Intro to Online Experiments in jsPsych

Part 1: Website Basics, Intro to jsPsych, Consent Forms, Surveys

Lisa Sullivan

July 13, 2021

Workshop Outline

Part 1

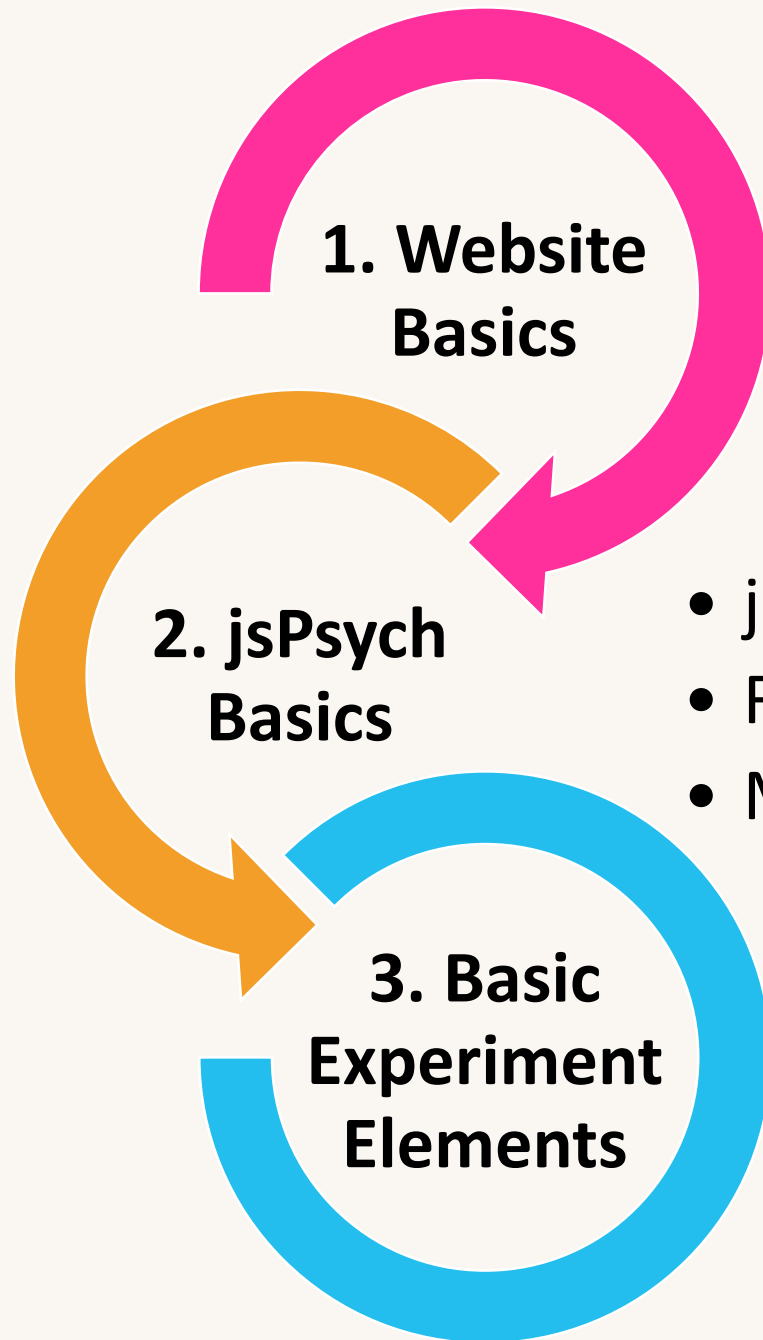- Website Basics
- jsPsych Basics
- Consent Forms
- Surveys

