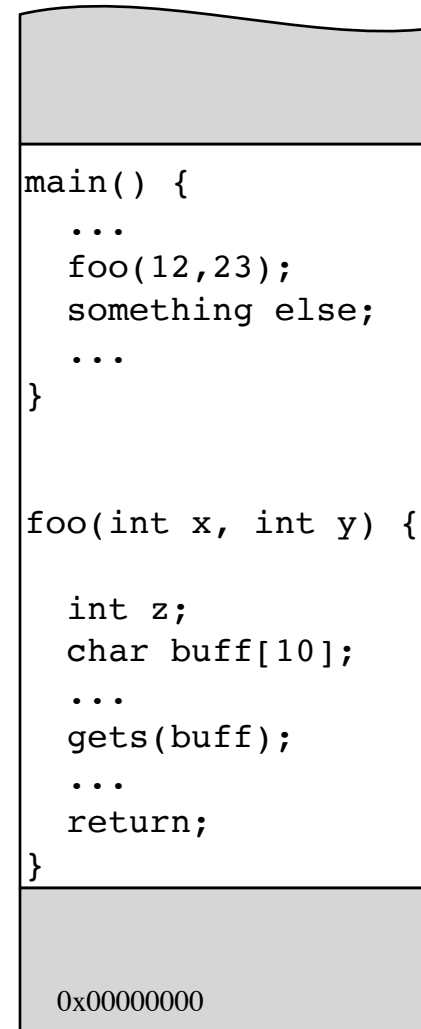
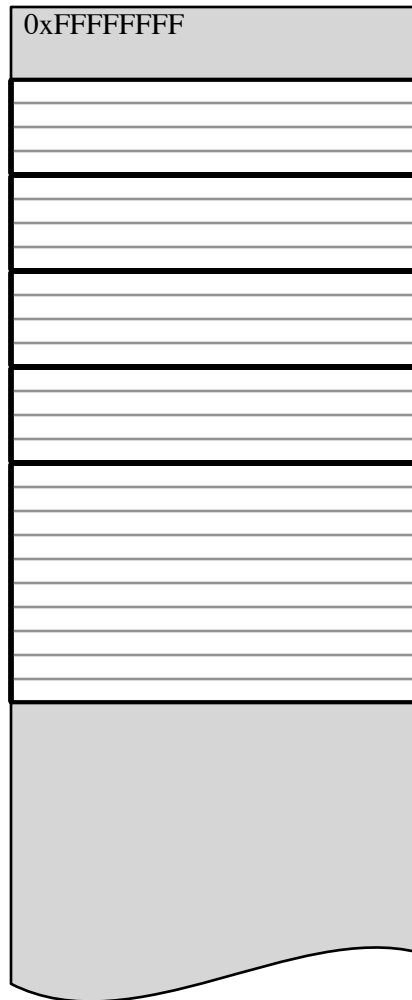


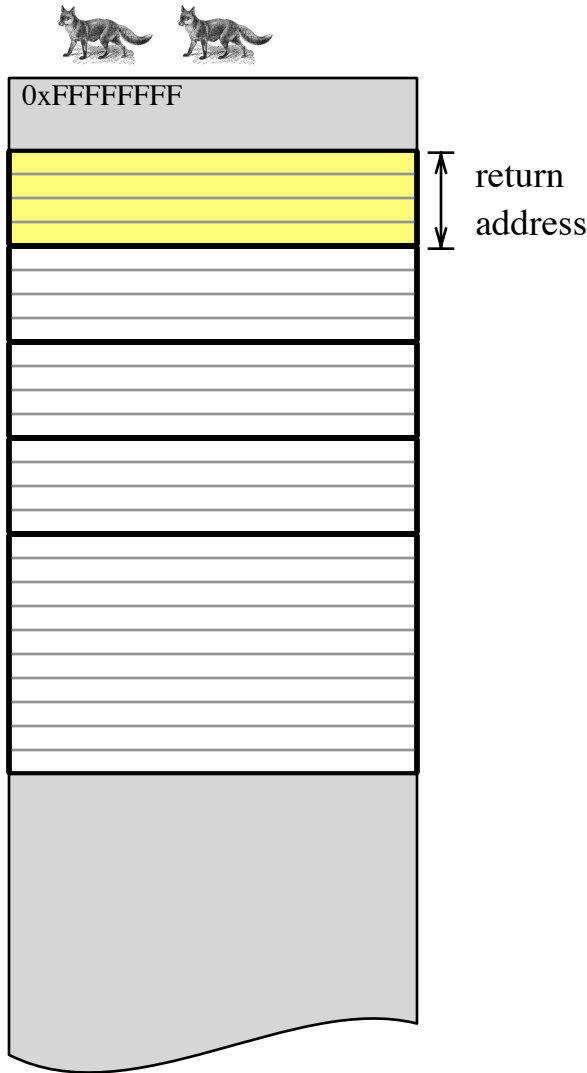
Buffer Overflow!

