Free Tools for Developing Online Experiments

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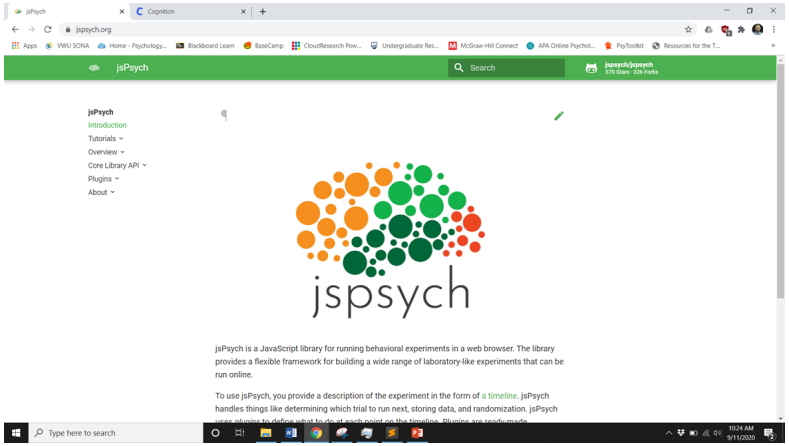
Virginia Wesleyan University

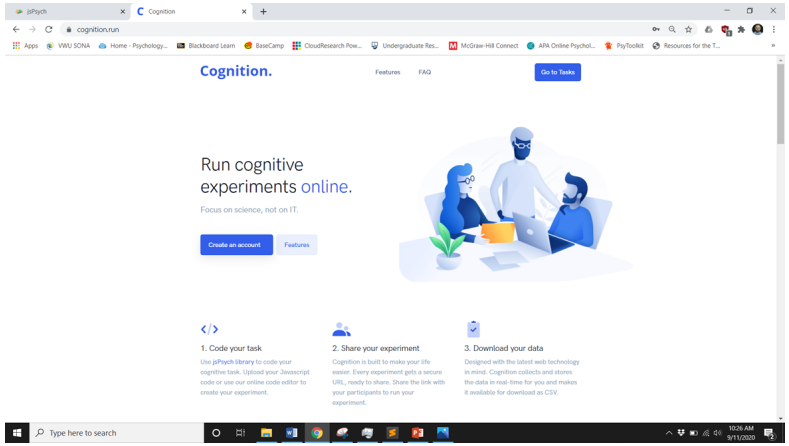
jsPsych (jspsych.org)



