

A short Course for

zTree

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Contents

- 1 Installation
- 2 Introduction
- 3 Simple Single Player Experiments
- 4 Implementing Questionnaires
- 5 Changing the Design

nb

Content Overview

- 1 Installation
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- 3 Simple Single Player Experiments
- 4 Implementing Questionnaires**
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Goal

Task: We want to add Questionnaires to experiments

Why ?

- Questionnaires are parts of almost all experiments which are meant to be conducted.
- In zTree they terminate every Experiment and start payment phase.

Example

Adresse

Vorname

Nachname

Adresse

Postleitzahl

Ort

Telefon

E-Mail

Möchten Sie an weiteren Experimenten teilnehmen?

- Ja
 Nein

Preperation

Preparations

- Copy the Folder zTree, Paste it in the same directory
- Rename the Copied Folder to "Questionnaires"
- Download <https://github.com/DennisKubitza/DennisKubitza.github.io/raw/master/zTree/example1.ztt> (Alernativly <https://bit.ly/2sd7rId>)
- Start zTree and open the .ztt file

General

Some general Information

- A Questionnaire has to contain a Adress File for the Generation of the Payment file.

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Some general Information

- A Questionnaire has to contain a Adress File for the Generation of the Payment file.
- A Questionnaire can have arbitrary many other Question / Question Screens.
- The last "Question" can not have button
- Questionnaires can be started like Treatments if all Clients are "Ready"

Content Overview

- 4 Implementing Questionnaires
 - A minimal Questionnaire
 - More Options

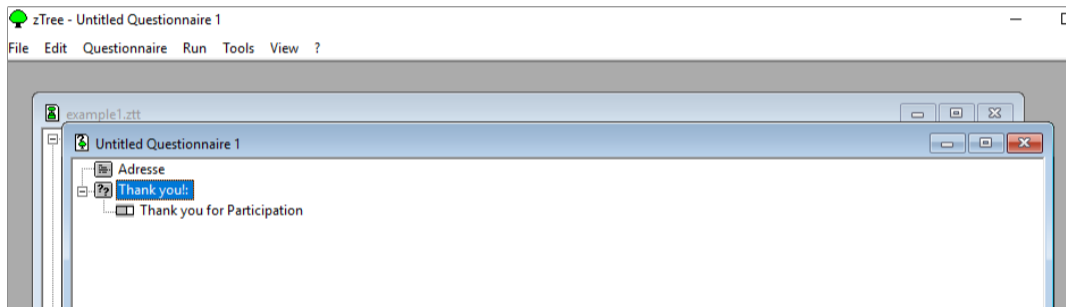
A minimal Questionnaire

In zTree ...

- ... Click on File > New Questionnaire
- ... Click on Questionnaire > New Adress Form > OK
- ... Click on Questionnaire > New Question Form > Type as ID: Thanks > OK
- ... Click on Questionnaire > New Question > Type as Label: Thank you for Participation > OK

Result

Your result should look like follows:



Now you can play the Treatment by selecting it. Afterwards if all clients are finished you can start the questionnaire.

Content Overview

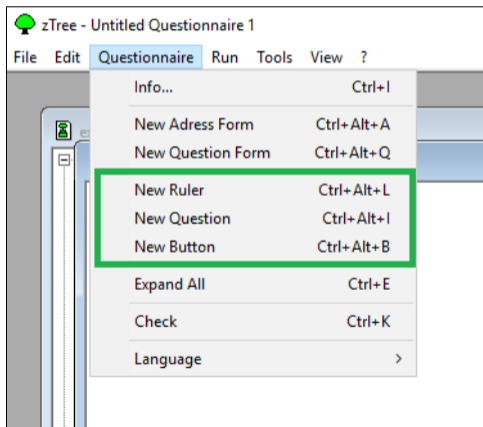
- 4 Implementing Questionnaires
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More Options

For constructing Questionnaires you have 3 different Elements you can add:

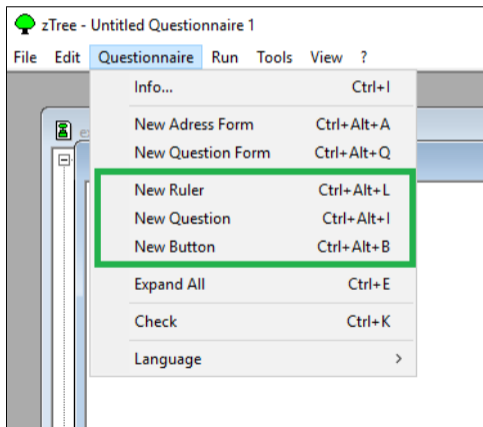
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More Options

