Experimental Linguistics

Session A: Experiment Creation

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Experimental Linguistics

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Experimental Linguistics

- **18.05** Introduction to Software and Tools for the Creation of Experiments
- **25.05** Introduction to Software and Tools for Webscraping and Data Mining
- **01.06** Data Analysis
- **08.06** tba

Experimental Software: Examples

- **Example 1: reading time, sentence rating (*ibexfarm*)**

  https://spellout.net/ibexfarm
- **Example 2: mental rotation (*magpie*)**

  https://magpie-ea.github.io/magpie-site/index.html
- **Example 3: lexical decision task (*LabVanced*)**

  https://136.243.191.165/page/library/2849
- **Example 4: public goods game (*Lioness*)**

Overview of Tools

- **magpie:** minimal architecture for the generation of portable interactive experiments (*javaScript*)
- **PsiTurk**: platform for developing and running online experiments with Amazon's MechanicalTurk (*python*)
- **LabVanced**: graphical user interface, design experiment directly in the browser, extensive library of templates, in-house crowdsourcing solution (*no programming*)
- **Ibex & Ibex Farm:** easy to realize psycholinguistic experiments, server app (*python, javaScript*)
- **Lioness:** multi-participant experiments, graphical user interface for basic blocks (*javaScript*)
- **Further tools**: Dallinger, z-tree, Labsee

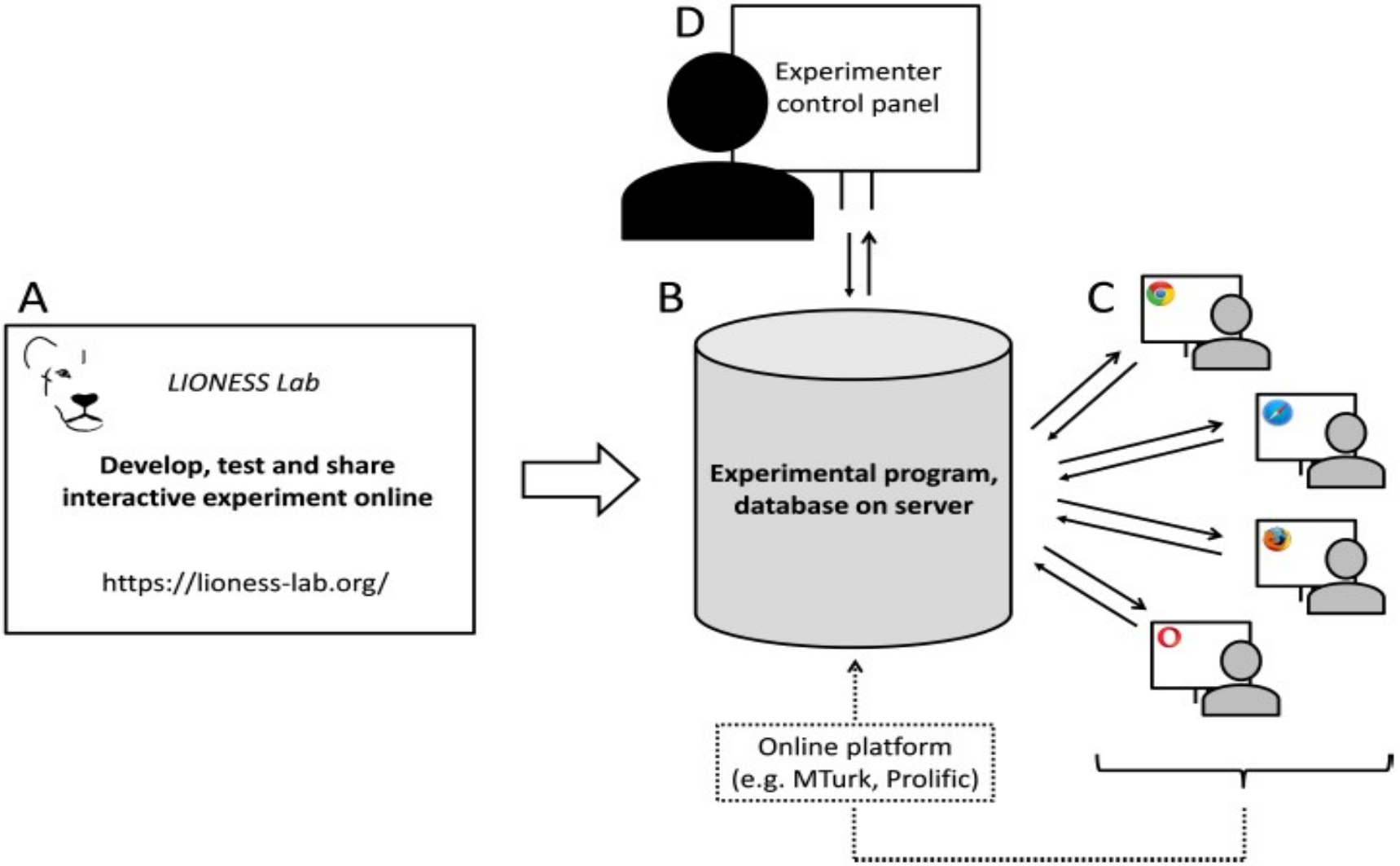
Tool characteristics

- **online/offline:** experiments can be designed as local applications (offline) and browser applications (online)