JavaScript library for web-based behavioral research

Download the library at https://github.com/jspsych/jsPsych/

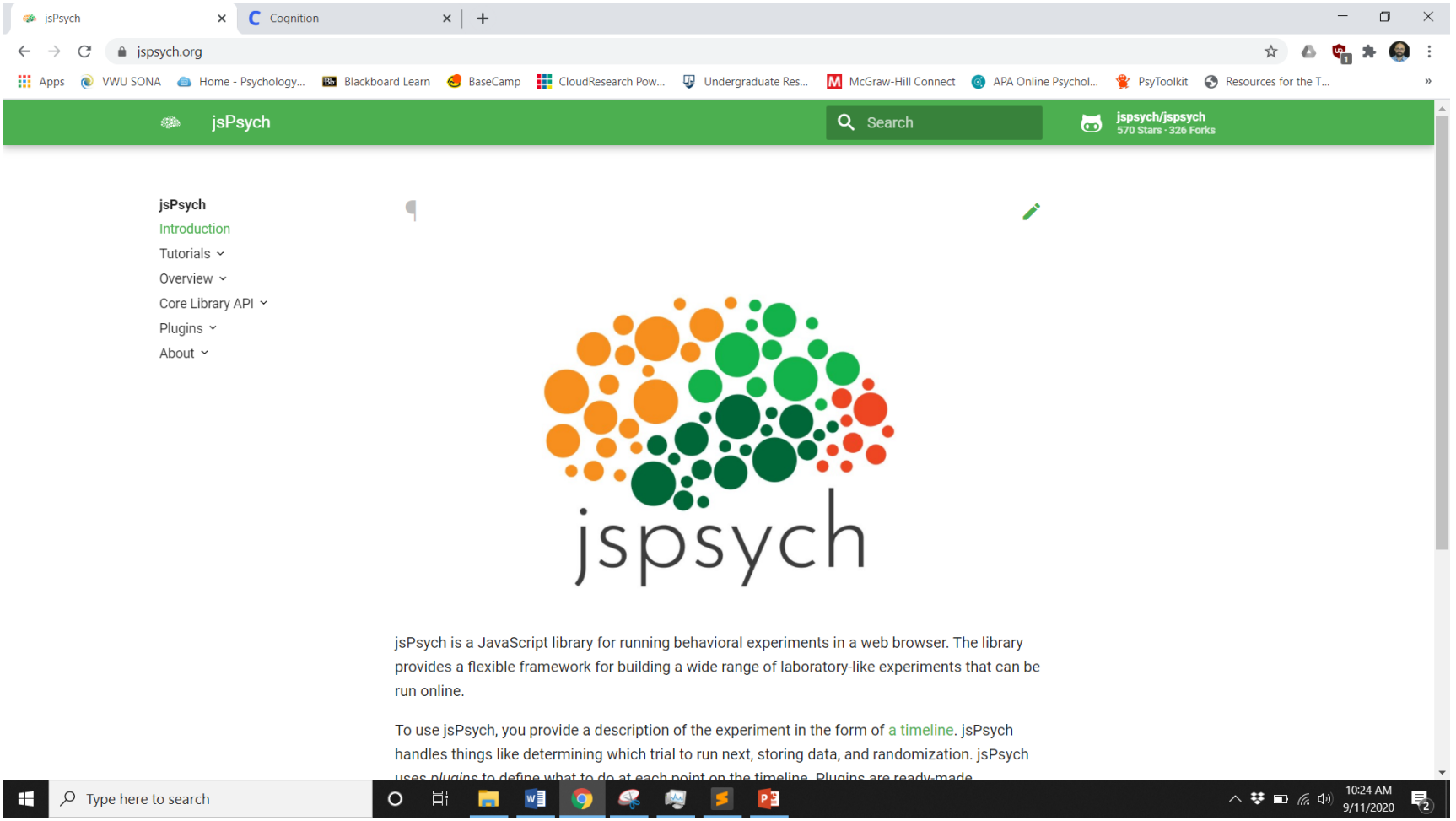
Cognition.run



Online experiment platform that utilizes the jsPsych architecture.