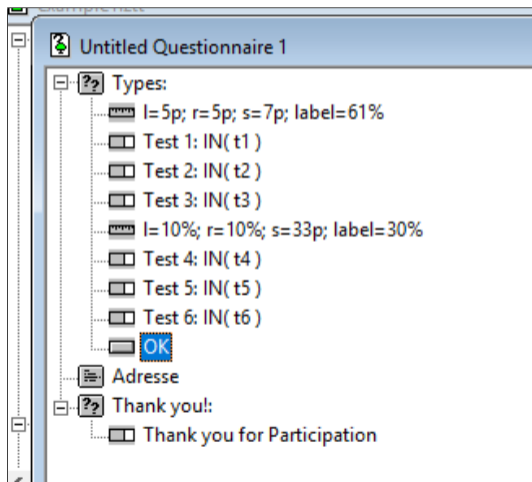
For constructing Questionnaires you have 3 different Elements you can add:



- You always have to have a button, except for the final slide
- You can have as many Questions and Rulers as you want.

The Ruler

A ruler sets the design for all following Questions in the Tree structure.



The Ruler

Test 1

Test 2

Test 3

Test 4

Test 5

Test 6

OK

The Button

The Button works like in the Treatments! It takes a Participant to the next QuestionForm.

Questions

There are different types of Questions ...

Question ✕

Label

Variable

Wide

Input

Empty allowed

Type

Number Radiobuttons Checkbox

Text Radioline Slider

Buttons Radiolinelabel Scrollbar

Commons

... and they all require

- A Label, which is the Question you want to ask?
- A Variable where to save the result

Despite that each of the different Types has some special parameters.

Question Types

Text or number	<input type="text"/>
radiobuttons	<input type="radio"/> A <input type="radio"/> B <input type="radio"/> C
radiolinelabel	left <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> right
radioline	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
checkboxes	<input type="checkbox"/> M <input type="checkbox"/> N <input type="checkbox"/> O <input type="checkbox"/> P
slider	<input type="range"/>
scrollbar	<input type="text"/>
buttons	X Y Z

Question Types

- **Number, Radioline, Scrollbar and Slider** require a *Minimum, Maximum* and *Resolutior* value

The image shows a list of question types on the left and their visual representations on the right:

- Text or number**: A simple rectangular text input field.
- radiobuttons**: Three vertically stacked radio buttons labeled A, B, and C.
- radiolinelabel**: A horizontal line with radio buttons at both ends, labeled 'left' and 'right'.
- radioline**: A horizontal line with seven evenly spaced radio buttons along its length.
- checkboxes**: Four vertically stacked checkboxes labeled M, N, O, and P.
- slider**: A horizontal slider control with a central knob and arrows at both ends.
- scrollbar**: A standard vertical scrollbar with a scroll bar and arrows.
- buttons**: Three vertically stacked rectangular buttons labeled X, Y, and Z.

Question Types

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- radioline**: A horizontal line with seven radio buttons spaced along it.
- checkboxes**: Four checkboxes labeled M, N, O, and P.
- slider**: A horizontal slider bar with a central knob and arrows at both ends.
- scrollbar**: A vertical scrollbar with a central knob and arrows at the top and bottom.
- buttons**: Three rectangular buttons labeled X, Y, and Z.

- **Number, Radioline, Scrollbar and Slider** require a *Minimum, Maximum* and *Resolutior* value
- **Buttons, Radiobuttons, Checkboxes, Radiolinelabel** require the Definition of Options by Entering commands like:

The image shows an 'Options' dialog box with a list of options and a selection marker:

Options

- Option A;
- Option B;
- Option C;
- Option D; ■

Buttons: Cancel, OK

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What we know

- We can create a Standard Box for Display
- We can use Text and Number inputs to define Variables

but there is more necessary to create a suitable Design.

Periode
 1 von 1

Verbleibende Zeit [sec]: 237

	Wood	Stone	Wheat	Iron	Tools
Price	14	25	22	144	176
Last Period's Price	13	28	29	103	167
Trend	17	28	26	128	189

Money 300

Wood 0

Stone 3

Wheat 8

Iron 0

Tools 0

Sell Stone ?
 0 Everything

Sell Wheat?
 0 Everything

Buy Wood ?

