

Assignment #3 Design/Testing

Understanding the Problem

This problem is asking me to take my program that I created for my #2 assignment and divide the program in appropriate functions that are each ten lines or less, including the main function. While also taking into consideration the correct parameters, arguments, and other characteristics that apply to creating functions of a program.

Devising a Plan/Design

Create a `bin_to_dec()` function.

Create a for loop within another for loop

Print resulting string of characters

Create a `dec_to_bin()` function.

Create a for loop

Print resulting string of binary values

Create a `get_user_inpu()` function.

Prompt user for a string of characters

Prompt user for a string of binary values

Create a `check_user_inpu()` function.

Create an if statement within a for loop

Apply the correct organization of the created functions into the main function.

Testing

While putting this program together, external sources I used in order to help me to create this program was the textbook for the course, what was covered in the lecture, documentation from the internet, and my peers. For example, learning more about how to set parameters and arguments in a program during the lectures greatly helped me create the program for this assignment.

The only imperfection of my create program is that it will re-prompt the user for a valid input even though the user did input a valid input in the first place. I could not understand why before the assignment was due, so the fault is still a part of the resulting program for this assignment.

Values Inputted	Expected	Actual Meet Expected
character string = hi (string of characters)	To print out the correct corresponding binary values for the each inputted character of the inputted string.	Yes
binary string = 0110100001101001 (string of binary numbers)	To print out the correct corresponding characters for each set of binary values inputted of the inputted string of binary values.	Yes

binary string = as (incorrect input)	To re-prompt the user for a valid input.	Yes
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Design for Next Assignment:

Define parameters in the main function

Create appropriate algorithm for error handling

Test Plan:

Input the correct values/characters after the program has been created, checking that each and every output is correct depending on its given input, making sure that the program works correctly when the user inputs the correct inputs. Then I will check if the program can also handle user error and/or see how the program does handle it by inputting incorrect inputs based on what the program prompts the user for.