Easily host experiments and store data online

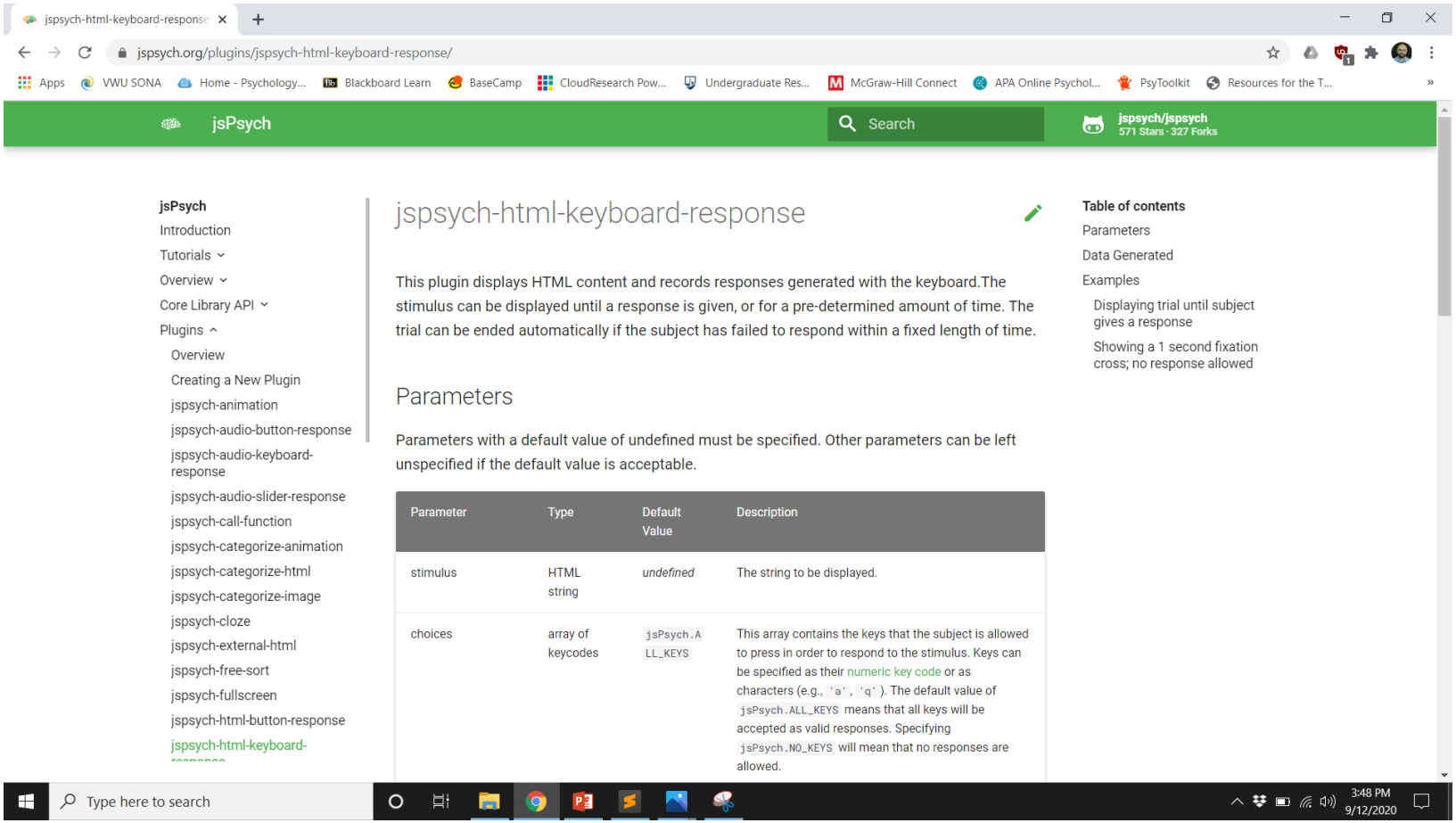
1. Get started by visiting jspsych.org



jsPsych Plugins (all included in cognition.run)

