Code After Hours Project

Welcome to Code After Hours

Code After Hours is a organization that was founded by the idea of having Coding Clubs in Puerto Rico schools. Founded and being maintained by two High School students and a Psychologist/Web Designer. The principal goal of Code After Hours is for providing hgih school students resources, help and mentors so they can implement coding clubs at their Schools. Then the main organizer of the school becomes the mentor for that school, this way everyone's learning together. Every week Organizers from different school will have a meeting to discuss teaching topics and the progress of each club. Through the school year, Code After Hours will be having monthly Hackathons in which the students will participate and apply what they have learn in their clubs, this will be a practice for the anually Hackathong in which the students have a chance to win prizes.

This Code After Hours curriculum is based on Codecademy curriculum, this was made initially to see how the project goes and see people responses. With time we'll be fixing the curriculum depending on the needs of the students.

FAQS

Do I need programming knowledge to start the club?

NO! In this curriculum there's everything to get started with. The base for this curriculum is Codecademy curriculum. So this curriculum is gonna be using Codecademy After School Programming program. Some Practices will be made with codecademy.com others will be encourage to be live coding sessions.

What type of preparation do I need?

None, just get to know Codecademy and the topics.

Is this "Codecademy" free?

Yes it is. Its a free way to learn to code. We'll be using it as our main resource for teaching to code.

What are the things I need to start the Coding Club?

Any computer with access to internet. It can be Windows, Linux, or Mac. As long as there's internet access.

What do the students need?

Besides the computer with internet access, an email account for Codecademy.

What will the students learn with Codecademy?

They'll learn the basics of programming and creating websites with HTML and CSS. Also they'll be familiar with the basics of the JavaScript programming language.

What about students who finish early or have prior experience?

In our program Code After hours, its all about community. So those students can become mentors to other students. Thats our main goal, for students to become leaders.

How many mentors do I need to start with Code After Hours?

Actually none, just ask around who's interested in the coding club and ready to be a mentor and we'll train them. So then later they can train others.

What will the students get out of this program?

Students will be able to develop simple programs and websites. So later on they can learn other programming languages. This is a jump-start program for students without prior knowledge. But it doesn't end there, if there's a student with prior knowledge he or she will be able to give a boost to their programming knowledge and work with extra projects.

So, what's the difference between Code After Hours and Codecademy?

The difference is that Code After Hours is the program for running the coding clubs at the school and our main program that lets students communicate with each other for learning purposes, its kind of a social network for schools that integrates Coding as the main reason. And Codecademy is the main resource for the material needed.

Intro

This is a 14 week curriculum based on Codecademy Curriculum that covers HTML, CSS and JavaScript.

WEEK ONE: INTRODUCTION TO CODING

Topics to be covered:

- What is programming?
- What is a browser?
- What is HTML, CSS and JavaScript?
- Where can you see HTML, CSS and JavaScript?
- What does Math has to do with programming?

WEEK TWO: HTML FUNdamentals

Topics to be covered:

- Structure of HTML
- Basic tags
- Hyperlinks
- Images

Project: Build your first webpage

WEEK THREE: MORE WITH HTML

Topics to be covered:

- Lists
- Styles
- Tables

Project: Make a recipe card

Discussion:

- Every student must find a tag on the internet and use it for the next session.

WEEK FOUR: HTML REVISION

Go through everything the students have built and make sure they have a solid understanding of it.

WEEK FIVE: STYLE WEBPAGES WITH CSS

CSS is the beauty for the HTML. It lets you style webpages.

Topics to be covered:

- CSS
- Selectors
- Different ways to link CSS

Project: First website built with HTML and CSS

Discussion:

- Play around with colors and CSS.
- Teach them to find CSS code.
- Talk about BootStrap

WEEK SIX: ADVANCED CSS SELECTOR

Topics to be covered:

- CSS Selector and IDs
- Inheritance and Cascading
- Psudoselectors

Project: Build a Resume

Dicussion:

- Build different types of resumes.

WEEK SEVEN: INTRO TO CSS POSITIONING

Learning the basics for CSS positioning.

Topics to be covered:

- Box Model
- Relative positioning
- Absolute positioning

Project: Create a Personal Webpage

Discussion:

- Have a short look into the history of Computer Science: Who is Steve jobs? Linus Torvalds? Bill gates?

WEEK EIGHT: ADVANCED CSS POSITIONING

Topics to be covered:

- Absolute positioning
- Fixed positioning

Project: Pizza Time!

Discussion:

- Teach students how to use Firebug.
- Inspect Element functionality in browsers.
- Ask them to bring one attribute for next session.

WEEK NINE: CSS REVISION

Go through everything the students have learned. Present each project with minor modifications.

Helping them work with a local environment. Saving the progress to the PC/MAC and load them in the browser.

WEEK TEN: GETTING STARTED WITH PROGRAMMING

Introduction to JavaScript. This will be their first exposure to programming which is completely different form HTML.

Topics to be covered:

- Strings
- Numbers
- Variables
- If/Else Statements

Project: Make your own adventure game!

Discussion:

- Talking about how it all works.

WEEK ELEVEN: INTRODUCTION TO FUNctions

Talk about what FUNctions are.

Topics to be covered:

- Functions
- Using variables in functions
- Returning a value at the end of a function

Project: Rock, Paper, Scissors

Discussion:

- Review last week's topics.
- Why are Functions so useful for programmers?
- How do you understand functions?

WEEK TWELVE: INTRODUCTION TO FOR LOOPS IN JS

Topics to be covered:

- For loops

Discussion:

- Why are loops so useful?
- What else could you do with a for loop?

WEEK THIRTEEN: RECAP OF JAVASCRIPT

Topics to be covered:

- JavaScript Revision
- Variables
- Output
- Operators
- For loops
- Comparison Operators
- Branching

Tip: Ask a Programmer/Mentor of Code After Hours to go to the classroom and talk about what they do and their experience.

WEEK FOURTEEN: PUTTING IT ALL TOGETHER

Talk about what the students have learned.

Project: Code'n'Tell

I'M DONE! WHAT'S NEXT?

Learning Ruby.

Ruby. For students seeking to get more into programming. This is an all-purpose programming language. With Ruby they can build form simple scripts to Web Apps Powered by Ruby on Rails.