sheCodesNow

Intro to JavaScript

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Preview

What we're covering today:

- Intro - What does it take to be a developer?
- Quick recap of HTML/CSS
- Intro to JavaScript - what can it do?
- Syntax and vocabulary
- Data Types
- If/Else conditional statements
- User prompts and alerts

What we'll cover next time (intermediate JavaScript)

- Loops
- Functions
- Objects

Resources to have open during today's workshop

Have a chrome browser open

(download here: https://www.google.com/chrome/)

Download Visual Studio Code Editor (it's free)

(download here: https://code.visualstudio.com/download)

Download the full intro workshop materials

(download here: https://github.com/She-Codes-Now/Intro-to-JavaScript)

Your mind!

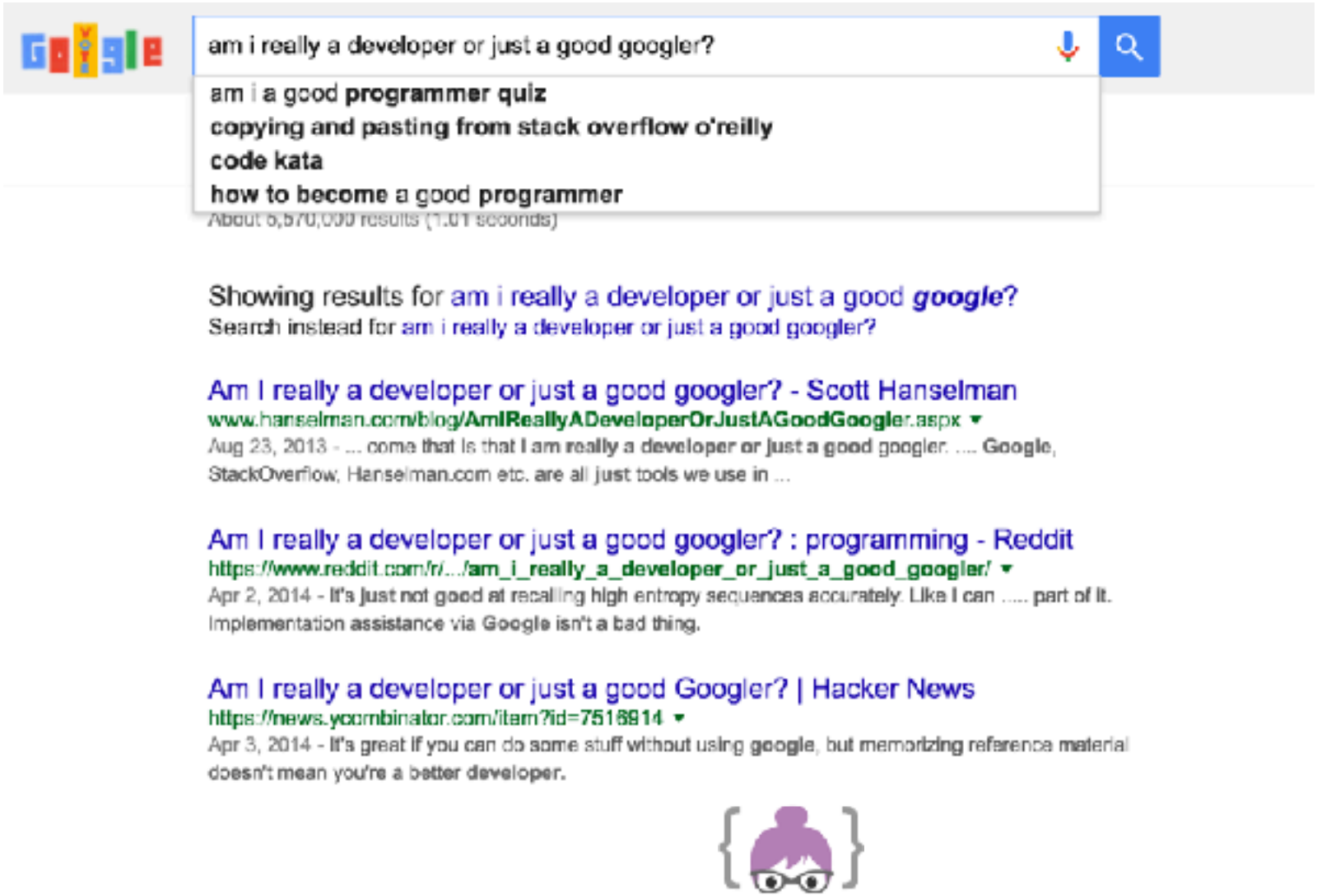
*Learning something new can be challenging. If you don't understand at first, don't give up. You just don't understand **yet**! You will and we'll help you get there.*

3 questions to determine if you can be in Tech...