  recruitment: laboratory, link (eMail), crowdsourcing
- **interactive**: some tools provide features that enable or facilitate the development of interactive designs: experiments with multiple participants

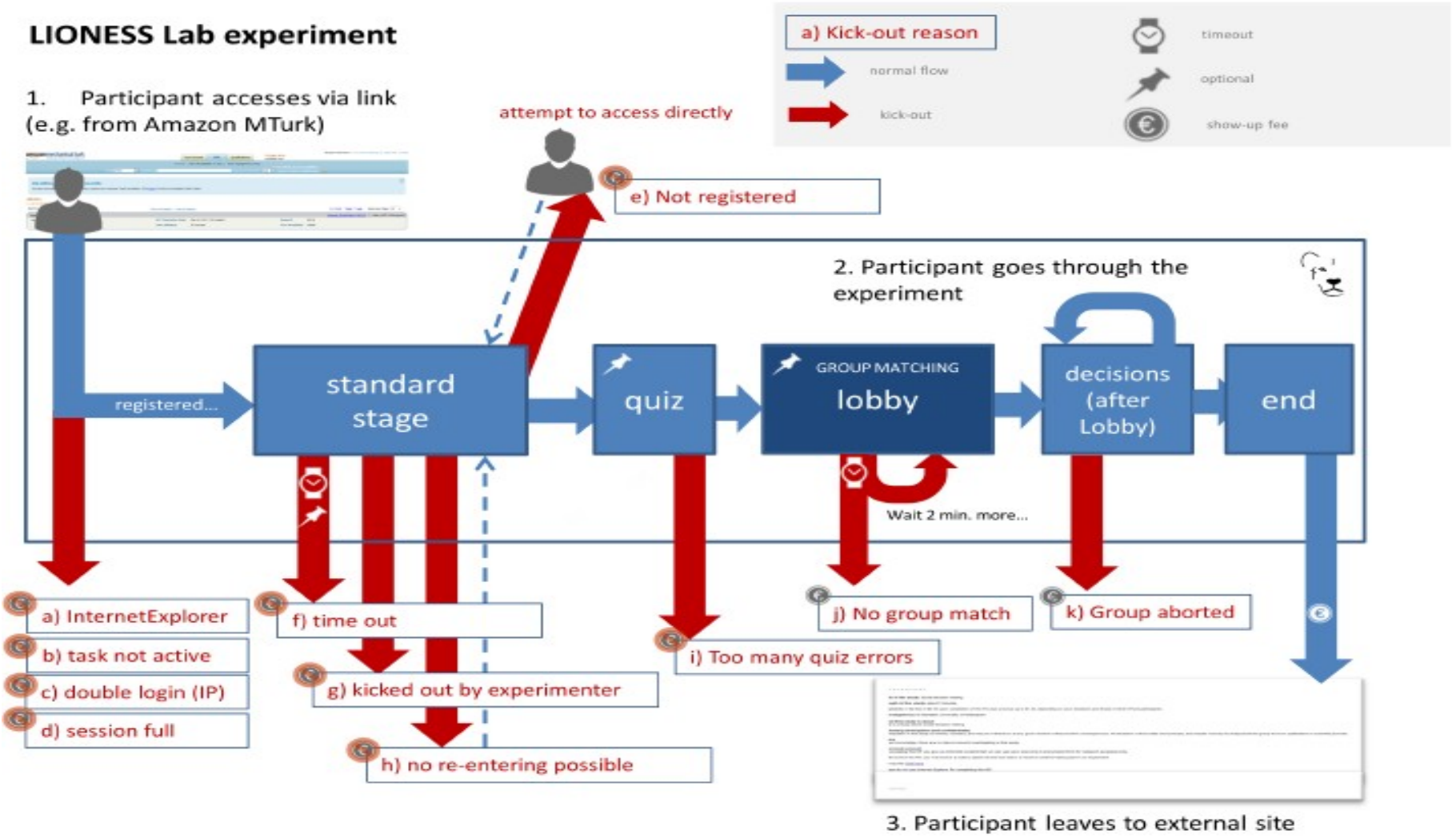
  features: lobby, server engine, droupout handling
- **server/database**: some tools come with an integrated server or database where the experiment can take place
- **graphical user interface (gui) vs coding**: most tools require programming skills (JavaScript, python), some are fully functional with only a gui, some are hybrid
  low requirements, easy to use VS control, scope

