**Mobile Makers Academy**

*Pre-course Material, Summer 2013 iOS Immersive*

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**Challenge 1: Getting Started**

## Part 1:

Watch the first chapter only title “Programming Basics” of the lynda.com videos: *Foundations of Programming: Fundamentals*.

Then respond to the following following prompts:

**1. Imagine asking a friend to meet you at a restaurant. What instructions would a computer program need that your friend would not in order to understand how to get there?**

A program needs the latitude and longitude for both the starting and ending locations.

**2. What is the difference between source code and machine code? What does the CPU do? Where are instructions and data stored?**

Source code typically refers to the coding language that a program is written in (Objective-C, C#, PHP, etc.). So, when someone states they are “coding” or “programming”, they are writing source code. Machine code, however, runs at the chip level and refers to the commands that control the most basic operations of a computer or device. Essentially, programmers write source code, devices execute machine code.

The CPU or Central Processing Unit interprets and executes the most basic functions of a computer or device.

**3. What is an IDE and why is it useful?**

An IDE, or Integrated Development Environment, offers additional functionality and capabilities beyond a simple text editor. For example, Xcode offers auto-complete, syntax checking and links to documentation that aren’t available in a plain text editor.

Xcode and Visual Studio are examples of IDEs.

**4. What kind of language is Objective-C? Why do you think we use it for making device specific applications? Why wouldn't we want to use an interpreted language for making iPhone and iPad apps?**

Objective-C is a compiled application which means when the source code is interpreted an executable file is generated. The resulting executable file can be run on any supporting device. A compiled language is useful for developing device-specific apps because the application is ready to run, it often runs faster than interpreted languages and the source code is protected. This third point is one of best reasons for using a compiled language for distributed iPhone and iPad apps.

## Part 2:

Now that you have finished the easy part, read chapters 1 through 11 of The Big Nerd Ranch book and complete all the exercises.