- Thanks to Sean Smith (Dartmouth)

Buffer Overflow

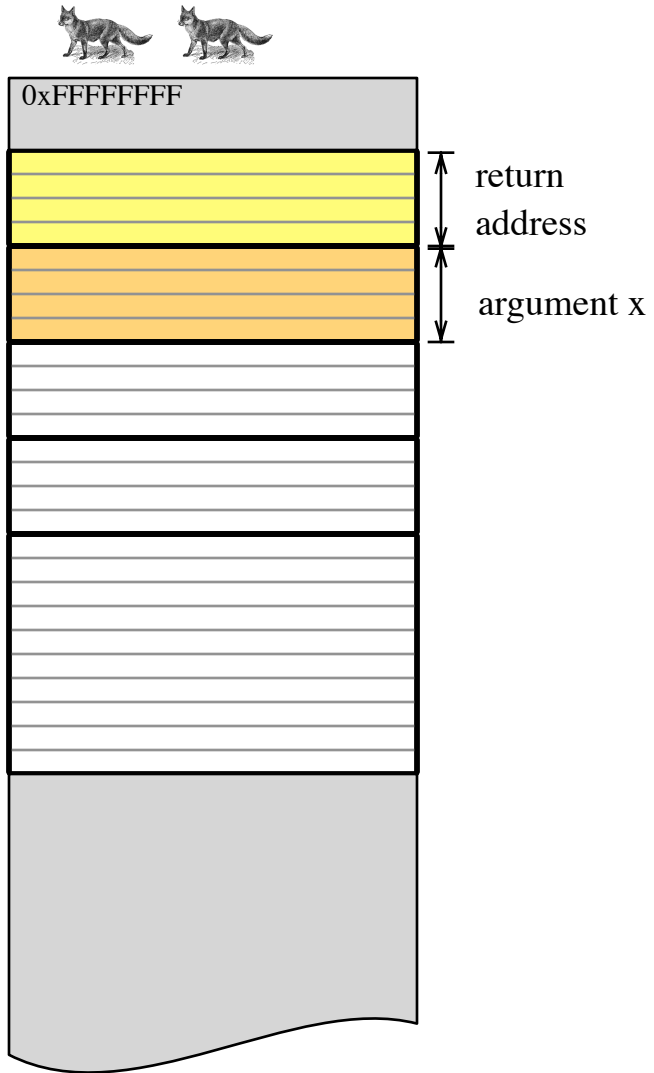


Buffer Overflow



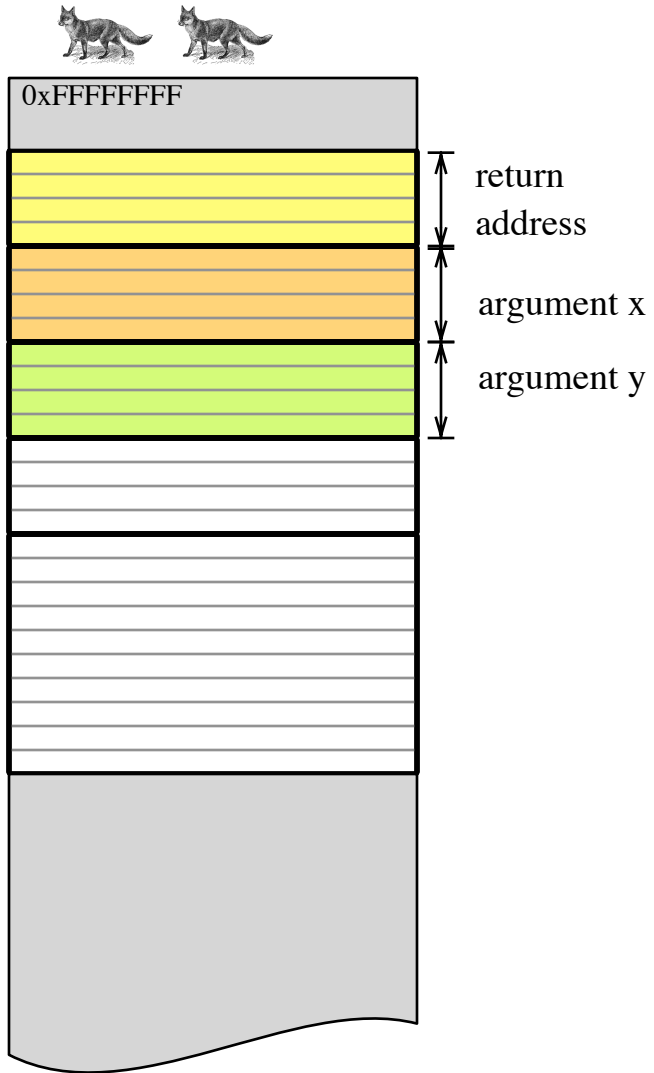
```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}  
  
