can be built using the jtel system.

The logic can be changed and adapted as the use case requires.

Here are some examples:

- Save the readings to a new list only containing the readings recorded
- Check the meter number using a checksum algorithm if available
- Query a backend system by REST to check the meter number and record the results directly