Buy Stone ?

Buy Wheat ?

Buy Iron ?

Buy Tools?

Instructions:

This is a simple Trade simulation. In 3 Periods you can Sell and Buy goods. In each Period you will be first asked how much you want to sell, and how much you want to buy.

On the box in the upper left corner, you'll see information on the Goods. The Trend is the expected Value of the next Period.

Sell

Content Overview

- 5** Changing the Design
 - The Design Stages
 - Changing Item Layouts
 - The Arrangement of Items
 - The Arrangement of Boxes

Design

The main Design Elements in zTree is made up of Boxes and Items. We can divide any Design Decision into 3 different Layers:

- How do our Items look like ?
- How our Items arranged within a Box ?
- Where are our Boxes positioned ?

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Item Layouts

We know from Questionnaires that, there are multiple Input Formats we can use:

- Text Inputs
- Radio Buttons
- Checkboxes
- Sliders
- Scrollbars
- etc.

We can use them also in our Experiments.

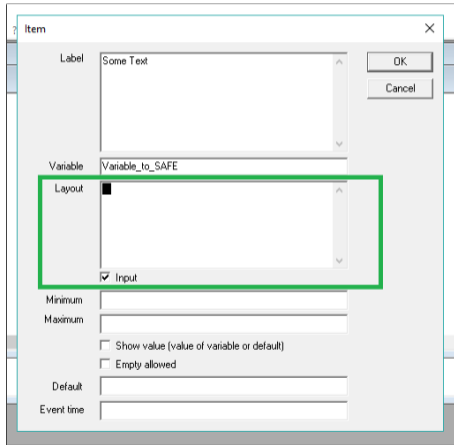
Item Layouts

The screenshot shows a dialog box titled "Item" with a close button (X) in the top right corner. The dialog contains several input fields and checkboxes:

- Label:** A text box containing "Some Text".
- Variable:** A text box containing "Variable_to_SAFE".
- Layout:** A text box containing a small black square, highlighted with a green border.
- Input:** A checked checkbox.
- Minimum:** An empty text box.
- Maximum:** An empty text box.
- Show value (value of variable or default):** An unchecked checkbox.
- Empty allowed:** An unchecked checkbox.
- Default:** An empty text box.
- Event time:** An empty text box.

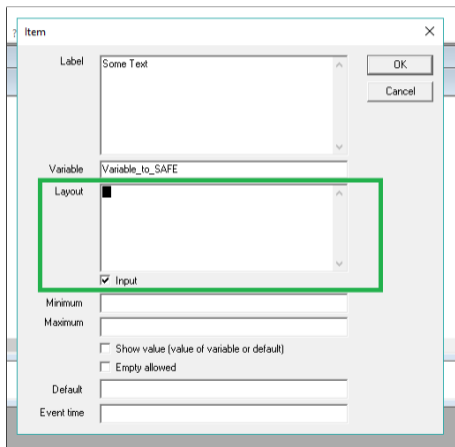
Buttons for "OK" and "Cancel" are located to the right of the "Label" field.

Item Layouts



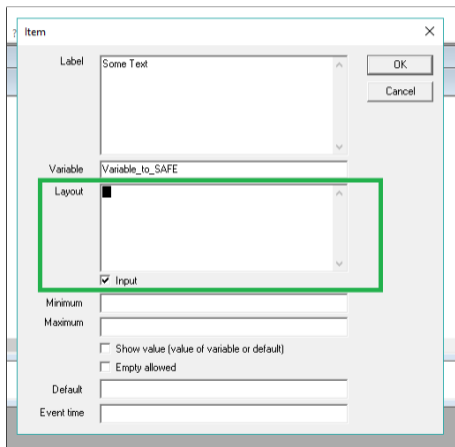
- To change the Input Type of an Item, we have to change the commands in Layout.

Item Layouts



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- We have already seen the options **!string** and **1, 0.1, 0.01 ...** for text/number input

Item Layouts



- To change the Input Type of an Item, we have to change the commands in Layout.
- We have already seen the options **!string** and **1, 0.1, 0.01 ...** for text/number input
- For other input fields we have to enter other layout commands

Input Fields

<code>!radio: value1 = label1; value2 = label2</code>	Creates vertical Radio Buttons
<code>!radiosequence: value1 = label1; value2 = label2; ...</code>	Creates horizontal Radio Buttons
<code>!radioline: leftvalue = leftlabel; rightvalue = rightlabel; number</code>	Creates horizontal Radio Buttons
<code>!slider: leftvalue = leftlabel; rightvalue = rightlabel; number</code>	Creates a Slider
<code>!scrollbar: leftvalue = leftlabel; rightvalue = rightlabel; number</code>	Creates a Scrollbar
<code>!button: value1 = label1 ; value2 = label2; ...</code>	Creates Multiple Buttons
<code>!checkbox: 1 = text;</code>	Creates a Checkbox

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For now we have always used Standard Boxes.