- jspsych-animation
- jspsych-audio-button-response
- jspsych-audio-keyboard-response
- jspsych-audio-slider-response
- jspsych-call-function
- jspsych-categorize-animation
- jspsych-categorize-html
- jspsych-categorize-image
- jspsych-cloze
- jspsych-external-html
- jspsych-free-sort
- jspsych-fullscreen
- jspsych-html-button-response
- jspsych-html-keyboard-response
- jspsych-html-slider-response
- jspsych-iat-html
- jspsych-iat-image
- jspsych-image-button-response
- jspsych-image-keyboard-response
- jspsych-image-slider-response
- jspsych-instructions
- jspsych-rdk
- jspsych-reconstruction
- jspsych-resize
- jspsych-same-different-html
- jspsych-same-different-image
- jspsych-serial-reaction-time
- jspsych-serial-reaction-time-mouse
- jspsych-survey-html-form
- jspsych-survey-likert
- jspsych-survey-multi-choice
- jspsych-survey-multi-select
- jspsych-survey-text
- jspsych-video-button-response
- jspsych-video-keyboard-response
- jspsych-video-slider-response
- jspsych-visual-search-circle
- jspsych-vsl-animate-occlusion
- jspsych-vsl-grid-scene

2. Use jsPsych's Library to build your task



Parameters

Parameters with a default value of undefined must be specified. Other parameters can be left unspecified if the default value is acceptable.

Parameter	Type	Default Value	Description
stimulus	HTML string	*undefined*	The string to be displayed.
choices	array of keycodes	`jsPsych.ALL_KEYS`	This array contains the keys that the subject is allowed to press in order to respond to the stimulus. Keys can be specified as their numeric key code or as characters (e.g., `'a'`, `'q'`). The default value of `jsPsych.ALL_KEYS` means that all keys will be accepted as valid responses. Specifying `jsPsych.NO_KEYS` will mean that no responses are allowed.
prompt	string	null	This string can contain HTML markup. Any content here will be displayed below the stimulus. The intention is that it can be used to provide a reminder about the action the subject is supposed to take (e.g., which key to press).
stimulus_duration	numeric	null	How long to display the stimulus in milliseconds. The visibility CSS property of the stimulus will be set to `hidden` after this time has elapsed. If this is null, then the stimulus will remain visible until the trial ends.
			before ending the trial in milliseconds. If the subject fails to make a response before this timer is reached, the subject's response will be recorded as null for the trial and the trial will end. If the value of this parameter is null, then the trial will wait for a response indefinitely.
response_ends_trial	boolean	true	If true, then the trial will end whenever the subject makes a response (assuming they make their response before the cutoff specified by the `timing_response` parameter). If false, then the trial will continue until the value for `trial_duration` is reached. You can use this parameter to force the subject to view a stimulus for a fixed amount of time, even if they respond before the time is complete.

Data Generated

In addition to the default data collected by all plugins, this plugin collects the following data for each trial.

Name	Type	Value
key_press	numeric	Indicates which key the subject pressed. The value is the numeric key code corresponding to the subject's response.
rt	numeric	The response time in milliseconds for the subject to make a response. The time is measured from when the stimulus first appears on the screen until the subject's response.
stimulus	string	The HTML content that was displayed on the screen.

Examples

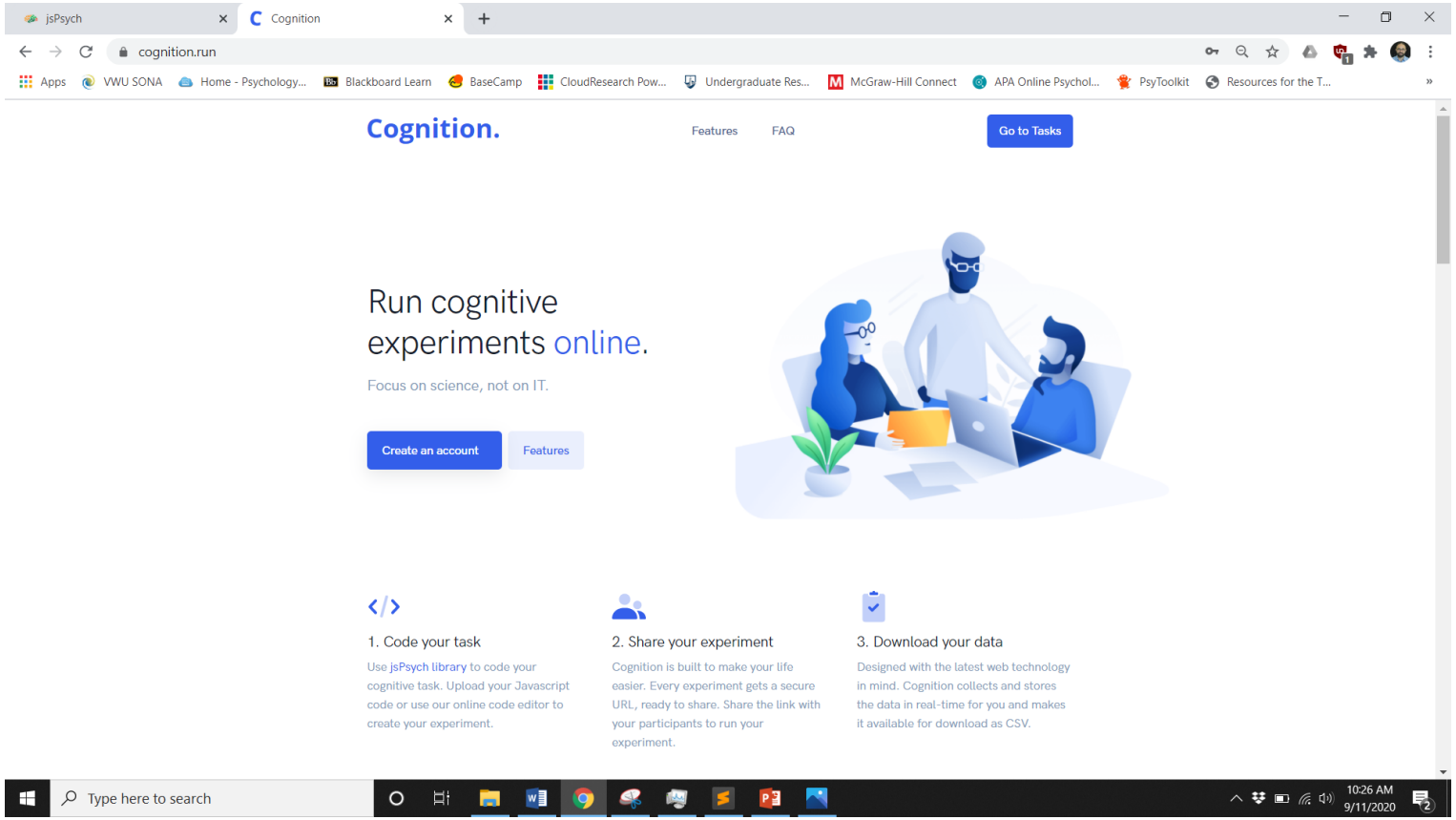
Displaying trial until subject gives a response