Part 2

- Integrating Sound
- Advanced Blocks
- Multiple Trials (Loops)
- ABX Task

Today's Outline

1. Website Basics

- How Websites Work
- HTML
- CSS
- Scripting Languages

2. jsPsych Basics

- jsPsych website & documentation
- Files and Folders
- Main Task Page

3. Basic Experiment Elements
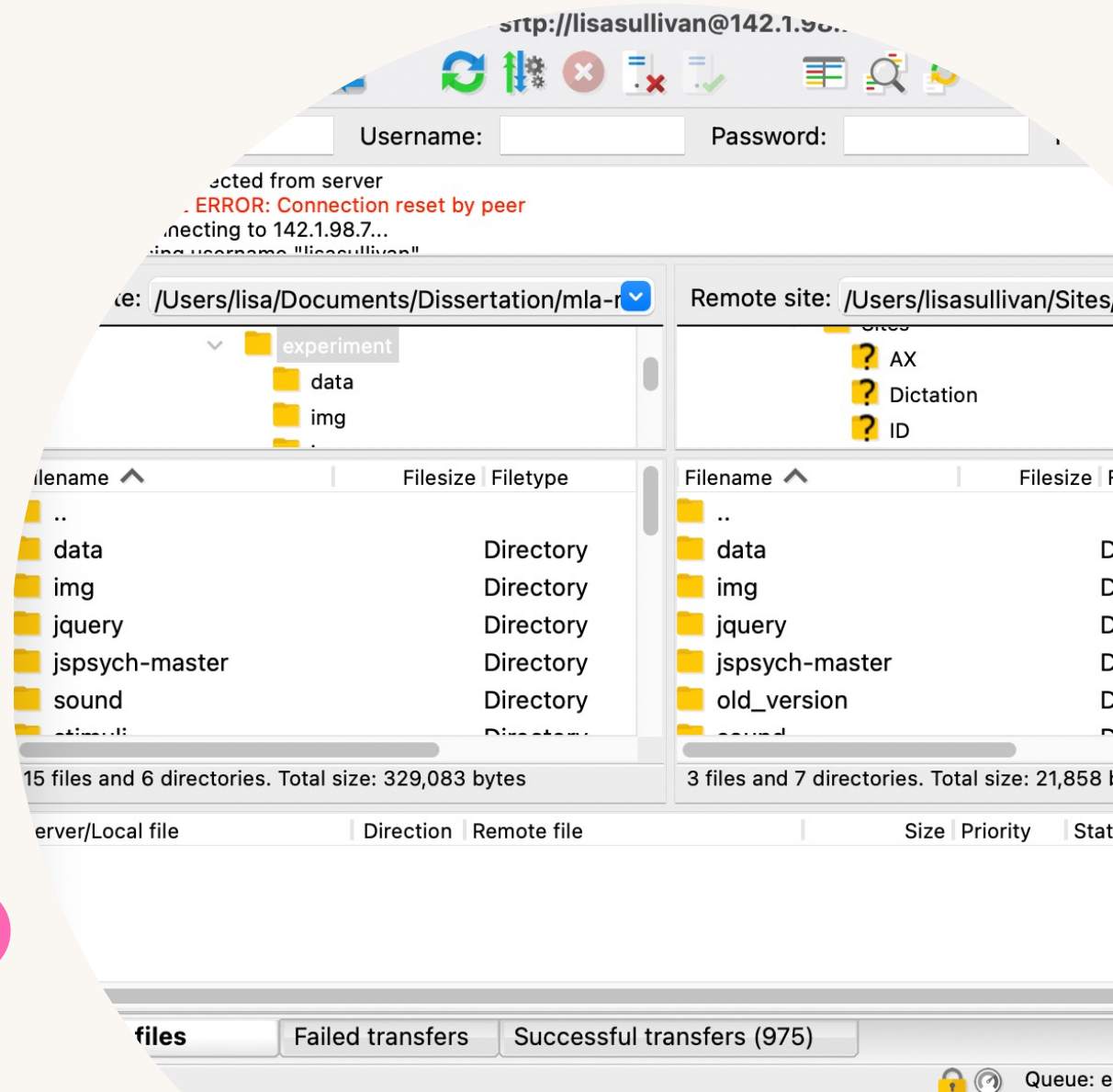
- Consent Forms
- Surveys

Website Basics

How Websites Work

Client · HTTP Request · www · Web Page · FTP server / Web Server

FTP: **F**ile **T**ransfer **P**rotocol

- Upload files to your web server

- Manage files and permissions on your web server

- **What you need**
  - FTP Client (e.g. FileZilla: https://filezilla-project.org/)
  - Host
  - Username
  - Password

HTML: **H**yper**t**ext **M**arkup **L**anguage

- Markup language – specifies what each block of text is (e.g. heading, paragraph, list, etc.)

- It's all you need to create a static webpage – not what we're doing, so we need more

- **Resource**: https://www.w3schools.com/html/default.asp

```
<!DOCTYPE html>
<html>
    <head>
        <title>Title of the document</title>
    </head>

    <body>
        <h1>Heading 1</h1>
        <h2>Heading 2</h2>
        <h3>Heading 3</h3>
        <h4>Heading 4</h4>
        <h5>Heading 5</h5>
        <h6>Heading 6</h6>

        <p>This is a paragraph. <a href="http://google.com">This is a link to Google</a>.
This is some <strong>bold text</strong>. This text is <em>italicized</em>. This is an
email link <a href="mailto:my@email.com">my@email.com</a>
        <br />This text follows a line break. Make sure you close all your tags</p>

        <img src="trees.jpg" alt="This is an image. Include alt text on images for screen
readers and in case they don't load'" />

        <ul>
            <li>This is an</li>
            <li>unordered list...</li>
        </ul>

        <ol>
            <li>This is an</li>
            <li>ordered list...</li>
        </ol>
    </body>
</html>
```