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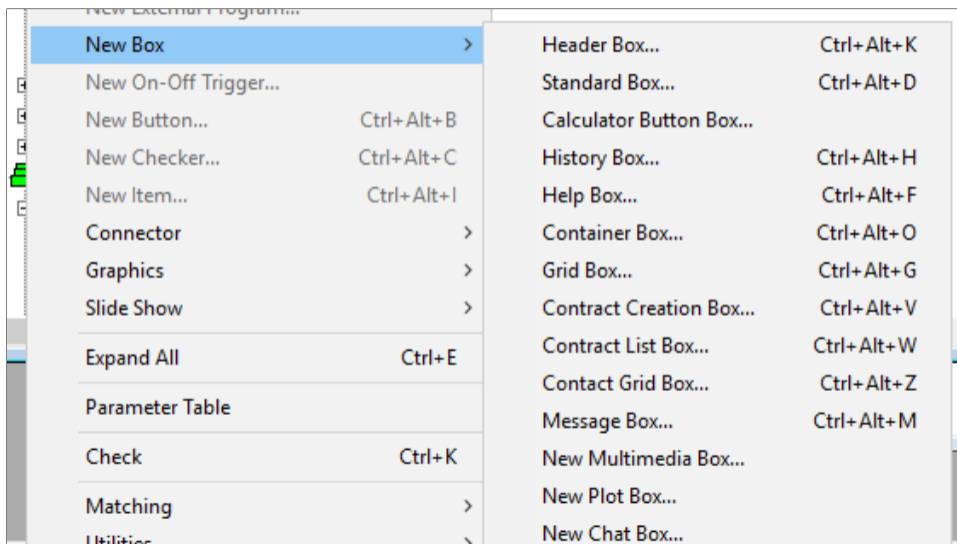
- They always show labels on the Left Side

For now we have always used Standard Boxes.

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- They always show labels on the Left Side
- And the Element defined by Layout on the Right Side

Other boxes



Other boxes

Header Box	Shows the Time and Stage (Supplementary Information)
History Box	Shows the results of past Rounds in a Table
Help Box	Just Displays a Text
Grid Box	Arranges items in a user Defined Table
...	...

Contract and other Boxes supply functionality for advanced Programming.

Example

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 1 von 1

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IMPORTANT

The final “Design” of your experiment is dependent on the Resolution of the client PC. (LAB PCs) If you design the layout always use the resolution for the client, that the Participants will see.

Changing the resolution of zLeaf

- Right-Click on zLeaf
- Create Shortcut
- Right-Click on Shortcut
- Add to Target: /size WidthxHeight

Example

...zLeaf.exe /size 1024x768

Position of Boxes

After you set up the final Resolution, you can start with the Placement of Boxes.

Position of Boxes

Each Box you create has 2 important Design Parameters

Standard Box

Name with Frame

Width [p/%)

Height [p/%)

Distance to the margin [p/%)

Adjustment to the remaining box

left top right

bottom

OK

Cancel

Display condition

Buttons

Position

Arrangement

In rows

In columns

Position of Boxes

- Width and Height change the total size of the box

Position of Boxes

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- The Margins Define the Distance to the border of the Window

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- You can use either pixels or percents.

Position of Boxes

- Width and Height change the total size of the box
- The Margins Define the Distance to the border of the Window
- You can use either pixels or percents.
- If you leave some fields empty zTree will calculate its values automatically, unless there is a conflict

Container Boxes

If you have many boxes, your program can get messy. The solution are **Container Boxes**.

- Container Boxes are positioned like all other boxes .
- They can contain other boxes.
- These contained boxes will see the Containers as their whole window.

Excercise

- Download the .ztt file Example2 from <https://github.com/DennisKubitza/DennisKubitza.github.io/raw/master/zTree/example2.ztt>
- Add a sixth good (Wool) by adding Items and changing the Position of all predefined boxes. (Use Control C / Control V)
- Don't forget to add Wool to the Program at the beginning (for the sliders)!

Any Questions???