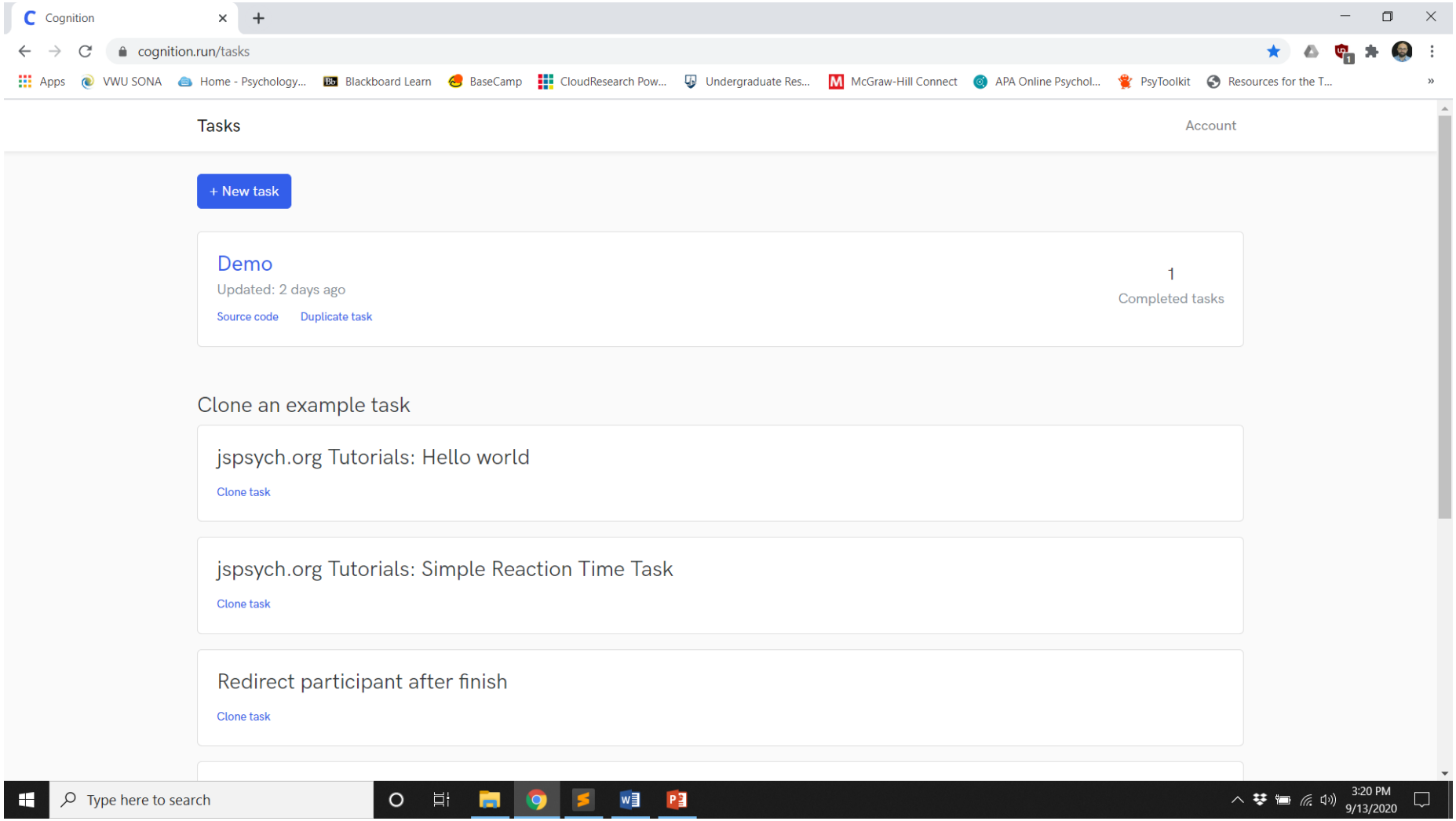
```
var trial = {
    type: 'html-keyboard-response',
    stimulus: '<p>Running</p>',
    choices: ['e', 'i'],
    prompt: "<p>Is this activity healthy or unhealthy? Press 'e' for healthy and 'i
};
```