0x00000000
```

Buffer Overflow



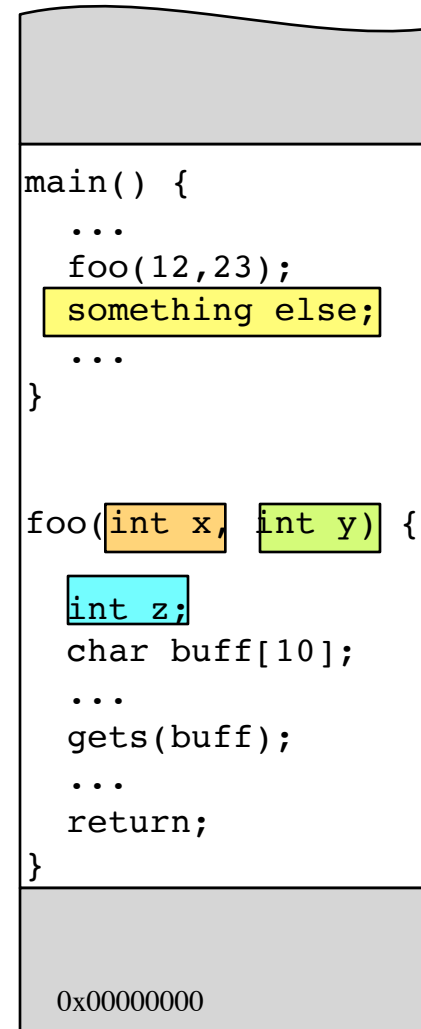
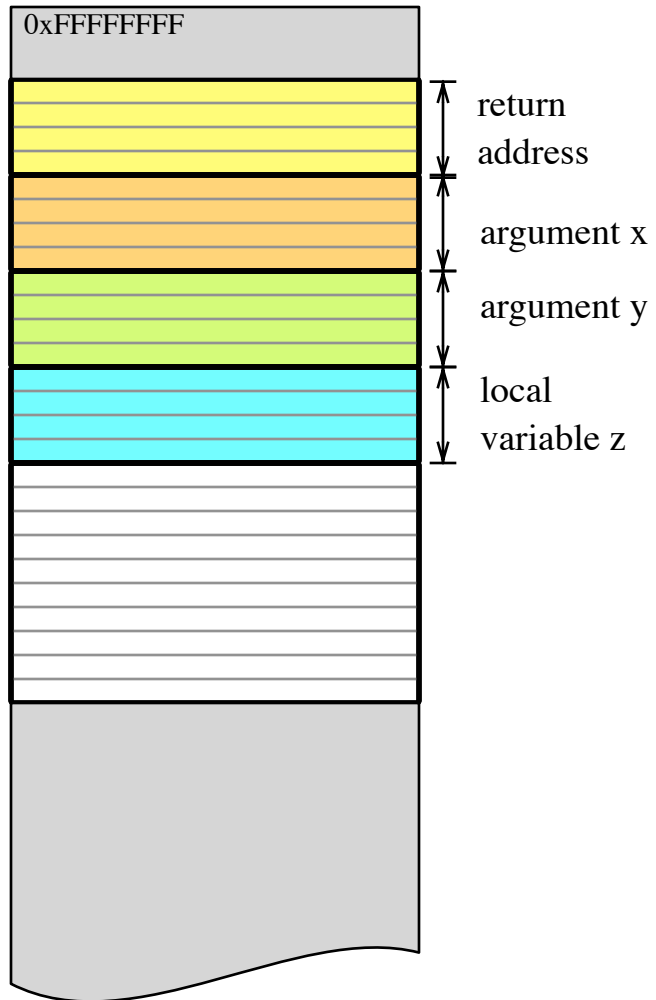
```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}  
  
0x00000000
```

