# Challenge: lesson

### Challenge Description:

It's time to learn some basic things about binaries and basic c. Answer some questions to get the flag.

#### Context:

- This is a questionnaire about the C programming language, you get given a .C program with some functions and a compiled version and you basically need to find information about the program and answer the question according to the questionnaire.
- The questions will also give little hint and what tools you can use to find the answer but isnt always direct with it.

#### Notes:

- Tools:
- Cli Terminal A Terminal to Netcat into the server to answer the questions you just need to type.

## Flag:

- Start the instance, and then Netcat into the server with the IP:PORT. First look at the terminal I got when I first connected seems to be a questionnaire.
- The answers to the Questions goes as:

```
>> 64-bit

* * * * * * * * * * * * * *

* Correct * *

* * * * * * * * * * * *
```

#### The Code in question for this is:

```
#include <stdio.h>
void under construction() {
 printf("This is under development\n");
void print msg(char *user) {
 char formatter[0x20];
 strncpy(formatter, user, 5);
  for (size t i = 0; i < 5; i++) formatter[i] =
tolower(formatter[i]);
 printf(strncmp(formatter, "admin", 5) == 0 ? "\nWelcome
int main(int argc, char **argv){
 char name[0x20] = \{0\};
 unsigned long x, y;
 printf("Enter your name: ");
 scanf("%s", name);
 print msg(name);
 return 0;
```

```
HINT: This is the buffer \longrightarrow char name[0×20] = {0}; \odot
               *] Question number 0×4:
               >> 0×20
              [*] Question number 0×5:
              Which custom function is never called? (e.g. vuln())
              >> under_construction
                      Correct
[*] Question number 0×6:
What is the name of the standard function that could trigger a Buffer Overflow? (e.g. fprintf())
      Correct
              [*] Question number 0×7:
              Insert 30, then 39, then 40 'A's in the program and see the output.
              After how many bytes a Segmentation Fault occurs (in hex or decimal)?
                      Correct
```

```
[*] Question number 0×8:
What is the address of 'under_construction()' in hex? (e.g. 0×401337)
>> 0×4011d6

* * * * * * * * * * * * * * * *

* Correct *

* birdo@DESKTOP-0ENQDDA: /mnt/d/HackTBox/Lessom/challenge
(gdb) p under_construction
$1 = {<text variable, no debug info>} 0x4011d6 <under_construction>
(gdb)
Great job! It's high time
```

Great job! It's high time
HTB{w4rm35t\_w4rmup\_3v3r}

Then we get the flag: HTB{w4rm35t\_w4rmup\_3v3r}