Final Project Catalog

CS6460

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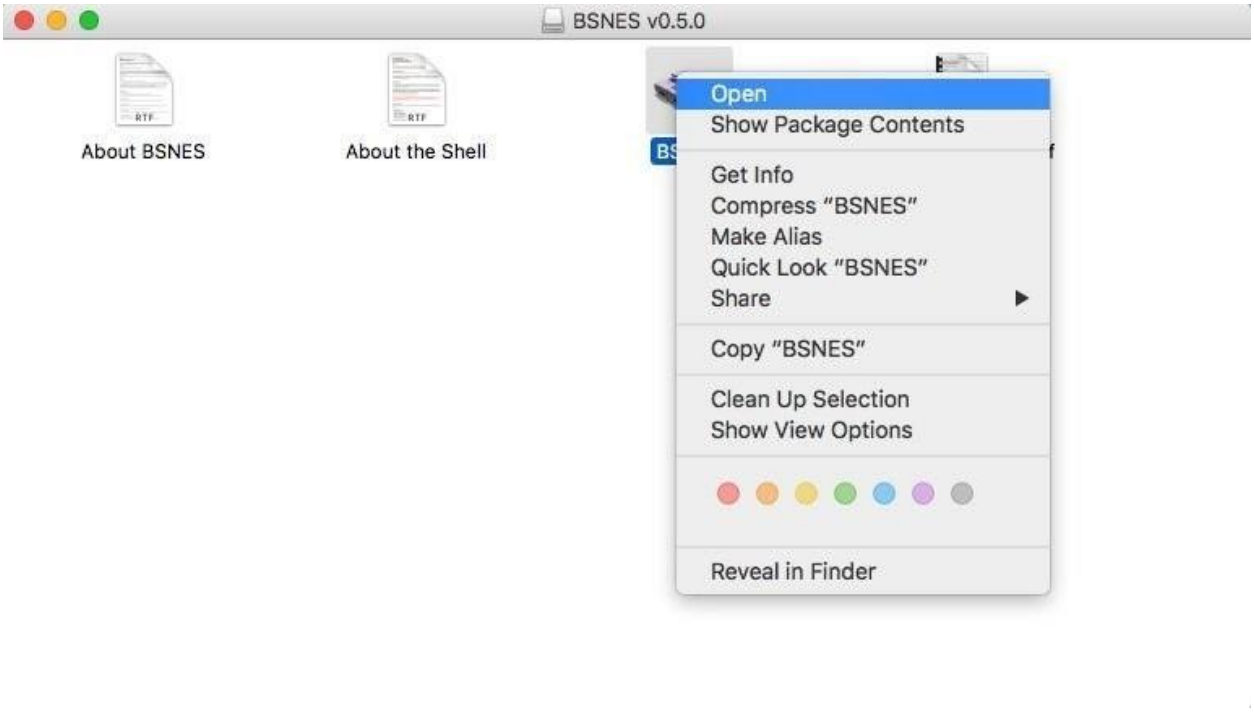
Instructions to Run

I've attached zip files to run the compiled game. It includes EXE file for Windows, app file for MAC, and runnable for Linux. I have no personally tested the MAC and Linux versions. You usually need admin privileges to run the game.

To play on MAC, you need to find it in the Finder and Ctrl+Click then click Open. See sample image below.



Instructions to Compile Code

You need Unity (with Windows/MAC/Linux compiler options), Visual Studios (C#, ASP.NET 4.6.1), and IronPython 2.7 installed.

Source Code

I've attached a zip of the source code. Additionally, here is the link for the source code on GitHub:

https://github.com/mohsalim/EdTechGame

BGD Document

This is the main document I made before developing my game for balanced game design (BCD).

Content	Task	Model
Learn basic form of outputting to console.	Fix spelling error in "Hello Wrld" program. Then have it to say right after: "Goodbye World".	**Correct**: Player learned to write two lines of text to the console. **Incorrect**: 1. ***No change within quotes.*** Player does not understand where the actual text is. 2. ***Only one line printed out.*** Player replaced original string with new string instead of printing one after the other. 3. ***Text has incorrect casing.*** Player did not understand the strict nature of programming (such as case-sensitive strings).
Variables	Four variables will appear on screen: an integer, a double, a string, and a Boolean. Print the four variables one line after the other. Create four more variables (one of each type with a specific value), then print those. Change the value of the integer variable from the very top, then print it out.	**Correct**: Player learned how to initialize, change, and print four different primitive variable types. **Incorrect**: 1. ***Variables did not all print.*** Player does not understand that you can pass a variable to System.Console.Writeline. 2. ***Incorrect types for the four variables created.*** Player does not understand the strict typing requirement when declaring variables. 3. ***Incorrect value for integer.*** Player does not understand that you can re-initialize a variable after it's declaration and initial initialization.