Example: Online Experiment



Source: Lioness Documention Release 0.06, page 1

Example: Interactive & Online



Source: Lioness Documention Release 0.06, page 32

Example: LabVanced

- Visual Experiment Builder (gui)
- Canvas Frame (insert, drag&drop, rotate, etc)
- Programmable Events (design logic)
- Dynamic feedback, Interactive Design
- Page frames & questionaires
- More than 20 stimulus types (images, video, audio, interactive elements, etc.)

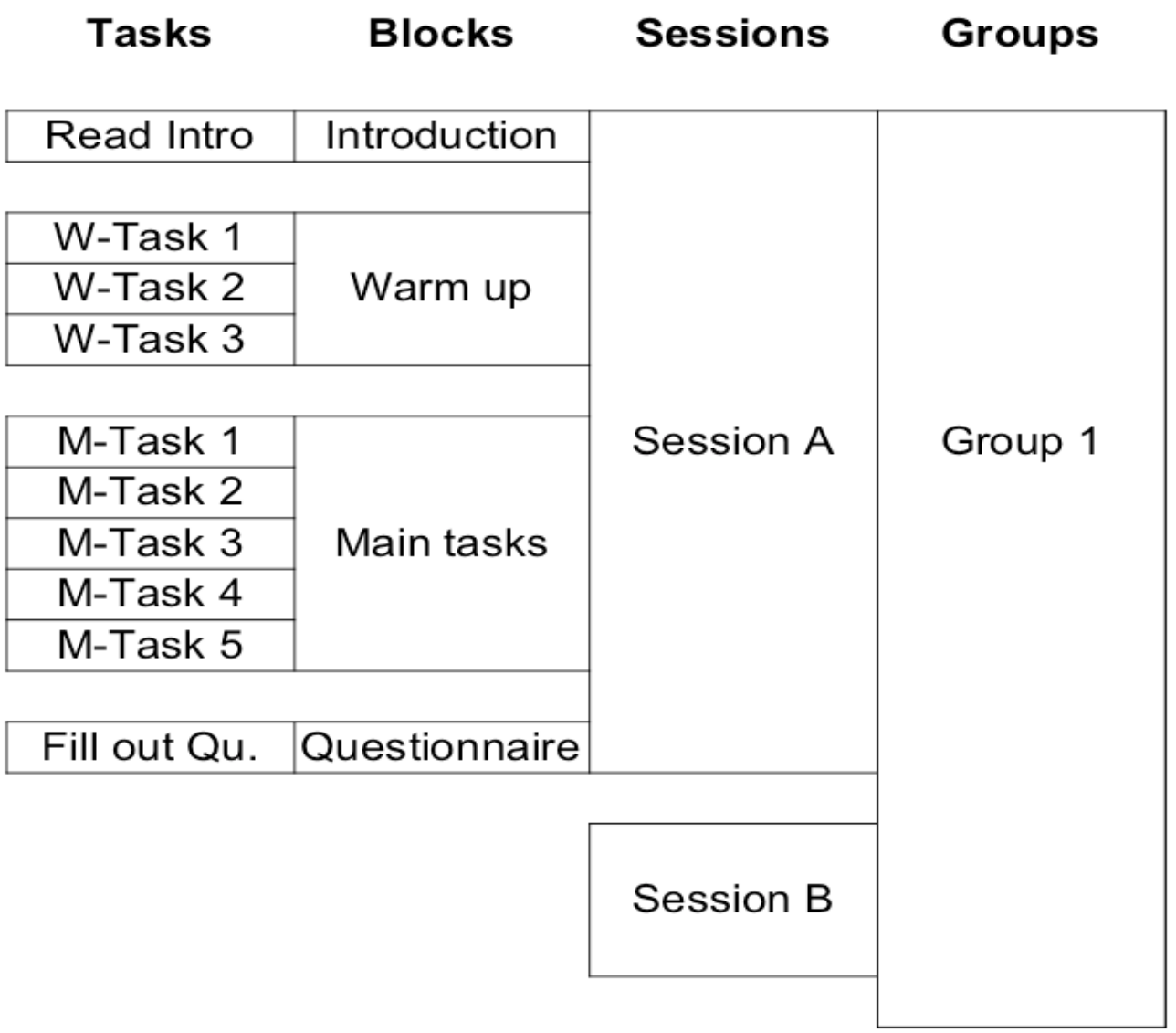
LabVanced Licenses

Free User	Premium User	Lab/Department
Unlimited Exp. creation	Unlimited Exp. creation	Unlimited Exp. creation
CSV/Excel Data export	CSV/Excel Data export	CSV/Excel Data export
1 account	1 account	**Unlimited accounts**
1 published study at time	1 published study at time	**Unlimited number studies**
Import of templates	**Import of all experiments**	**Import of all experiments**
300 MB storage place	**Unlimited storage space**	**Unlimited storage space**
10 records per month	**Unlimited recordings**	**Unlimited recordings**

