Aleeza Iftikhar - Lab 8 (Post-Lab)

PART 1:

Step 4) Set a breakpoint at the line of statement “while (num > 0)”. *Question: Write your command.*

break 5

Text

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Run the program until the first breakpoint. *Question: Write your command.*

r

Text

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Step 6) Run the while loop step by step using command **n** multiple times. (gdb)n

*Question: check the value of rev\_num and num after each iteration and fill in the table below.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| iterations | 1st | 2nd | 3rd | 4th |
| num | 1125 | 1125 | 112 | 112 |
| rev\_num | 0 | 5 | 5 | 5 |

5th: num = 112 rev\_num=52. 6th: num = 11 rev\_num=52

7th: num = 11 rev\_num=52. 8th: num = 11 rev\_num=521

9th: num = 1 rev\_num=521. 10th: num = 1 rev\_num=521

11th: num = 1 rev\_num=5211. 12th: num = 0 rev\_num=5211

Step 8) *Question: Now can you tell what the function foo does?*

Function *foo* takes num as parameter and returns value of rev\_num, as in main class we passed num=1125, and after going through function’s while loop (12 iterations, as shown in above screenshot), this number reverses and finally returns rev\_num=5211.

PART 2:

*Question: Please write down the line numbers containing the errors and show how to correct them.*

(Note: you do not need to write down the commands you issued in **gdb**.)

Note: Line numbers changed after I corrected my code, below are line numbers from given assignment code (before correction).

* #include <string.h> //to calculate string length
* Line 5 = initialize letters.
* Line 6 = initialize words.
* Line 7 = declare string (character array).
* Line 9 = gets function to input string, after this line.
* Line 11 = while (i < strlen(character)), also initialize i before while loop
* Line 12 = character[i] instead of character in if condition
* Line 13 = eliminate this line
* Line 14 = do letters++ instead of words++ inside if
* Line 15 = eliminate this line
* Line 17 = eliminate this line
* Line 19 = eliminate this line and do words++ inside else
* Line 22 = declared and initialized average variable before this line after exiting while loop (float average = (float)letters/words;), then just printed average inside printf.

Text

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