DOCTYPE

head tag

title

html tag

body tag

headings

paragraph

image

lists

<!-- This is a comment. It won't show up on the website. -->

```html
<!DOCTYPE html>
<html>
    <head>
        <title>Title of the document</title>
    </head>

    <body>
        <h1>Heading 1</h1>
        <h2>Heading 2</h2>
        <h3>Heading 3</h3>
        <h4>Heading 4</h4>
        <h5>Heading 5</h5>
        <h6>Heading 6</h6>

        <p>This is a paragraph. <a href="http://google.com">This is a link to Google</a>.
This is some <strong>bold text</strong>. This text is <em>italicized</em>. This is an
email link <a href="mailto:my@email.com">my@email.com</a>
        <br />This text follows a line break. Make sure you close all your tags</p>

        <img src="trees.jpg" alt="This is an image. Include alt text on images for screen
readers and in case they don't load'" />

        <ul>
            <li>This is an</li>
            <li>unordered list...</li>
        </ul>

        <ol>
            <li>This is an</li>
            <li>ordered list...</li>
        </ol>
    </body>
</html>
```

Labels (annotations):
- DOCTYPE
- title
- head tag
- html tag
- paragraph
- body tag
- line break
- headings
- strong (bold)
- hyperlink
- em (emphasis, italics)
- Email hyperlink
- image
- lists

<!-- This is a comment. It won't show up on the website. -->

CSS: **C**ascading **S**tyle**s**heets

- Defines styles for your website – e.g. what a paragraph or a header looks like
- 3 places to add CSS:
  - **External**: In a separate .css file (loaded in <head>)
  - **Internal**: In a <style> tag in the <head>
  - **Inline**: In the style attribute in an HTML tag (<body style ="">…)
- Separation of style and content (for accessibility and best practice)
  - Define content in HTML
  - Define styles in CSS
- **Resource**: https://www.w3schools.com/css/default.asp

Heading 1

Heading 2

Heading 3

This is a paragraph. This is a link to Google. This is some **bold text**. This text is *italicized*. This is an email link my@email.com This text follows a line break. Make sure you close all your tags

- This is an
- unordered list…

1. This is an
2. ordered list…

```html
<!DOCTYPE html>
<html>
    <head>
        <title>Title of the document</title>

        <link rel="stylesheet" href="style.css">      → External CSS

        <style>
            body {
                color: #333333;
                font-family: verdana;
                font-size: 1em;
            }
            h1 {text-align: center;font-size: 4em;}
            div#main{margin: 0 auto;background-color:#FFFFFF;padding:2em;}
            img.photos{display:block;margin: 0 auto;}

        </style>
    </head>                                            Internal CSS

<body style ="background-color: lightblue;padding: 2em;">
<div id="main">                                        Inline CSS
    <h1>Heading 1</h1>              ID
    <h2>Heading 2</h2>
    <h3>Heading 3</h3>

        <p>This is a paragraph. <a href="http://google.com">This is a link to Google</a>.
This is some <strong>bold text</strong>. This text is <em>italicized</em>. This is an
email link <a href="mailto:my@email.com">my@email.com</a>
        <br />This text follows a line break. Make sure you close all your tags</p>

        <img src="trees.jpg" alt="This is an image. Include alt text on images for screen
readers and in case they don't load'" class="photos"/>
                                                       Class
        <ul>
            <li>This is an</li>
            <li>unordered list...</li>
        </ul>

        <ol>
            <li>This is an</li>
            <li>ordered list...</li>
        </ol>
```

Scripting Languages

- Add dynamic and interactive functionality to a website
  - Forms, experiments, search functions, games, etc.
- There are two types of scripting languages, client-side and server-side, need two languages:
  - **JavaScript**
  - **PHP** (**H**ypertext **P**re**p**rocessor)
- **Resources**
  - JavaScript: https://www.w3schools.com/js/default.asp
  - PHP: https://www.w3schools.com/php/default.asp

Client-Side vs Server-Side Scripting

Client-side languages

- Work on the user's computer after the webpage is loaded
- **Example**: auto-validation on forms
- JavaScript
- We be using jsPsych, which is built on Javascript, to run our experiments