Buffer Overflow

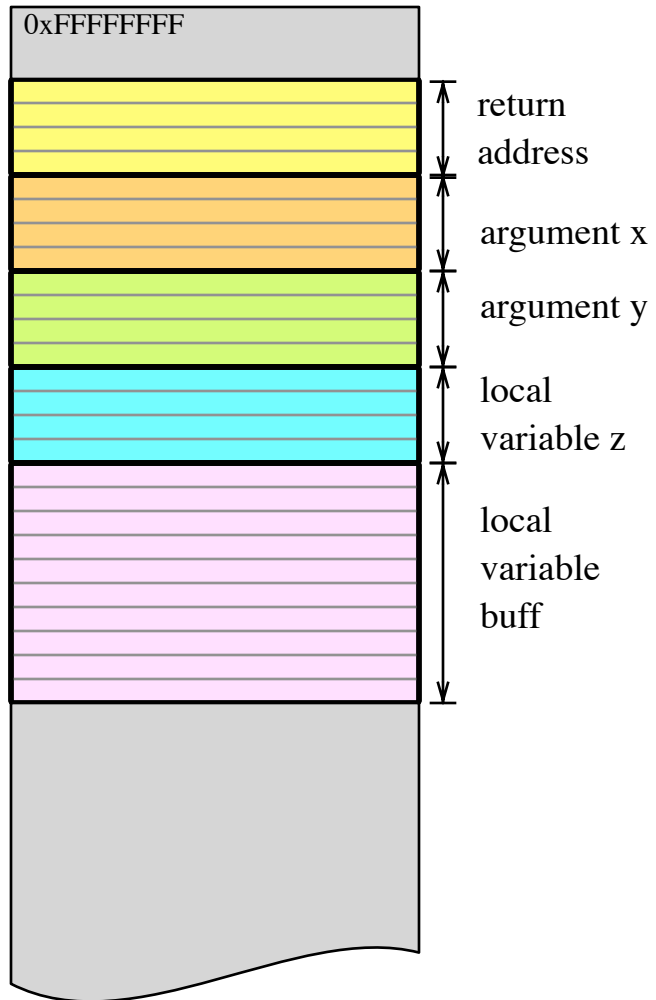


```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}  
  
0x00000000
```

