

PART 1

4. While loop is at line number 6. So to set a break point we use:
"break q1.c:6"

6.

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

8. The foo function returns the reverse of the number that is passed to it as an argument. In our program the number is 1125 and foo function returns 5211.

PART 2

The screenshot shows the OnlineGDB web interface. The code editor displays a C program with the following content:

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int letters;
6     int words;
7     char character;
8
9     printf("Enter a Sentence: ");
10
11     while((character=getchar())!=\n)
12     {
13         if(character != ' ')
14         {
15             if(!space)
16             {
17                 words++;
18             }
19             character = getchar();
20         }
21     }
22
23     printf("Average word length : %.1f", letters/words);
24 }
```

The compiler output shows the following errors and warnings:

```
Compilation failed due to following error(s).
main.c:11:34: error: stray '\n' in program
11 | while((character=getchar())!=\n)
   |                               ^
main.c:11:35: error: 'n' undeclared (first use in this function)
11 | while((character=getchar())!=\n)
   |                               ^
main.c:11:35: note: each undeclared identifier is reported only once for each function it appears in
main.c:15:17: error: 'space' undeclared (first use in this function)
15 |         if(!space)
   |               ^
main.c:25:38: warning: format '%f' expects argument of type 'double', but argument 2 has type 'int' [-Wformat=]
25 |     printf("Average word length : %.1f", letters/words);
   |                               ^~~~~~
   |                               |
   |                          double  int
   |                               |
   |                          %.1d
```

Errors in the program:

Line 12: Missing single inverted commas around \n.

Line 6: The variable *space* has not been initialized.

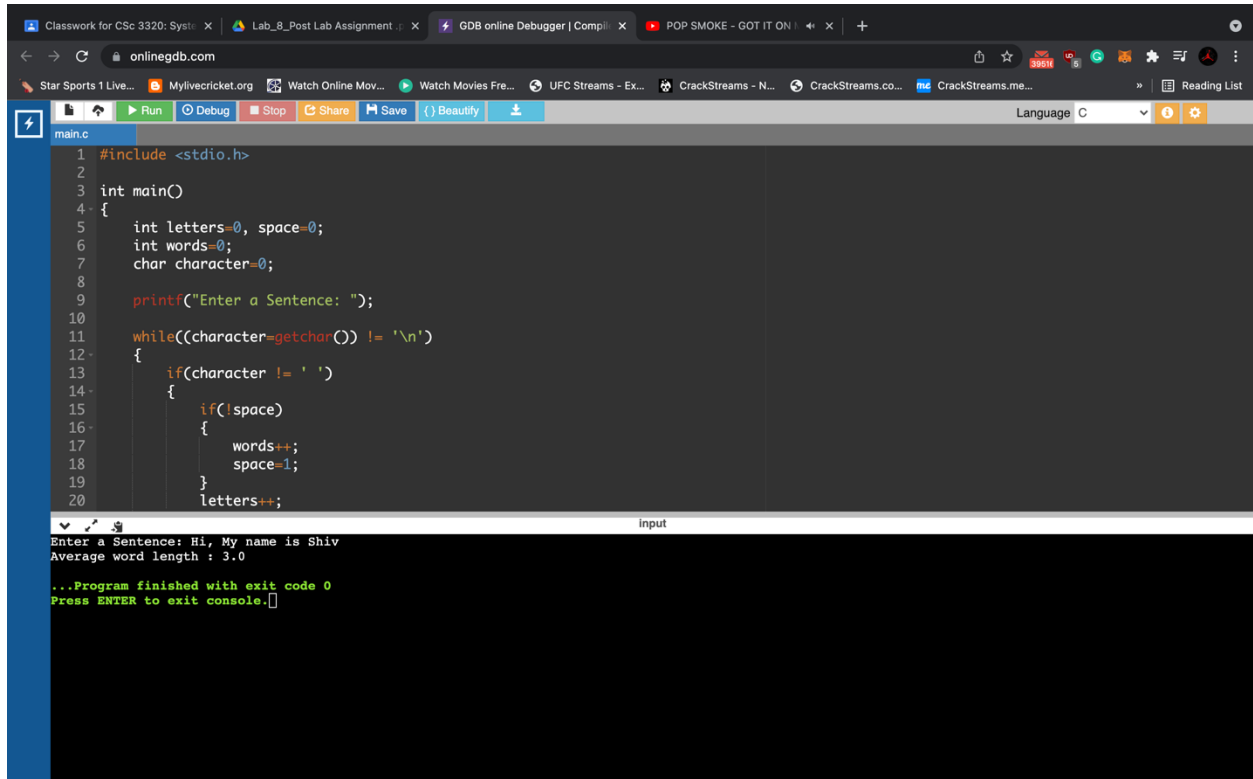
Line 26: Type mismatch.

Corrected program:

Line 12: Add single inverted commas around `'\n'`.

Line 6: Declare and initialize the variable *space* to correct the program.

Line 26: Explicitly cast the type in the printf statement.



The screenshot shows a web browser with multiple tabs, including 'onlinegdb.com'. The main content area displays a C program in a dark-themed editor. The program is as follows:

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int letters=0, space=0;
6     int words=0;
7     char character=0;
8
9     printf("Enter a Sentence: ");
10
11     while((character=getchar()) != '\n')
12     {
13         if(character != ' ')
14         {
15             if(!space)
16             {
17                 words++;
18                 space=1;
19             }
20             letters++;
21         }
22     }
23
24     printf("Average word length : %.1f\n", (float)letters/words);
25
26     return 0;
27 }
```

Below the code editor, the program's output is shown in a console window. It displays the prompt 'Enter a Sentence: ', the user input 'Hi, My name is Shiv', and the calculated 'Average word length : 3.0'. The console also shows the program finishing with exit code 0 and a prompt to press ENTER to exit.