Server-side languages

- Works on the server before the webpage is loaded
- **Examples**: Wordpress, COVID Vaccine Booking
- PHP
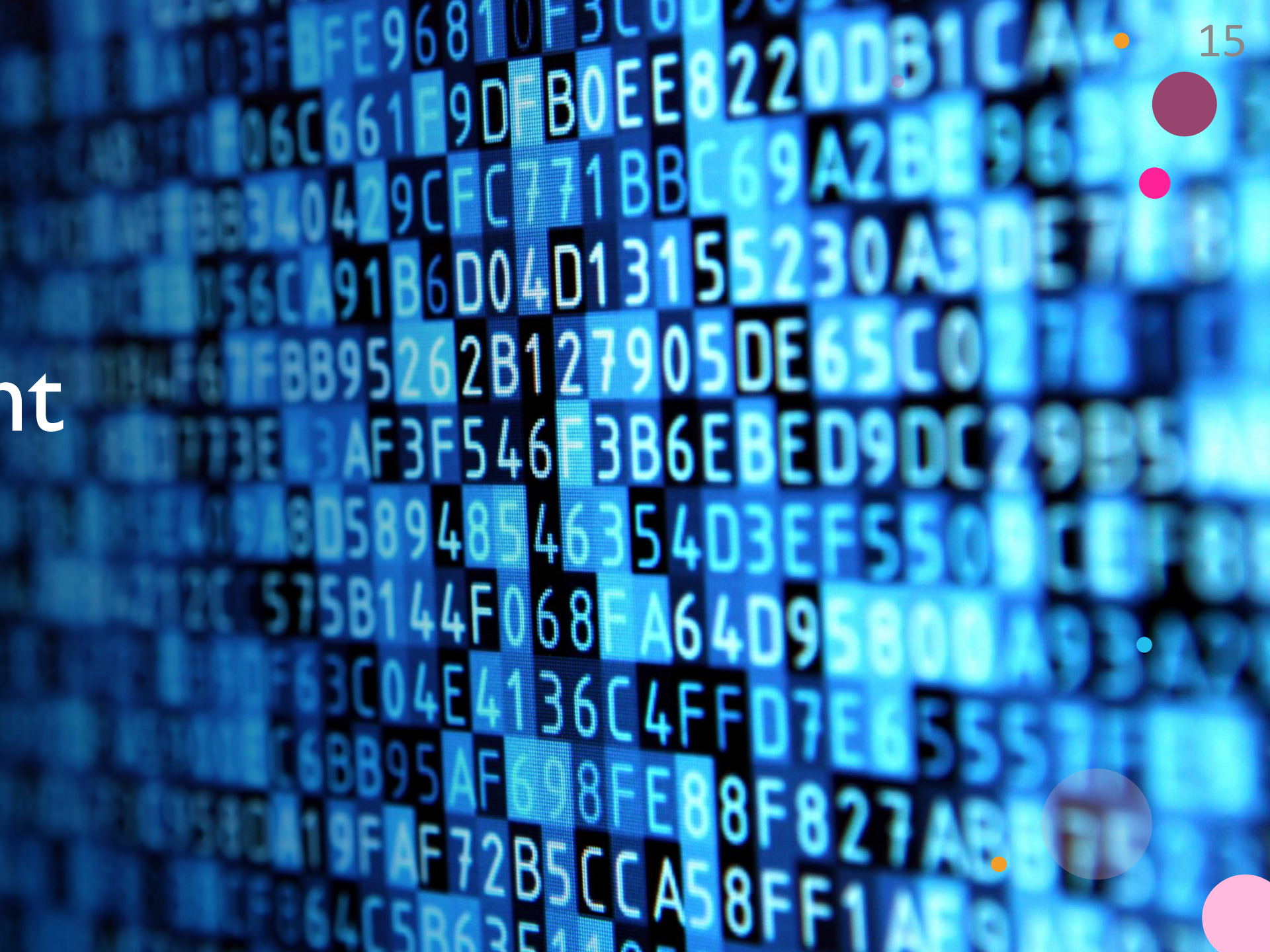- We will use a PHP script to save the participant's data to the server

jsPsych Basics

Consent Forms

Surveys

Homework

Create a functional consent form & background questionnaire

- **Consent Form**: Use the "Click next to consent" method
  - *Challenge: Try the radio button response method*
- **Background Questionnaire**:
  - survey-text for age, gender, place of birth, languages spoken
  - survey-likert for the Language Use Index for English
  - survey-multi-choice for socioeconomic status, education, rurality
  - survey-multi-select options for continents visited
  - *Challenge: try to use survey-html form for some or all of this*

Resources

- jsPsych Website: https://www.jspsych.org
- W3Schools: https://www.w3schools.com/
- Google
- Email Lisa: lisa.sullivan@mail.utoronto.ca

Next Time

- Integrating sound files
- Advanced blocks
- Running multiple trials
- ABX tasks

Thank you!