Showing a 1 second fixation cross; no response allowed

```
var trial = {
    type: 'html-keyboard-response',
    stimulus: '<p style="font-size: 48px;">+</p>',
    choices: jsPsych.NO_KEYS,
    trial_duration: 1000,
};
```

No server, no database, no problem
3. Go to Cognition.run

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Tasks
Account
+ New task
Demo
Updated: 2 days ago
Source code
Duplicate task
1
Completed tasks
Clone an example task
jspsych.org Tutorials: Hello world
Clone task
jspsych.org Tutorials: Simple Reaction Time Task
Clone task
Redirect participant after finish
Clone task
Type here to search
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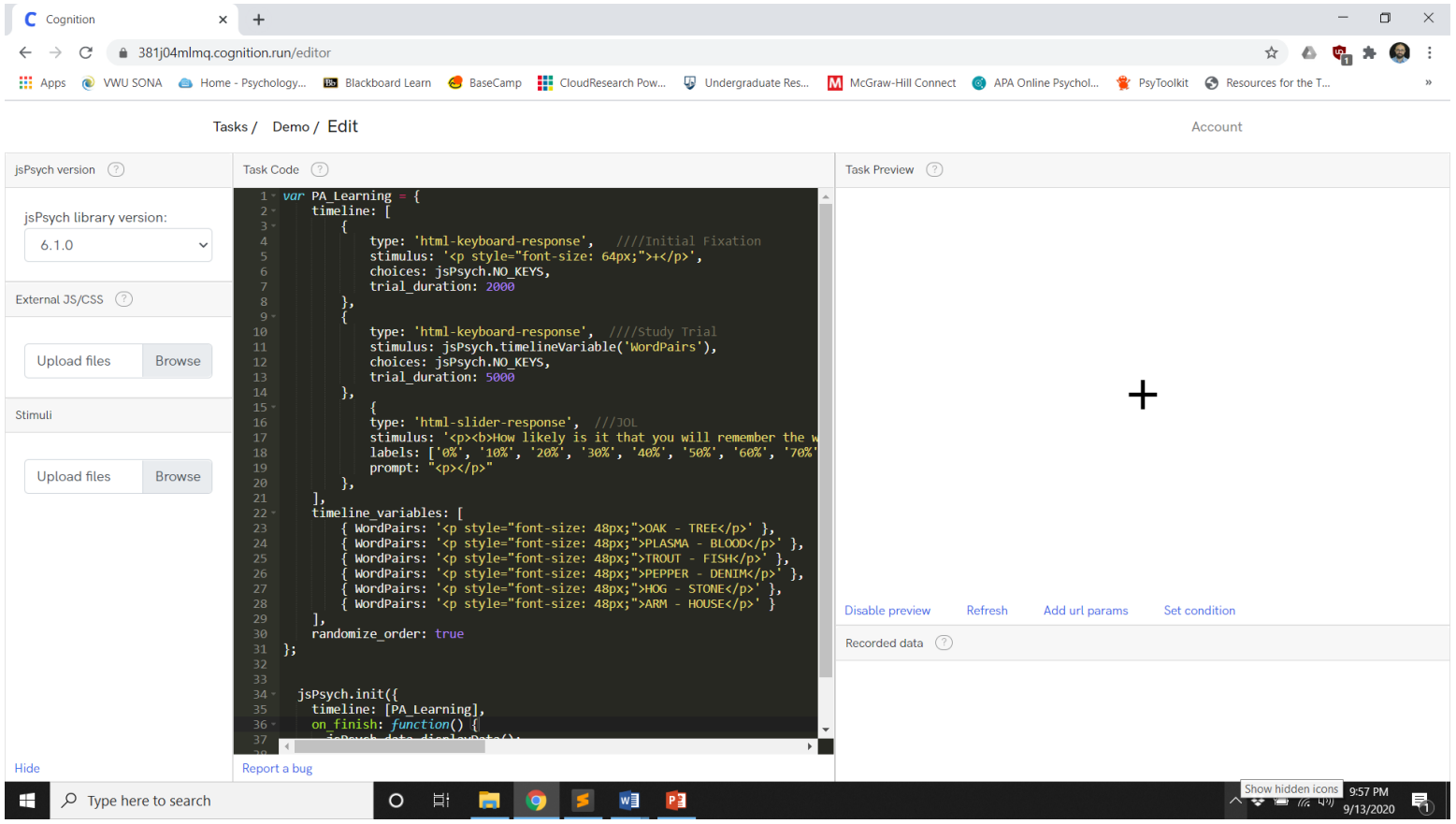
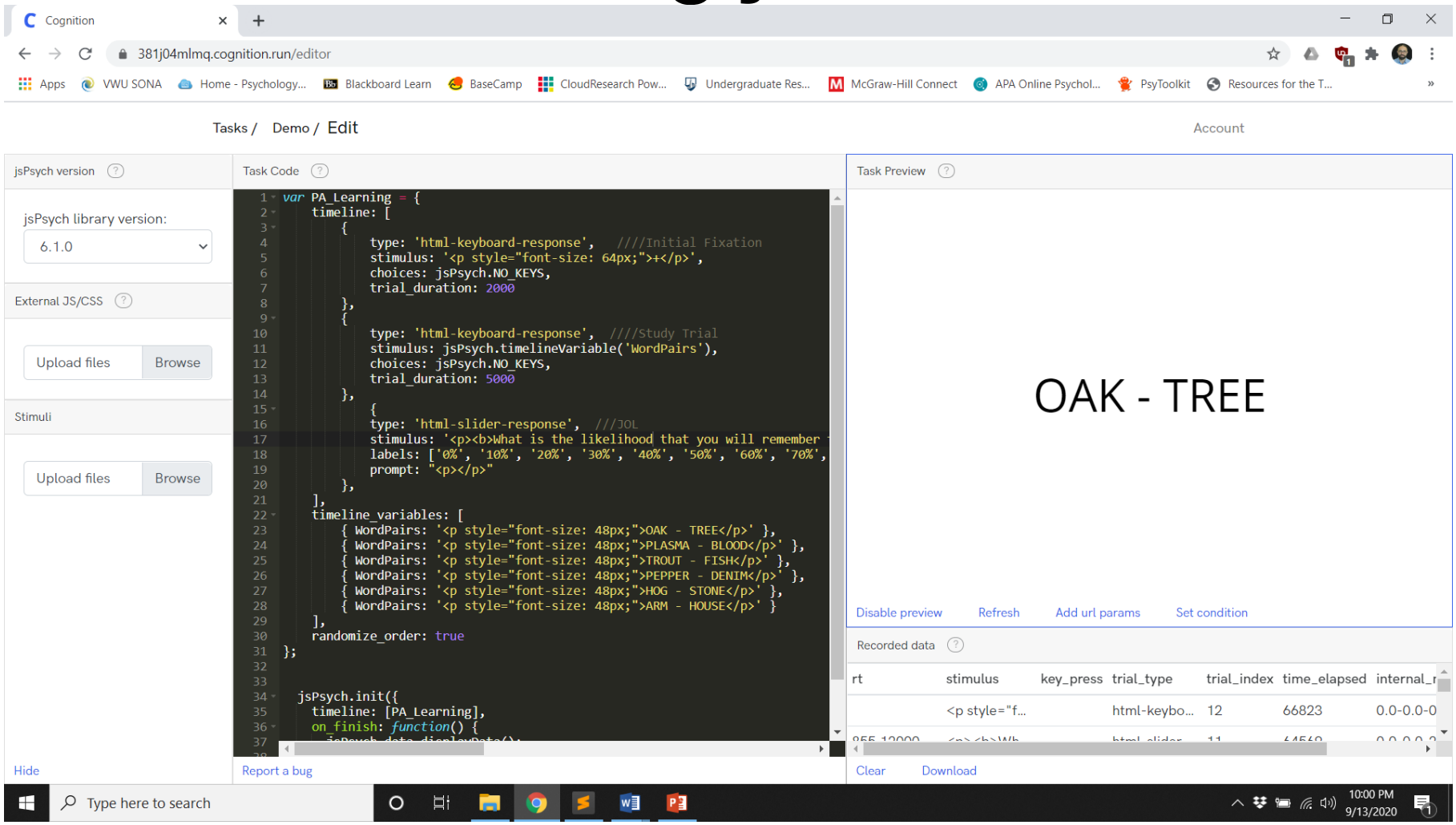
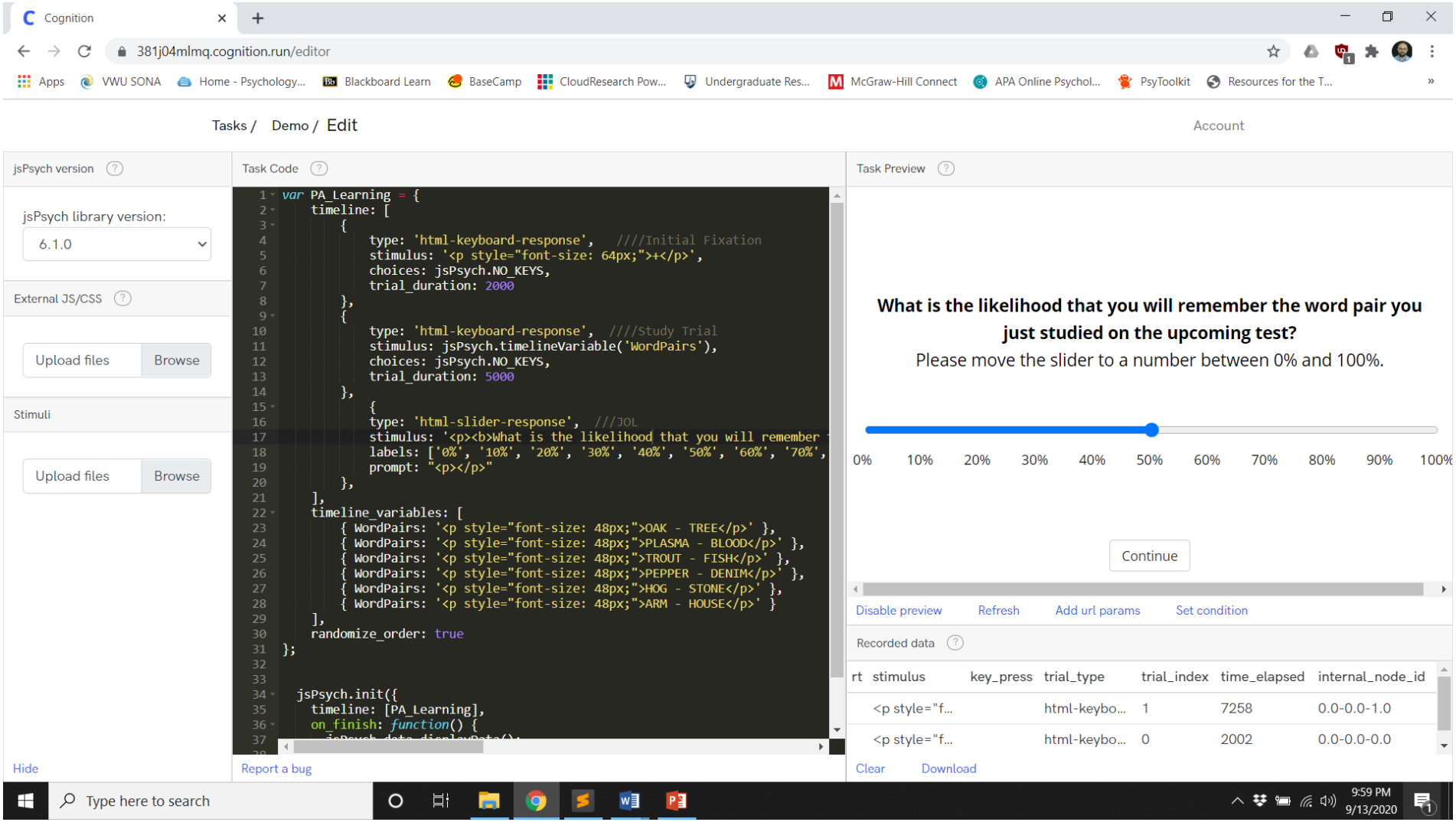
9/13/2020

