

Security Injections @ Towson

Module: Buffer Overflow - CS0 C++

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Discussion Questions

Describe the buffer overflow problem.

Buffer Overflow is a problem that occurs when data is written outside of the allocated range currently set for an object

How could you prevent a buffer overflow from occurring in your program?

You can prevent buffer overflow from occurring in a program by having a function to check if a value is within the allocated range in a object .

Give three real life examples of buffer overflow attacks (research on the web).

NVIDIA SHIELD TV
macOS Catalina
Morris Internet Worm
Libgcrypt Vulnerability
Linux Detected Vulnerability

What can result from a buffer overflow ?

In cpp unexpected things happen when buffer overflow happens . In java going out of bounds causes an error .

Provide three different examples of code that contains buffer overflows.

```
int arr[0];
arr[4092] = 1;

char x[0] = "13";

int a[10];

for (int i = 0; i < 10; ++i) {
    a[i+i] = i;

    cout << a[i] << " ";
}
```