Assignment 3 - Morse Code (Déjà Vu?)

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Background

You're not alone in the aftermath! Now that you have a program to help send out messages to the other atomic-age survivors, it's time to start decoding the messages that are being sent to you from the other Vaults!

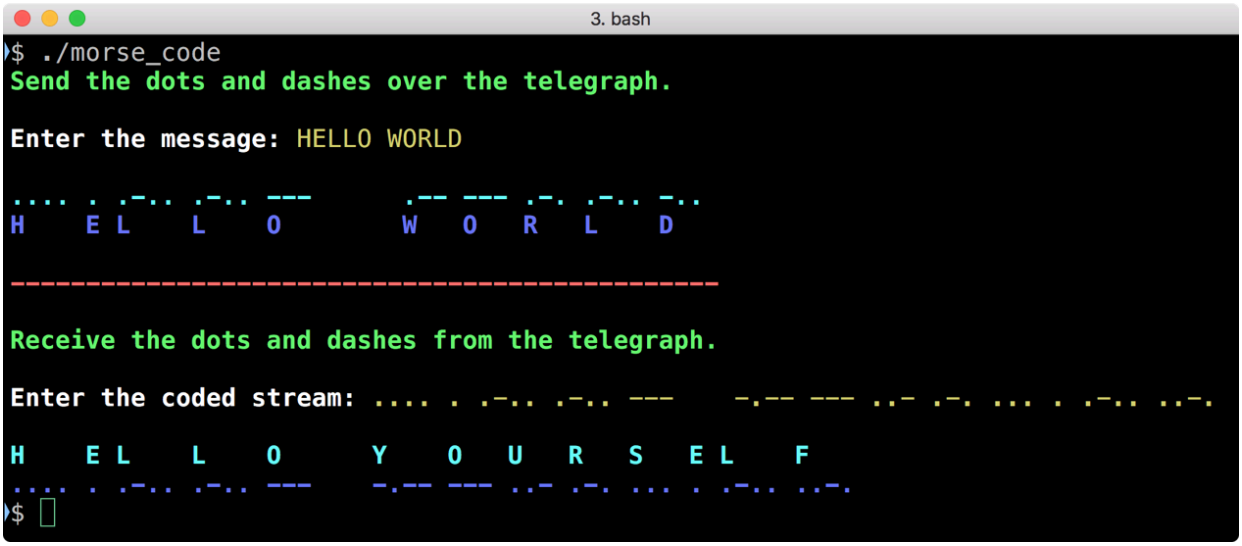

Figure 1 - Solution Example

Task

1. Change your program to be more efficient by using functions, structs and/or better logic.
2. Add the ability to convert a stream of Morse Code dots and dashes into the corresponding words and letters.
3. The decoded text should be displayed on the screen with the corresponding Morse Code below each letter.
4. Your program should be able to tell the difference between letters and words by the spacing of the incoming Morse Code. Letters will be separated by single spaces and words will be separated by more than one space.
5. The program only needs to convert the **upper-case** alphabet; lower-case letters, digits, punctuation and other characters don't need to be converted and you can assume they won't need to be decoded.

Notes

- Figure 1 is an example of what your program could look like when completed.
- Submit the completed assignment to the appropriate BrightSpace dropbox **before** the due date.
- Refer to the attached rubric to ensure you are completing all the required elements of the assignment.

Criteria	Unsatisfactory	Acceptable	Good	Exceptional	Marks
	0	1	2	3	
Input & Output	- the wrong information was selected for input or nothing was input - the output was unclear and currency was not formatted	- some information was correctly input - all information is output, but it needs to be formatted better	- input is handled - output is clear and appealing, but a small change would improve it	- user input is correctly handled - output to user is very clear and visual appealing	
Functions and Structs	- no functions were used - too few functions were used - too many functions used incorrectly - structs were used incorrectly	- a few functions/ structs were correctly added, but more were needed to minimize code and increase code reusability - some errors exist	- some functions/ structs were correctly added to minimize code and increase code reusability - a couple of errors exist	- structs/functions were correctly added to minimize code and to increase code reusability - no errors exist	
Morse Code	- characters are not converted correctly to/from Morse Code - too many errors in conversion exist	- some characters are converted correctly to/from Morse Code - a few errors exist	- most characters are converted correctly to/from Morse Code - a couple of errors exist	- all characters were correctly converted to and from Morse Code - words are separated by extra spacing	x2
Letter Output	- letters were not output with the matching Morse Code	- some letters were correctly output with the right Morse Code	- most letters were correctly output with the right Morse Code	- each letter is correctly output with its corresponding Morse Code	
Comments and Variables	- little to no comments used - all variables use the wrong data type - very poor names were used - no naming convention was used	- comments are used, some are meaningful and easily understood - some files and functions have headers - some data types were chosen well - a few variables were well-named - a naming convention was not well used	- comments are used extensively, most are meaningful and easily understood - most files/ functions have headers - most data types were chosen well - some variables were well-named - naming convention was mostly followed	- not over/under commented - comments are meaningful and easily understood - files/functions have headers - program is self-documenting - most appropriate data types used - well-named - uses appropriate naming conventions	
Formatting	- was not indented - there were too many deviations in indentation or placement of braces - very difficult to read	- source code formatting was fairly consistent, but contained some inconsistency with whitespace, brackets, etc	- source code formatting was very consistent with respect to whitespace, brace brackets, parentheses, etc	- standard indentation is used throughout without deviation - placement of braces consistent - easy to read	———
				Total	**21**