# 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

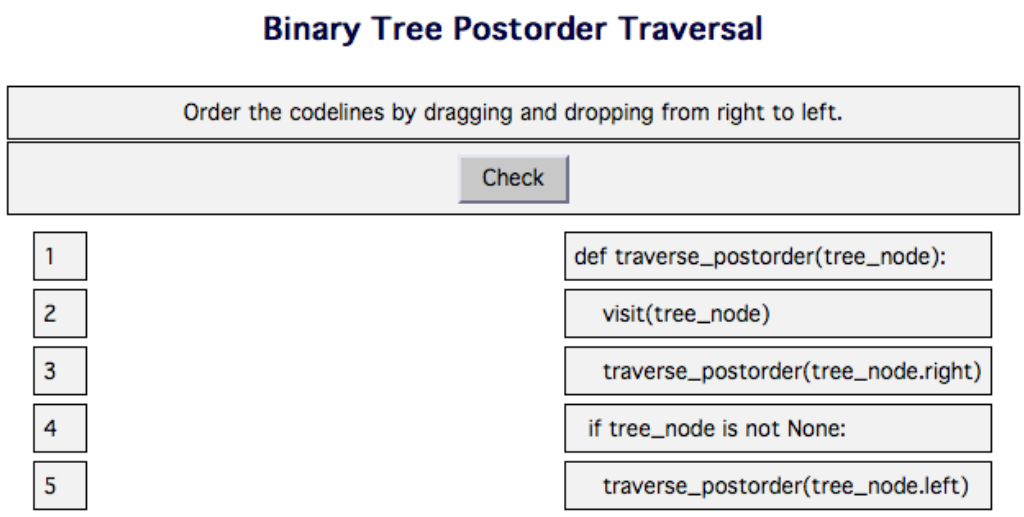
2. get h5p existed library to test in Drupal
3. try to write simple JavaScript code and pack into packages to test in Drupal

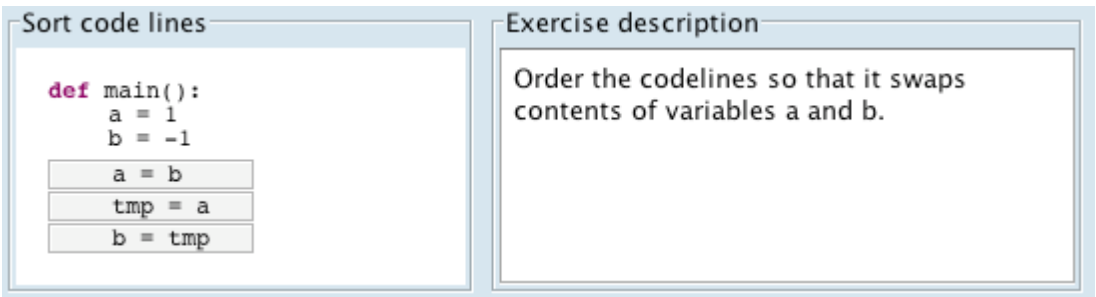
(previously, I miss one important step to explore how Drupal connected with H5P, and I had a long time on hitting errors when once I submitted a new package)

4. From research

   Current parsons puzzle type

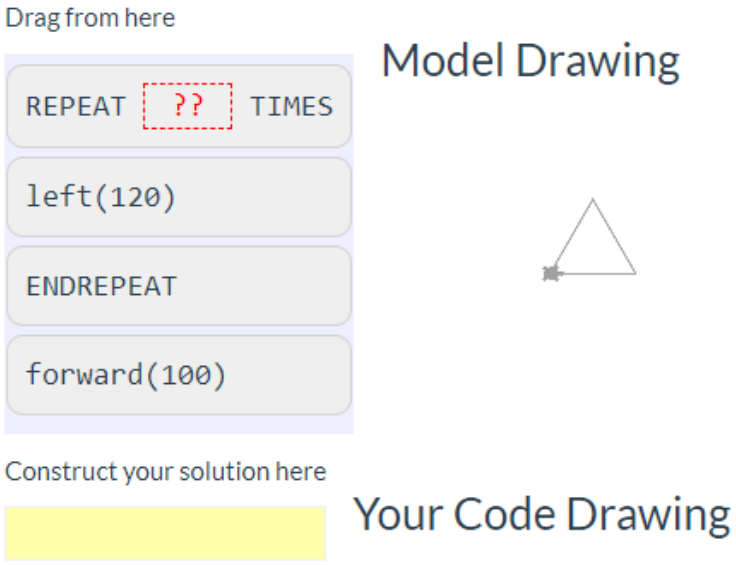
   (1) Extra lines
   (2) User-created block
   (3) Fix code for context
   (4) Drag and drop



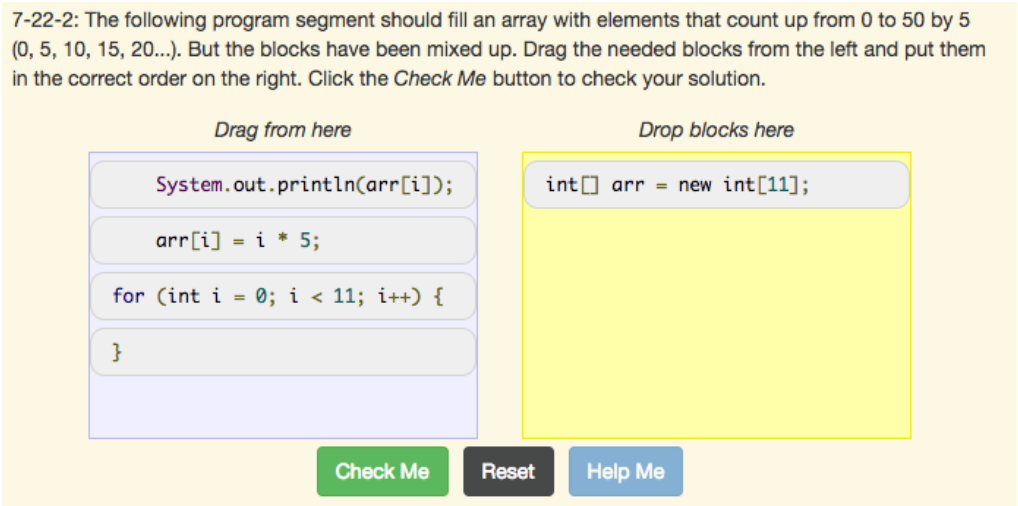
(5) Click or fill in blank for revealing a part of a line, like iteration time, assignment or if condition fill in.

(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.




(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



(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

problem

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

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

Reset Feedback

problem

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


```
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