Let‘s have a look at https://www.labvanced.com

LabVanced Features

https://www.labvanced.com/page/documentation_eng

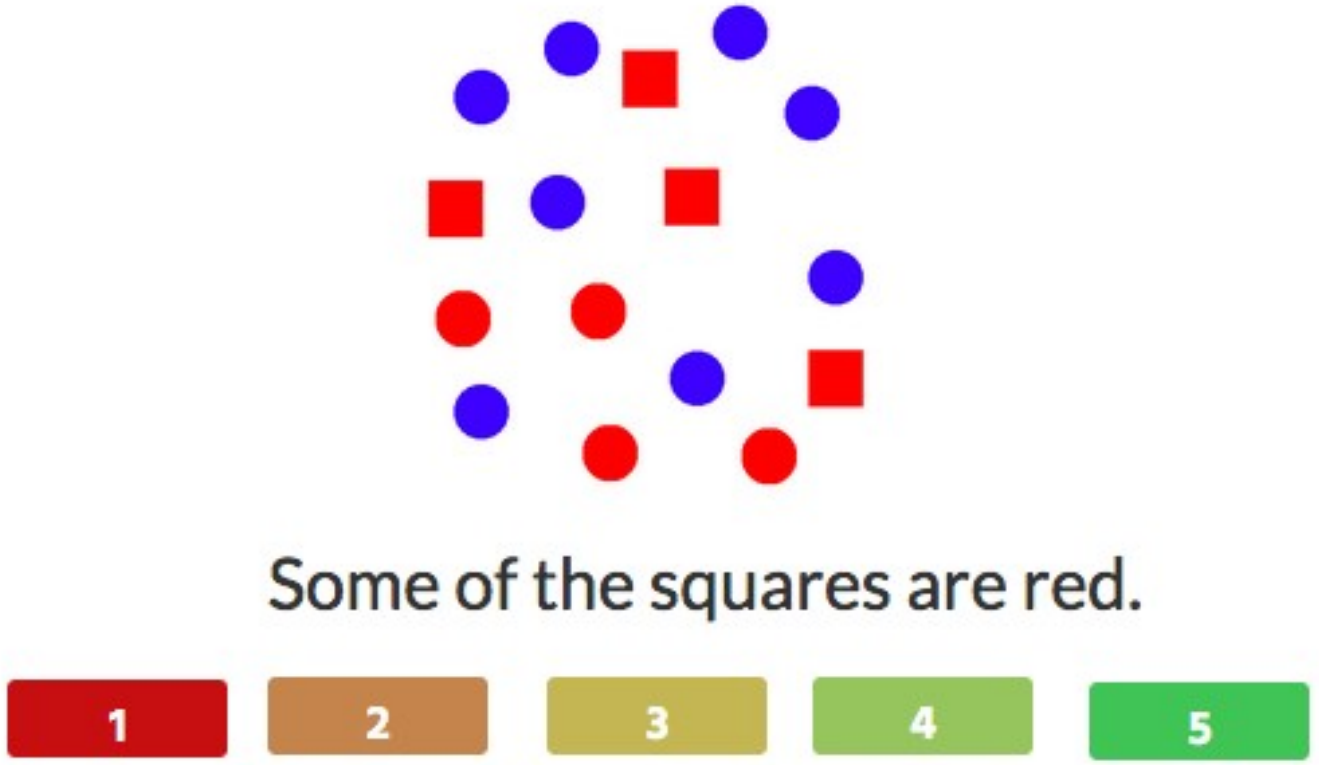


LabVanced Structure

- **My studies**: folder of different studies
- **Study design**: groups, sessions, blocks, tasks
- **Task editor**: design and change tasks
- **Study settings**: global settings
- **Variables**: overview of experiment variables
- **Translate**: translate to different language
- **Run**: Test or run the whole experiment
- **Publish and record**: link creation, crowdsourcing, etc.
- **Sharing**: add your study to library
- **Dataview & Export**: read and download result data

LabVanced: Example Study

Scalar Implicature Experiment:



Introduce yourself

Introduce yourself:

- Name
- Program
- Area of interest
- Project idea, research interest
- Expectations, requests from the course