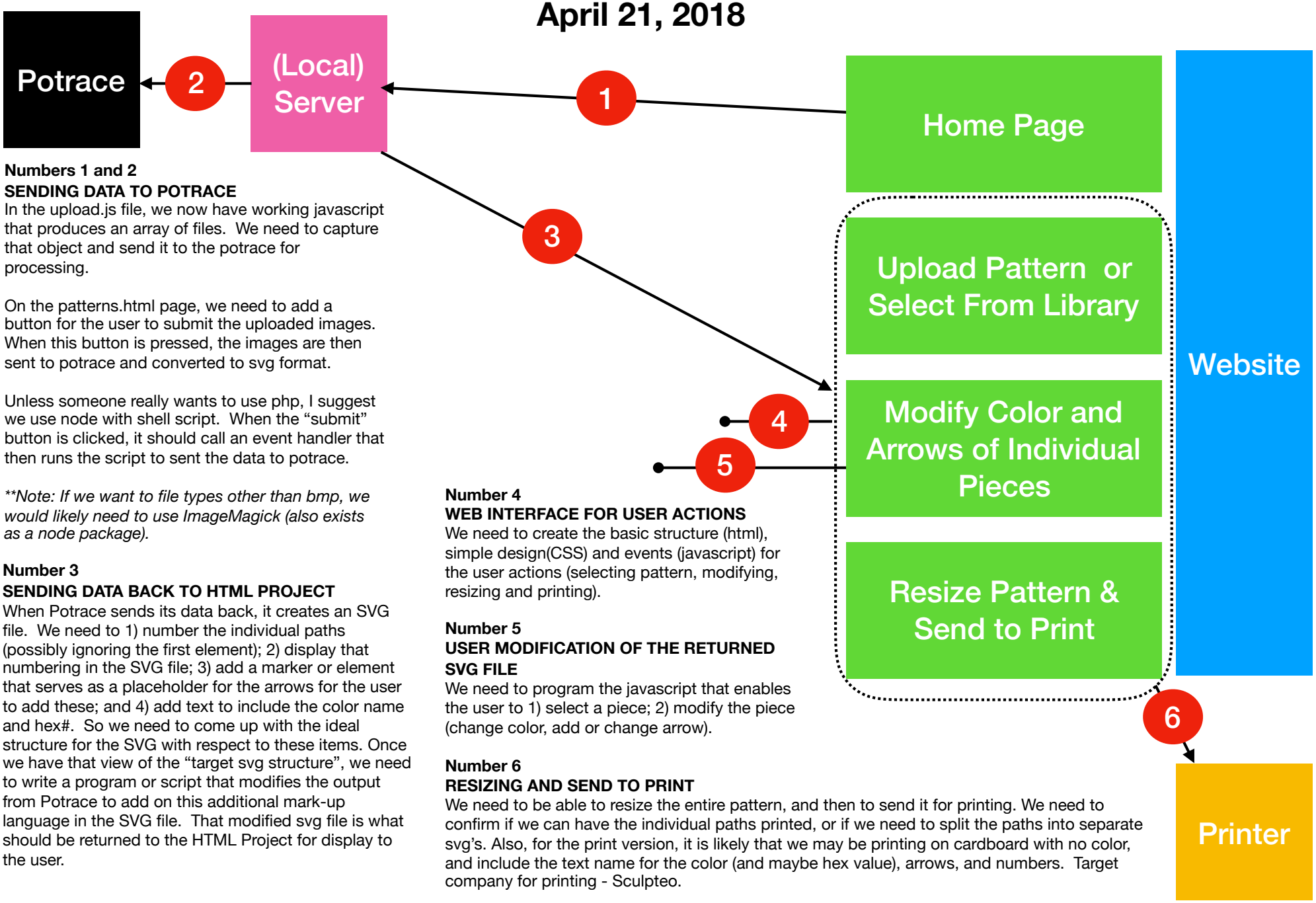
Glass Pattern Builders

Key Technical Issues
April 21, 2018



Numbers 1 and 2
SENDING DATA TO POTRACE
In the upload.js file, we now have working javascript that produces an array of files. We need to capture that object and send it to the potrace for processing.

On the patterns.html page, we need to add a button for the user to submit the uploaded images. When this button is pressed, the images are then sent to potrace and converted to svg format.

Unless someone really wants to use php, I suggest we use node with shell script. When the "submit" button is clicked, it should call an event handler that then runs the script to sent the data to potrace.

***Note: If we want to file types other than bmp, we would likely need to use ImageMagick (also exists as a node package).*

Number 3
SENDING DATA BACK TO HTML PROJECT
When Potrace sends its data back, it creates an SVG file. We need to 1) number the individual paths (possibly ignoring the first element); 2) display that numbering in the SVG file; 3) add a marker or element that serves as a placeholder for the arrows for the user to add these; and 4) add text to include the color name and hex#. So we need to come up with the ideal structure for the SVG with respect to these items. Once we have that view of the "target svg structure", we need to write a program or script that modifies the output from Potrace to add on this additional mark-up language in the SVG file. That modified svg file is what should be returned to the HTML Project for display to the user.

Number 4
WEB INTERFACE FOR USER ACTIONS
We need to create the basic structure (html), simple design(CSS) and events (javascript) for the user actions (selecting pattern, modifying, resizing and printing).

Number 5
USER MODIFICATION OF THE RETURNED SVG FILE
We need to program the javascript that enables the user to 1) select a piece; 2) modify the piece (change color, add or change arrow).

Number 6
RESIZING AND SEND TO PRINT
We need to be able to resize the entire pattern, and then to send it for printing. We need to confirm if we can have the individual paths printed, or if we need to split the paths into separate svg's. Also, for the print version, it is likely that we may be printing on cardboard with no color, and include the text name for the color (and maybe hex value), arrows, and numbers. Target company for printing - Sculpteo.

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Timeline to Completion
April 21, 2018

	April 21	April 28	May 5	May 12	May 19
SEND FILES TO SERVER	Items 1 & 2	Complete script for sending data to potrace	Add additional file types to input (png, jpg, etc.)		
RETRIEVE OUTPUT FROM PROGRAM AND SEND BACK TO PROJECT	Item 3	Complete sample SVG File that shows how we should be displaying text (for color name), numbering and arrows	Complete script for modifying the svg file to send data back to the website project.		
DESIGN & IMPLEMENT USER INTERFACE FOR HANDLING PATTERN	Items 4 & 5	Complete basic html and basic css structure for the user modification pages	Write javascript for each user modification type: 1) add color; 2) add arrows; 3) resize; 4) send to print	Adding javascript validation for filetype Tweak UI Add CSS polish	**DEMO DAY**
SEND FILE TO LASER CUTTING / PRINTING		Confirm file requirements for printing.	Write code for modifications that are required for sending to for 3D laser cutting	Send test files to Sculpteo for printing (add to video)	
Items Completed	User can upload images to website				Barbara on vacation - will not be in class!