



Level 0x09

Bugs



Topics

- Events
- Shirts



Code Quest



- Saturday, February 24
- 2.5 hours. Free breakfast and lunch
- Teams are 2-3 students
 - 1 laptop per person
 - Novice division
 - Advanced division (1 programmer with 1 year programming exp)
- High school students, ages 13-18 years old
- Up to 4 teams per school



Teams

- Wildcat Coders 1 - Novice
 - Eshan V
 - Saaketh K
 - Shoaib A
- Wildcat Coders 2 - Advanced
 - Justin T
 - Dylan G
 - Sam S
- Wildcat Coders 3 - Novice
 - Gabriella Z
 - Dominic M
 - Avery M
- Wildcat Coders 4 - Advanced
 - Jay J
 - Parker W
 - Zachary W



Non US Citizens

- Greencard Holders
 - Greencard Number
 - Greencard Expiration
 - Greencard Image
- Passport
 - Passport Number
 - Passport Country
 - Birth Country
 - Passport Expiration
 - Passport Image

Upcoming Events



LOCKHEED MARTIN
CYBERQUEST®
COMPETITION

- Lockheed Martin Cyber Quest
 - Saturday, March 23rd
 - 3 hours. Free Breakfast and Lunch
 - Teams are 3-5 students
 - 3 laptops per team
 - No team limit given
- Pico CTF (Carnegie Mellon)
 - March 12-26
 - Online CTF



What About the Challenges?

Lockheed Martin CYBERQUEST® challenges are

Ben Heck

- Computer Engineer
- Console Modder
 - Miniaturized Gaming Consoles
 - Accessibility Control Mods
- Element 14 Show on YouTube
 - Electronics
 - Reverse Engineering
 - 3-D printing and design





Command Injection

- Taking user string input and sending to an call that will cause additional unintended behavior
 - system()
 - SQL Query Injection

```
#include <stdio.h>
#include <unistd.h>

int main(int argc, char **argv) {
    char cat[] = "cat ";
    char *command;
    size_t commandLength;

    commandLength = strlen(cat) + strlen(argv[1]) + 1;
    command = (char *) malloc(commandLength);
    strncpy(command, cat, commandLength);
    strncat(command, argv[1], (commandLength - strlen(cat)) );

    system(command);
    return (0);
}
```




Command Injection

- Multiple languages vulnerable
- Multiple functions can be dangerous
- Mitigation Difficult
- [GitHub Write Up / Notes](#)



Stack Buffer Overflow

See github writeup:

https://github.com/mwales/WildcatCSClub/tree/main/vulnerabilities/stack_buffer_overflow



Links

- <https://alchetron.com/Benjamin-Heckendorn>
- https://github.com/mwales/WildcatCSClub/tree/main/vulnerabilities/command_injection
- https://github.com/mwales/WildcatCSClub/tree/main/vulnerabilities/stack_buffer_overflow