1. Lesson 1

* Welcome to Yes We Code! A small app to help you learn the basics of coding.
* Let’s jump right into it!
* So what exactly is coding? Think of it this way.
* People around the world communicate in different languages: English, Spanish, Chinese…
* Well think of a computer as a person who can read different languages. Just like how I’m talking to you in English, you could talk to a computer in the language Java, Python, or so many more!
* Writing in a computer’s language is coding. Telling a computer to complete tasks through coding is called programming.
* The more computer languages that you learn, the more devices you can talk to. Smartphones, gaming consoles, and even some watches can do amazing things if you tell them to through programming!
* The following lessons will guide through some similarities between our human languages and a computer’s.

1. Lesson 2: Variables

* Question: What’s a computer’s favorite school subject?
* It’s math! Computers love math so much, that numbers and symbols often used in your various math classes are in many of their languages!
* A variable in its simplest form is an item you give of value.
* For an example: An apple at the store worth $1. To tell the computer this, you would write something like shown on the board.
* The apple is the variable, “1” is its value.
* The “;” at the end tells the computer you’re done with your statement. Think of it like the “.” at the end of a sentence.
* “price” would tell the computer that the “1” represents 1 dollar.
* Here are few more examples.

1. Lesson 3: If & Else Statements

* Many computer languages use various English words. Some are: “return”, “string”, “main”, and “root”.
* This lesson will go over the words: “True” “False” “If” “Else”
* Let’s say you told somebody that it’s raining outside. If it is raining outside, then what you said is “true.” If it’s not raining, your statement is “false”. How could we write this in a computer’s language?
* Look at the chalkboard. First, we have the variable “rain” with the value “true.”
* Next, we have “If rain.” Because rain = true, the computer will respond with “It’s raining!”
* But what if we change raining’s value to “false” ?
* The computer will then follow the command written under the “else”. This tells us that commands under “else” will only be followed if what’s written next to “if” is not true.

1. Lesson 4: Loops

* Time for some geometry! Try and draw a circle. If you’re like most people, you probably started your circle where it ended, making a loop. Computers like loops too!
* Loops in computer languages are commands that repeat themselves in a format seen above
* We start off with 3 eggs. Like we learned with “if”, what is written after “while” must be true in order for the command to be followed below.
* Within the “{ }” we have two commands: to write that we still have eggs and to subtract one from our egg variable. That would change our value from 3 to 2.
* These statements will repeat themselves until eggs = 0, because then “eggs > 0” would no longer be true.

1. Lessons 5: Methods

* Think of methods like a paragraph. Variables would be the words. Loops, If and Else statements are sentences.
* Methods can contain multiple variables, loops, commands, and more. We will present a simple example using the basics from the previous lessons.
* The name of this method is “Example.” “Public,” “Void,” and “()” help us characterize what type of method is being presented. You will learn more about this later in your coding education.
* Everything within the first “{ ” and last “}” are all a part of the method. So when you tell a computer to look at “Example”, everything in between is what it will read.
* Here we see a an if and else statement within a loop. The same logic from the past lessons apply here.
* We start off with 1 apple. Since apples = 1 is true at the moment the computer will write “only one apple!” and skip the else command.
* At the end of each loop we are going to add one apple. Now apple =2. Since that command is outside of the if and else statements, it will be repeat as along as apple is less than 5.
* On every loop onwards, we will write “we have plenty of apples!” until apples = 6.