Buffer Overflow



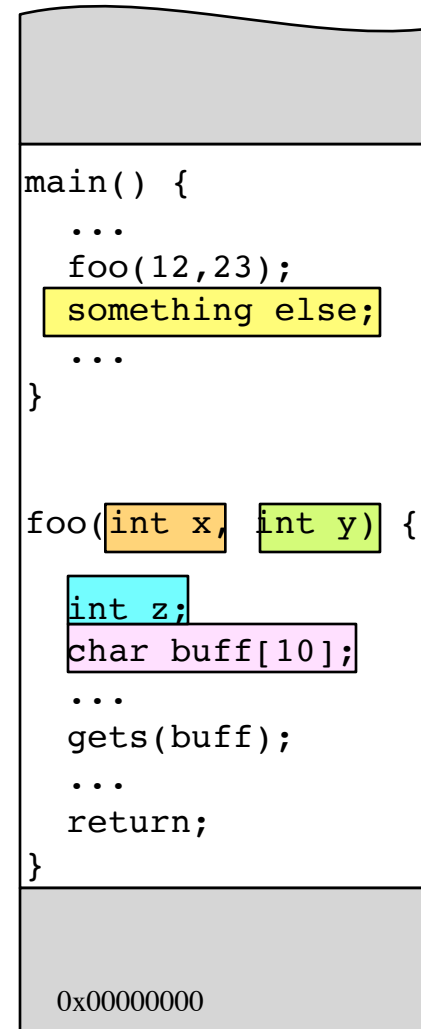
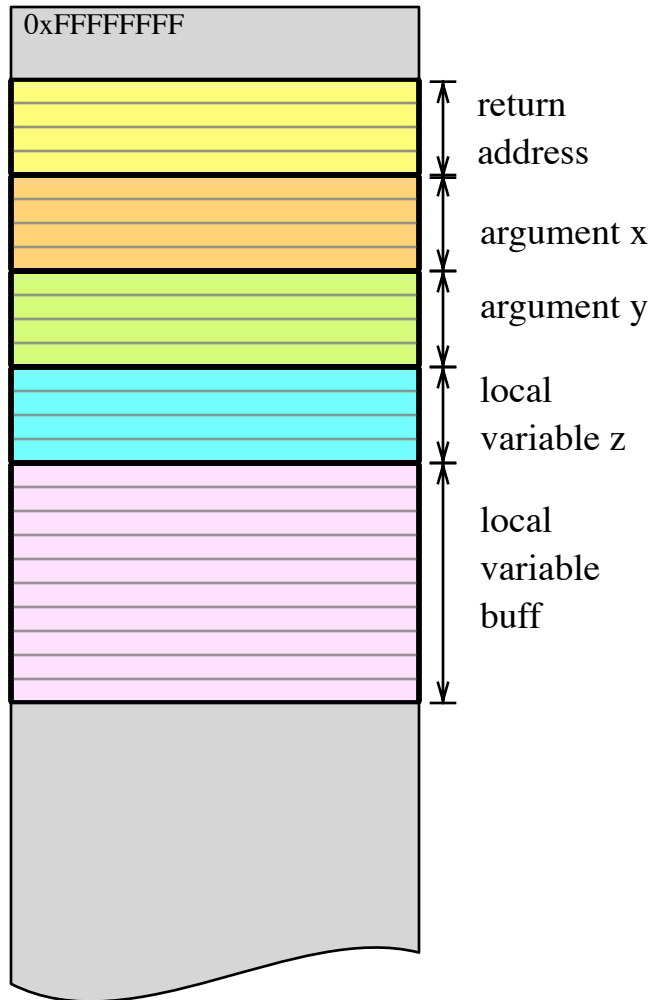
Buffer Overflow



