

# Integration of Creative Code and Programmatic Training for Youth

1. Mobile App Development
2. Course Content Development
3. Delivering Lectures

- Course centers around teaching youth to code using a modular design.
- Initializing Modules include
  - Basics of Computer Literacy
  - Introduction to Building Websites
  - Introduction to Mobile Apps

# Basics of Computer Literacy

- General OS, using Ubuntu as Example
- Installing and Running Apps
  - <http://lyndondaniels.com/2010/learn/general/install.html>
- Playing Games : Analyzing Screen space, understanding HID, Computer logic etc
- Browsing the Internet : Analysis of a Web interface, Behind the interface

# Introduction to Building Websites

- HTML Basics
- CSS Basics
- Using Plugins

# How Does it all come together?

- Training is initialized with a discussion about the course including examples of works that can be created upon completion.
- The learners are introduced to the Mobile App and instructed how to install it on their phones.
- Lessons have a modular design and should be constructed so that a single concept per lesson can be relayed to learners.

- The Mobile App then provides the learners with a practical application of the concept discussed in class.
- Example:
  - The students are learning about file systems, directory structure etc.
  - The lesson discusses techniques for file organization.

- The students then use phones which provide a practical experience of creating a folder on their phones using the App's interface that simulates aspects of the computers they use during lectures.
- The mobile experience is touch based with little to no typing involved.

- Example 2
  - The lesson is about creating an HTML template.
  - The students are instructed during a lesson
  - The practical using the mobile app, will involve touching the tags in the correct order so that they are placed in the correct order.
  - The app checks if the learner has completed the exercise correctly, if not provides hints and guidance to complete the lesson.



- Example 3

- Lesson involves understanding screen space in pixels and percentages.
- Mobile app, walks student through placing a sprite on the background of a running app. Then moving the sprite around.

- Lessons are designed towards building a major project i.e. an interactive mobile app and a personal website.
- The app has a login facility that will sync the students data and make their progress available for trainers.
- When an internet connection is not available the app works in offline mode storing all info locally, then syncing when a network connection is active.

- Approximately 24hrs per module (over 6 weeks)
- Main Modules can be added or subtracted
- Central Database tracks learners progress