



Mad Libs programming lesson - Jeremy Watt

Purpose

In this activity students will create their very own “Mad Libs” program from scratch, wherein they produce a short story with several names, nouns, verbs, and adjectives that a user will fill in as prompted from the command line of e.g., Python or Java. This exercise requires a bare minimum of programming experience, i.e., students need to know how to a) print statements to the command line b) take in user input from the command line c) understand and use variables and d) understand what a string is and how to add strings, but allows students to be creative with how they deploy these simple ideas.

Overview

Students should first come up with a general 4 – 6 sentence story (the funnier the better) with “fill-in-the-blank” spots for several names, nouns, verbs, and adjectives ala a “Mad Libs” story. We had our students have at least 3 of each category. The students then produce a simple program that

- prints a greeting
- requests words from the command line
- integrates user-inputted words into their story
- finally, prints the full story with user-inputted words placed in the text correctly

Student Outcomes

After completing this lesson students will be able to

- print to the command line
- take in user input from the command line
- understand the process of debugging and, consequently, the value of coding in chunks
- appreciate how simple programming skills can be used to create something fun!

Standards Addressed

CCSS.MATH.CONTENT.7.EE.A.1 – use properties of operations to generate equivalent expressions

CCSS.MATH.CONTENT.7.EE.B.3 – solve real life math problems using algebraic expressions

Time

40 – 50 minutes. We spent 5 – 10 minutes 1) showing the students a demo of what we wanted them to produce b) explaining the exercise and c) showing them the print and input commands in Python. The last 30 – 40 minutes are spent writing, programming, and debugging.

Level

7th grade, computer class

Materials and Tools

Computers with access to any standard programming language e.g., Python, Java, C++.



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Preparation

Some light exposure to coding is helpful for this exercise. However, students need only know what variables and strings are beforehand, as we taught the print and input commands (which goes very quickly).

Prerequisites

See above!

Background

A small amount of computer programming knowledge can go a long way! For this lesson you only need familiarity with a small amount of computer programming, which can be quickly learned by completing the first 3 lessons in Python, Java, or whatever programming language you have access to, on CodeAcademy.com (this takes 10 minutes tops!) From these two lessons understand how to define a “variable”, what a “string” is, how to add “strings”, and that’s it!

Teaching Notes

If you have a programming language in mind to use with your students, we recommend checking out CodeAcademy.com, Code.org, KahnAcademy.com, or any other coding site for free exercises to get your students started with coding. If you’re not sure which language to start with, we recommend Python or Java, and from the sites above you can find plenty of free lessons in these languages. For this lesson in particular, students really only need to understand what a variable is, and how to assign a string value to a variable. If you would like them to have prior exposure to print and user-input commands before starting this lesson, they can easily learn these via exercises from one of the previously mentioned websites.

This was our 7th grade students’ first exposure to debugging code as well – which unsurprisingly is the hardest part of the exercise. Therefore we recommend briefly discussing the value of coding *slowly* and testing small chunks of code one chunk at-a-time, as opposed to writing everything before trying to run the thing, before letting students loose to code.

Assessment

Does the Mad Libs program your student made actually work? If not, to what degree does the code function properly? Points for this lesson can be assigned based on how much of the student written code functions properly.