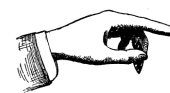
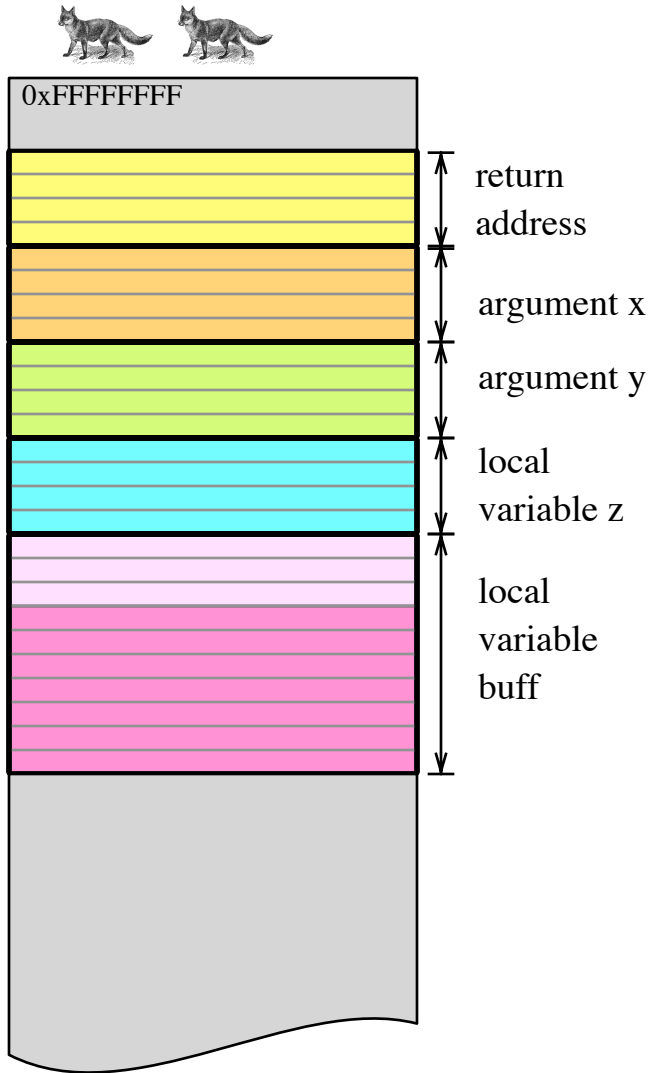
```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000 (bottom)

Buffer Overflow



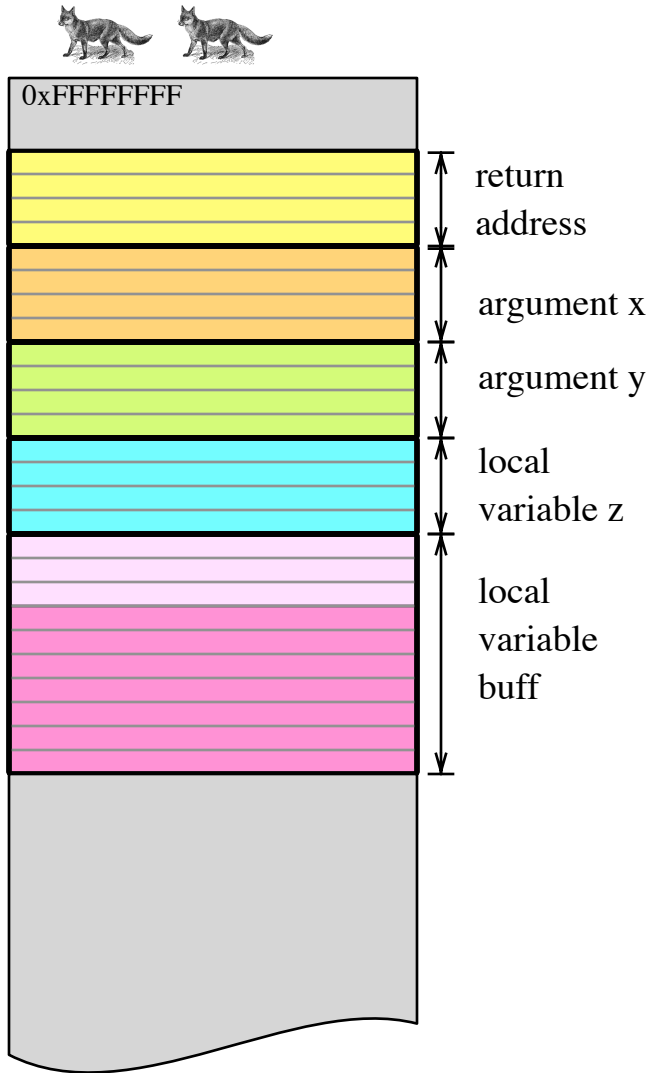
Buffer Overflow



