**First Meeting Follow Up**

Competitors

I looked into two different online code teaching websites, Code Combat and Code Academy. The former is a game which involves using code to move a character through dungeons whereas code academy does not include gameplay elements at all as it is solely a teaching website. I chose the python course for both of these as it is the language I plan to start with in my application

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| **My App** | **Code Combat** |
| Teaching Method  My game will have the teaching part and game part separate. I will use the techniques mentioned below to teach | Teaching Method  This game uses code to move a character across the screen as its teaching method. This includes avoiding obstacles and picking up items |
| Progression  Unlocking new cards to play with will be the progression in my game. The more coding challenges players complete the more cards they will be able to use | Progression  This game uses experience points and item unlocks as character progression. These items give bonuses such as more health which affects how many errors you are allowed to make before dying |
| Gameplay  The gameplay of my game is similar to top trumps. Cards with different code snippets can be played and an attribute selected (such as usefulness, difficulty, etc). If the attribute is higher than the opponents’ then the turn is won. The winner is the player who reaches 10 round wins first. | Gameplay  This game uses lines of code to move a character around and attack enemies. When the code is run the actions are performed and can then be changed if incorrect or the level ends if the solution was correct. |

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| **My App** | **Code Academy** |
| Teaching Method  See Teaching Techniques section | Teaching Method  Code Academy uses code completion, full code writing, guess the output and multiple choice questions to teach coding. These are all effective methods from my experience with the application. I plan on using similar methods in my app. |
| Progression  More challenges will become unlockable as the player progresses through stages. | Progression  There is a basic experience system but no real progression as it is not a game |

Unique Selling Point

The unique selling point of my application is that both teachers and students can utilise the app. It can be used to set homework but also students and independent learners can use the application to get a grasp of the basics of programming.

Target Market

The target market of my application is programming beginners above the age of 12 as well as teachers who wish to set homework. The application will not be tailored to children as it is code heavy, with little features that will be entertaining enough to keep younger audiences interested. Instead of opting for a scratch-like drag and drop block code system to teach I will have code completion tasks, speed trials and tasks where the output of the code must be guessed.

Best methods of teaching

**Teaching coding effectively**

<https://journals-sagepub-com.plymouth.idm.oclc.org/doi/full/10.1177/1076217517722578>

Ashenfelter, E. (2017). From the Classroom: A Guide to Teaching Coding Using Google’s CS First. *Gifted Child Today*, 40(4), pp.220-225.

**Teaching to good standards (and keeping standards interesting)**

Li, Xiaosong & Prasad, Christine. (2005). Effectively teaching coding standards in programming. 239-244. 10.1145/1095714.1095770.

<https://www.researchgate.net/publication/220707016_Effectively_teaching_coding_standards_in_programming>

Teaching Techniques I will use (modes)

* Guess the output
* Complete the code
* Find the mistake
* Speed trials

Main Features

* Teacher/student options
  + Teacher can set specific tasks to be completed by students and view which students have finished the work set or not
  + Students can log in and see tasks set by teachers or they can independently complete tasks to learn in their own time
  + People who are not in an educational institution may also access the app but will not have access to the set tasks page (since they have no teacher)
* Teaching code
  + Complete the code as a minimum requirement for my app. Other modes will follow
  + Ensure method of teaching is correct and teach good coding standards