Arithmetic	Summation for two variables will appear. Change this to multiplication and print. Subtract a number in-line (without creating a variable) during the multiplication and print. Do the subtraction first before multiplying using parenthesis and print.	**Correct**: Player learned how to do arithmetic while considering order of operations. **Incorrect**: 1. ***Initial output isn't multiplied.*** Player does not know the arithmetic character for multiplying or does not know where to change the arithmetic. 2. ***Second output has an unnecessary variable.*** Player does not know how to use value in-line. 3. ***Second variable is incorrect.*** Player does not know how to subtract or does not know how to handle two operations. 4. ***Third output is incorrect.*** Player does not understand how to use parenthesis to enforce precedence.
Strings	Two string variables will appear for a first name and last name. Create a full name by "adding" (concatting) the two strings and print. Now add a space between the two strings (full name with correct format) and print. Use built in methods: Substring, Replace, and IndexOf. Print results.	**Correct**: Player learned how to concat strings and use built-in string methods. **Incorrect**: 1. ***First or second output is not concatted.*** Player did not use + operator correctly or there is a confusion with the usage of + being both concat and add. 2. ***Second output is missing space.*** Player does not know how to concat a string in line. 3. ***Third output is incorrect.*** Player does not know functions since this is the first exposure to it or does not understand that C# is zero-indexed.

Arrays	Given an integer array with initialized values, variable with length property, variable with index. Print these. Change a value at a certain index and print. Initialize an empty array. Print length. Print at a certain index. Change at a certain index and print.	**Correct**: Player has learned two ways to initialize arrays, index arrays, and check the length property. **Incorrect**: 1. ***Initial output is not printed.*** Player has forgotten or not correctly learned to write lines to console. 2. ***Array index value is not correct after change.*** Player is has not gotten familiar with the indexing syntax. 3. ***Array index value is correct but in the wrong index.*** Player has forgotten C# is zero-indexed. 4. ***Length output is incorrect.*** Player is familiar with methods but not properties. May have added parenthesis.
For Loops	Given a for loop, print the number at each iteration. Make a second loop that is incrementing. Make a third loop that is decrementing.	**Correct**: Player has learned to use for loops that go in incrementing or decrementing order. **Incorrect**: 1. ***All elements do not print.*** Player has not place print statement inside the braces of the loop. 2. ***Loop never ends.*** Player has put a logical expression that causes an infinite loop. 3. ***Incrementing loop does not increment.*** Player does not understand the ++ operator. 4. ***Decrementing loop does not decrement.*** Player does not understand – operator.

Methods	Given a method that is passed an integer array and returns the product the first two elements. Print the result. Change method to loop entire array and add each number. Then append the returned value to a string and print.	**Correct**: Player has learned to write a method and been tested on previous tasks. **Incorrect**: 1. ***First output is invalid.*** Player does not understand the return concept of a method. 2. ***Entire array in not looped.*** Failed to master for loops and arrays. 3. ***Summation is incorrect.*** Failed to master variables and arithmetic. 4. ***Printed string is incorrect.*** Failed to master strings.

Story Document

Additional document to map story to lessons. This helped facilitated and organize the immersion aspect of I-Feature.

Scene	Plot	Lessons
S1	Your classmate, Broseph the Brogrammer, needs help on programming homework.	Console output, variables, and arithmetic.
S2	Professor Gevabad Graids hands out a difficult assignment. He expects a printed out copy of the assignment. Due to your part time job, you won't be able to hand in the assignment. Broseph insists to drop it off for you.	Strings and arrays.
S3	You receive a 0. When you ask Professor Gevabad Graids, he says that the TA never received your assignment. Broseph received a 100%. When you ask Broseph about what happened, Broseph says he doesn't remember offering to drop off your assignment for you. TA Ova Wurkt offers an extra credit assignment as a chance to make up for the 0.	For loops.
S4	Ova is impressed by your work. You later get a message from @n0n_h@ck3r asking if you want a chance to get revenge on Broseph. If you can prove to @non_h@ck3r that you are a decent programmer, then he/she will help you get back at Broseph.	Methods and combining previous lessons.