

Homework 3: implementing a 64-bit Buffer Overflow Exploit

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<https://xinliulab.github.io/cis5370.html>
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Homework 3

Objective: In our course, we have used a 64-bit `stack.c` file to demonstrate stack-based vulnerabilities in a 64-bit environment. However, the textbook provides a 32-bit exploit script (`exploit.py`). Your task is to convert this 32-bit exploit into a 64-bit version.

Task:

- 1 Modify the exploit to work in a 64-bit Linux environment.
- 2 Consider differences between 32-bit and 64-bit registers.
- 3 Adjust the buffer overflow offset for the 64-bit architecture.
- 4 Run the exploit in your 64-bit Linux virtual machine.

Submission Requirements:

- Submit the modified 64-bit exploit code.
- Provide a report including:
 - Screenshots demonstrating the exploit execution (e.g., successfully gaining a shell).
 - Explanation of modifications and key differences from the 32-bit version.