Rhea Mae Edwards

Assignment #1 Design/Testing

Understanding the Problem

This problem is asking me to have a program that first prints out values from the climits library by using macros of minimums and maximums of signed and unsinged integers, shorts, and longs. Then create variables that contain the calculations that produce those exact values and then print those onto the screen, making sure that the values are equal. Then I have to add one to each of the maximum values and state what I notice with those new calculated values. Then I have to prompt the user for a character, and then have the program print out that inputted character's ASCII values as a decimal, binary, and hexadecimal.

Devising a Plan/Design

Print out marcos

Create variables with calculations

Print out those variable to the macros

Print out the maximums with the addition of one

Print out observations

Prompt user for a character

Print out the character's decimal

Calculate the character's binary

Print out the character's calculated binary

Print out the character's hexadecimal

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 and what was covered in the lecture; which both dramatically helped me in completing this program. For example, most of the calculations inputted into the program were calculated during the lecture, which helped me apply the calculations in a way that worked with what the assignment was asking me to create. Also terminology and information needed to make sense and complete this program was provided by the textbook for the course.

Values Inputted	Expected	Actual Meet Expected
character = c (single character)	To print out the correct corresponding values for the inputted character.	Yes
character = cplus (multiple characters)	To only print out the first inputted character's correct corresponding values- ignoring the following characters overall.	Yes

Design for Next Assignment:

Prompt the user for a multiple character

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Print the binary ASCII value for each character creating a string of ones and zeros

Prompt the user for a binary string of ASCII values

Print an error message if the user did not input only ones and zeros

Print the characters that correspond to the given values

Test Plan: When asked for a string of ASCII values in a binary form, input a character that is not a one or zero to see if the program will catch the error. Also make sure that the program first outputs the inputted string of characters and its ASCII values in base 2, and then outputs the string of characters at the end that correspond to the last input string.