4. Paste your jsPSYCH code into the script window



5. Preview and debug your code in real time




Cognition
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PsyToolkit
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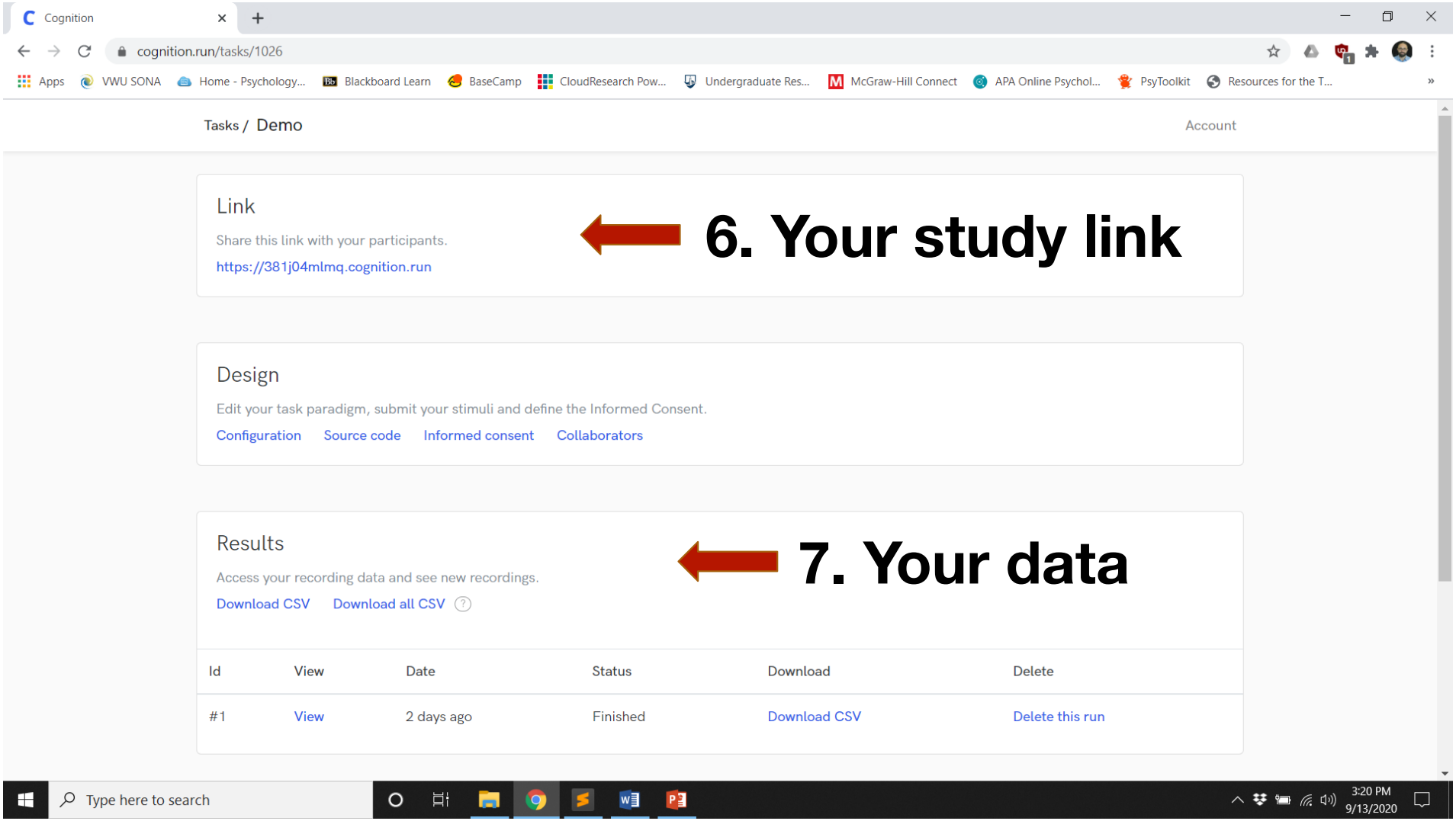
Tasks / Demo / Edit
Account
jsPsych version
jsPsych library version:
6.1.0
External JS/CSS
Upload files
Browse
Stimuli
Upload files
Browse
Hide
Task Code
var PA_Learning = {
timeline: [
{
type: 'html-keyboard-response', ////Initial Fixation
stimulus: ' + ',
choices: jsPsych.NO_KEYS,
trial_duration: 2000
},
{
type: 'html-keyboard-response', ////Study Trial
stimulus: jsPsych.timelineVariable('WordPairs'),
choices: jsPsych.NO_KEYS,
trial_duration: 5000
},
{
type: 'html-slider-response', ///JOL
stimulus: ' <b>What is the likelihood that you will remember
labels: ['0%', '10%', '20%', '30%', '40%', '50%', '60%', '70%',
prompt: " "
},
],
timeline_variables: [
{ WordPairs: ' OAK - TREE ' },
{ WordPairs: ' PLASMA - BLOOD ' },
{ WordPairs: ' TROUT - FISH ' },
{ WordPairs: ' PEPPER - DENIM ' },
{ WordPairs: ' HOG - STONE ' },
{ WordPairs: ' ARM - HOUSE ' }
],
randomize_order: true
};
jsPsych.init({
timeline: [PA_Learning],
on_finish: function() {
Report a bug
Task Preview
What is the likelihood that you will remember the word pair you just studied on the upcoming test?
Please move the slider to a number between 0% and 100%.
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Continue
Disable preview
Refresh
Add url params
Set condition
Recorded data
rt stimulus key_press trial_type trial_index time_elapsed internal_node_id
<p style="f... html-keybo... 1 7258 0.0-0.0-1.0
<p style="f... html-keybo... 0 2002 0.0-0.0-0.0
Clear
Download
Type here to search
9:59 PM
9/13/2020

Experiment Code: Basic JS and HTML

```
var PA_Learning = {
    timeline: [
        {
            type: 'html-keyboard-response',   ////Initial Fixation
            stimulus: '<p style="font-size: 64px;">+</p>',
            choices: jsPsych.NO_KEYS,
            trial_duration: 2000
        },
        {
            type: 'html-keyboard-response',  ////Study Trial
            stimulus: jsPsych.timelineVariable('WordPairs'),
            choices: jsPsych.NO_KEYS,
            trial_duration: 5000
        },
            {
            type: 'html-slider-response',  ///JOL
            stimulus: '<p><b>What is the likelihood that you will remember the word pair you just studied on the upcoming test?</b> <br>Please move the slider to a number between 0% and 100%.</br></
            br></p>',
            labels: ['0%', '10%', '20%', '30%', '40%', '50%', '60%', '70%', '80%', '90%', '100%'],
            prompt: "<p></p>"
        },
    ],
    timeline_variables: [
        { WordPairs: '<p style="font-size: 48px;">OAK - TREE</p>' },
        { WordPairs: '<p style="font-size: 48px;">PLASMA - BLOOD</p>' },
        { WordPairs: '<p style="font-size: 48px;">TROUT - FISH</p>' },
        { WordPairs: '<p style="font-size: 48px;">PEPPER - DENIM</p>' },
        { WordPairs: '<p style="font-size: 48px;">HOG - STONE</p>' },
        { WordPairs: '<p style="font-size: 48px;">ARM - HOUSE</p>' }
    ],
    randomize_order: true
};


  jsPsych.init({
    timeline: [PA_Learning],
    on_finish: function() {
      jsPsych.data.displayData();
    },
    default_iti: 250
  });
```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APA Online Psychol...
PsyToolkit
Resources for the T...
Tasks / Demo
Account
Link
Share this link with your participants.
https://381j04mlmq.cognition.run
6. Your study link
Design
Edit your task paradigm, submit your stimuli and define the Informed Consent.
Configuration
Source code
Informed consent
Collaborators
Results
Access your recording data and see new recordings.
Download CSV
Download all CSV
7. Your data
Id
View
Date
Status
Download
Delete
#1
View
2 days ago
Finished
Download CSV
Delete this run
Type here to search
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