Hakan Gunerli Lab 8 Sys

Part 1:

Question 4 : b 5
Question 4: run
Question 6:

	1st	2nd	3rd	4th
num	112	11	1	0
rev_num	5	52	521	5211

Question 8: foo reverses a given number. 1152 becomes 5211 at the end of the function.

Proof:

```
Reading symbols from /home/hgunerli1/lab8sys/q1...done.
(gdb) list 1
1       #include <stdio.h>
2       int foo(int num)
3       {
4       int rev_num = 0;
5       while (num > 0)
6       {
7       rev_num = rev_num*10 + num%10;
8        num = num/10;
9       }
10      return rev_num;
(gdb) b 5
Breakpoint 1 at 0x40053b: file q1.c, line 5.
(gdb) run
Starting program: /home/hgunerli1/lab8sys/q1
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib64/libthread_db.so.1".

Breakpoint 1, foo (num=1125) at q1.c:5
5       while (num > 0)
Missing separate debuginfos, use: debuginfo-install glibc-2.17-317.el7.x86_64
(gdb) display rev_num
1: rev_num = 0
(gdb) display num
2: num = 1125
(gdb) n
7       rev_num = rev_num*10 + num%10;
2: num = 1125
1: rev_num = 0
(gdb) n
8        num = num/10;
2: num = 1125
1: rev_num = 5
(gdb) n
5       while (num > 0)
2: num = 112
1: rev_num = 5
(gdb) n
7       rev_num = rev_num*10 + num%10;
2: num = 112
1: rev_num = 5
(gdb) n
8        num = num/10;
2: num = 112
1: rev_num = 52
(gdb) q
A debugging session is active.

        Inferior 1 [process 19895] will be killed.

Quit anyway? (y or n) y
```

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Part 2:

```
q2.c:1:19: warning: extra tokens at end of #include directive [enabled by default]
 #include <stdio.h>int main() {
                  ^
q2.c: In function 'main':
q2.c:10:1: error: stray '\' in program
 while(( character=getchar()) != \n){
 ^
q2.c:10:34: error: 'n' undeclared (first use in this function)
 while(( character=getchar()) != \n){
                                 ^
q2.c:10:34: note: each undeclared identifier is reported only once for each function it appears in
q2.c:12:5: error: 'space' undeclared (first use in this function)
 if(!space){
    ^
[hgunerli1@gsuad.gsu.edu@snowball lab8sys]$
```

Error in lines 10, 12 and 20;

Line 10: while((character=getchar()) != '\n')

Line no variable named spaces, you need to say int spaces; before line 12

Line 20: the value that is divided needs to be stored in some way. This case, double seems the most appropriate
printf("Average word length : %.1f", (double)letters/words);

```
[hgunerli1@gsuad.gsu.edu@snowball lab8sys]$ cat -n q2.c
     1  #include <stdio.h>int main() {
     2
     3  int main(){
     4  int letters;
     5  int words;
     6  char character;
     7
     8  printf("Enter a sentence: ");
     9
    10  while(( character=getchar()) != \n){
    11  if (character != ' '){
    12  if(!space){
    13  words++;
    14  space=1;
    15  }
    16  letters++;
    17  }else
    18  space=0;
    19  }
    20  printf("average word length : %.1f", letters/words);
    21  return 0;
    22  }
[hgunerli1@gsuad.gsu.edu@snowball lab8sys]$
```