

Part 1 -- SUCCESSFUL Path Exploration

1. Development environment setup

(1) Setup local development for Drupal

I didn't try a lot effort on Drupal's local environment setup, because I thought it is just a hosting site which contains h5p Plugin, so I found an useful tool which is the fast track to Drupal, it has a full-specific stack that includes Apache , MySQL, and PHP, it is an easy way to synchronize mt local Drupal website.

(2) set up h5p environment use "npm install -g h5p", so I am able to use h5p as command to pack up a h5p package

2. get h5p existed library to test in Drupal

3. try to write simple JavaScript code and pack into packages to test in Drupal

(previously, I miss one important step to explore how Drupal connected with H5P, and I had a long time on hitting errors when once I submitted a new package)

4. From research

Current parsons puzzle type

- (1) Extra lines
- (2) User-created block
- (3) Fix code for context
- (4) Drag and drop

Binary Tree Postorder Traversal

Order the codelines by dragging and dropping from right to left.	
<div>Check</div>	
1	def traverse_postorder(tree_node):
2	visit(tree_node)
3	traverse_postorder(tree_node.right)
4	if tree_node is not None:
5	traverse_postorder(tree_node.left)

Sort code lines	Exercise description
<pre>def main(): a = 1 b = -1 a = b tmp = a b = tmp</pre>	Order the codelines so that it swaps contents of variables a and b.

- (5) Click or fill in blank for revealing a part of a line, like iteration time, assignment or if condition fill in.
- (6) For the feedback part, most of the existing parsons puzzle tends to force students try more attempts by counting attempt times, some of them only have a short notification, such as “the code generated is too short”. There are also some distinctive parsons puzzle which use visualization on the other side to generate the actual output, more like a terminal plus drawing feature base on the problems. Some of them use a limitation on counting attempts, such as attempt will be counted with different organise code with wrong sequence.

Drag from here

REPEAT ?? TIMES

left(120)

ENDREPEAT

forward(100)

Model Drawing



Construct your solution here

Your Code Drawing

- (7) Most of the parsons puzzle do not contain brackets in code block
- (8) Most of the parsons puzzle are using python because code block are defined by indentation instead of start and end -symbols like curly braces. A small amount of other contains curly brace in some code blocks with actual indentation, so students may only work on sequence. Other languages are C++ , JavaScript

7-22-2: The following program segment should fill an array with elements that count up from 0 to 50 by 5 (0, 5, 10, 15, 20...). But the blocks have been mixed up. Drag the needed blocks from the left and put them in the correct order on the right. Click the *Check Me* button to check your solution.

Drag from here

System.out.println(arr[i]);

arr[i] = i * 5;

for (int i = 0; i < 11; i++) {

}

Drop blocks here

int[] arr = new int[11];

Check Me

Reset

Help Me

(9) One parson puzzle manly works on one function

(10) In creator side , most of current parsons puzzle is structure with 'title , description and design code panel

5. H5P:

main Library → Connect H5PEditor → use H5P container to append HTML elements vis js

6. Draft design by using adobe XD

Title

Description

Code

Language ▼

1
2
3
4
5
6
7
8
9
10

save

problem

Design a program that will print out "Hello World "
when x = 1

if x== 1 :
x=1

print("Hello World")

solution code is too short !
TRY AGAIN!

ResetFeedback

problem

Design a program that will print out "Hello World "
when x = 1

```
if x==1:  
x=1  
print("Hello World")
```

Reset

Feedback

problem

Design a program that will print out "Hello World "
when x = 1

indentation

```
x=1  
if x== 1 :  
    print("Hello World")
```

You Get the correct Answer!

Reset

Feedback

Next ►

Part2--MAIN challenge:

1. Not familiar with JavaScript
2. Developer account for canvas
3. Time limited

Part3 -- Currently working on:

1. How Drupal upload a h5p, file structure organize, because the upload file is different from uploading with h5p hub
2. More way to use h5p integrate with canvas
3. Previously I have a simple design for the editor page, still improving with adding more features for teacher to have better communicate with student side, thus be more efficient for the purpose of this project ---useful study tool.
4. Need to research more interactive features for teacher to create
5. Parsons puzzle code logic and structure