1) Do you like learning new things?

2) Do you like solving problems?

3) Do you know how to Google?



HTML

Content

- Headlines
- Photos
- Links
- Articles (copy)

CSS

Styles

- Fonts
- Colors
- Borders
- Backgrounds
- Layout

JavaScript

Interactivity

- Personalization
- Games
- Effects
- Animation**

** CSS can do animation as well

Backend*

- Servers
- APIs
- MORE
- Special JS libraries you'll learn about later like jQuery, NodeJS, ViewJS and more!

*What is backend?

JavaScript Syntax & Terminology

Syntax: Is the arrangement of words and phrases to create well-formed sentences in a language.

What are some examples of syntax in everyday life?

Basics of JavaScript syntax:

- **Values**: these can be fixed or variable
  - **Literals** are fixed
    - **Strings:** 'Jane is a great developer'
      " They are wonderful at debugging"
    - **Numbers:** 10, 0.5, 20.6, 10001, etc.
  - **Variables** hold/store values for the program
    - **Declare** variables by naming them like this:
      var x; var height; var max;
    - **Assign** values to variables by using the equals sign like this:
      x = 7; height = 202; max = 'is a good dog';

JavaScript Syntax & Terminology Cont'

More Basics of JavaScript syntax:

- **Mathematical Operators & Expressions:** Using arithmetic operators to create mathematical expressions like:
  - 5*10 = 50 ; x * 10
  - 30/3 = 10 ; 50 / y
  - x > 20 ; y <= 5
  - "Alex has " + y + "computers at home."
  - 15 +x != 20
  - 15 + y == 20
- **Naming convention:** camelCase:
  - There is snake_case for variables
  - There is pipe-case for variables
  - There is UpperCamelCase
  - There is lowerCamelCase - JavaScript developers prefer this format
- **Semicolons:** The great debate
  - NO DEBATE: **End ALL declarations, functions, etc. with a semicolon - best practice!**

;

Data Types

Primitive Data Types *not objects and cannot have methods associated with them*

1. **Numbers** (also NaN, and Infinity): *These are safe. What does that mean?*
2. **Strings:** *Let's quickly go over the uses in JavaScript of "", vs '', vs ``*
3. **Boolean:** *Alogical operator - only true or false, EVER*
4. **Null:** *A special value that means "nothing", "empty" or "value unknown"*
5. **Undefined:** *Simply means that no value has been assigned to that declared variable*

Objects are a special data type

6. **Objects:** *Allows you to store a complex set of data about something vs a single data point (like a variable)*
   We'll talk about Objects more in the next workshop, when we discuss loops and methods in more detail.

Are there more?

Yes! *There are* ***Symbols****, and* ***Typeof****, but we won't need those for today or even next time, so lets save those for now. You can research on your own if you're curious.*

if else statements

Conditional statements and how they work.

Examples

- if car has gas ==> go to store
- else ==> stay home :(

Scope

How does system know when to use each block of code?

We'll talk about scope more in the next workshop, when we discuss loops and methods in more detail.

LET'S CODE!

- Open your editors
- From your editors choose to download the Intro-to-JavaScript folder you dowloaded earlier from here: https://github.com/She-Codes-Now/Intro-to-JavaScript
- Go to the Start Files
- Let's look at the HTML file briefly
- Let's look at the CSS file briefly
- Let's discuss how we'll add JavaScript alerts to make your webpage ***INTERACT*** with your webpage visitor
- Everyone work on your Start Files
- Ask for help from anyone wearing a sheCodesNow badge

More JavaScript learning resources

Tutorials

https://www.codecademy.com/learn/introduction-to-javascript

https://www.khanacademy.org/computing/computer-programming

https://javascript.info/

http://jsforcats.com/

https://www.freecodecamp.org/ (free - sign up/in and choose)

Books

Eloquent JavaScript by Marjin Haverbeke

JavaScript and JQuery: Interactive Front-End Web Development by Jon Duckett