```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000

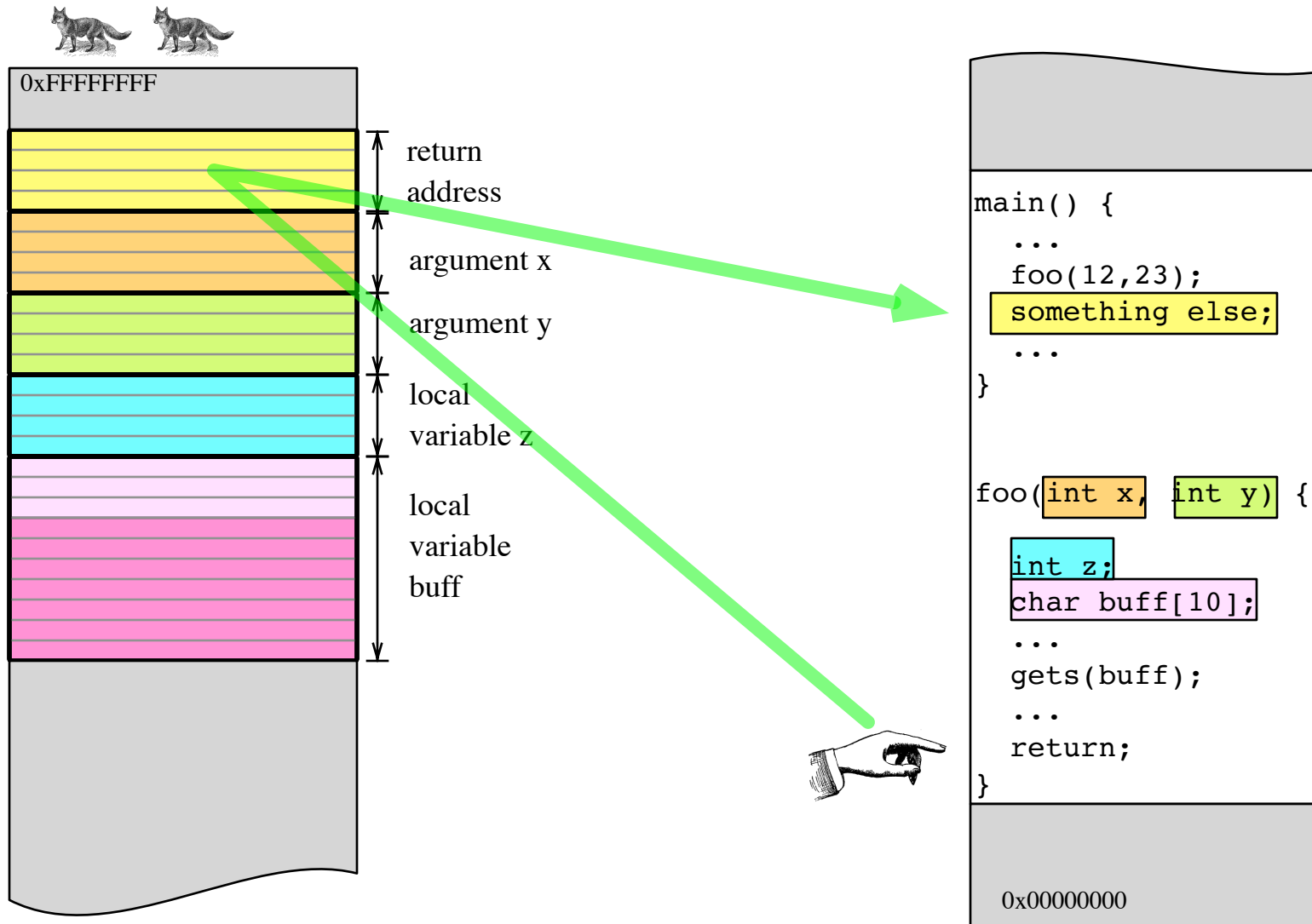
Buffer Overflow



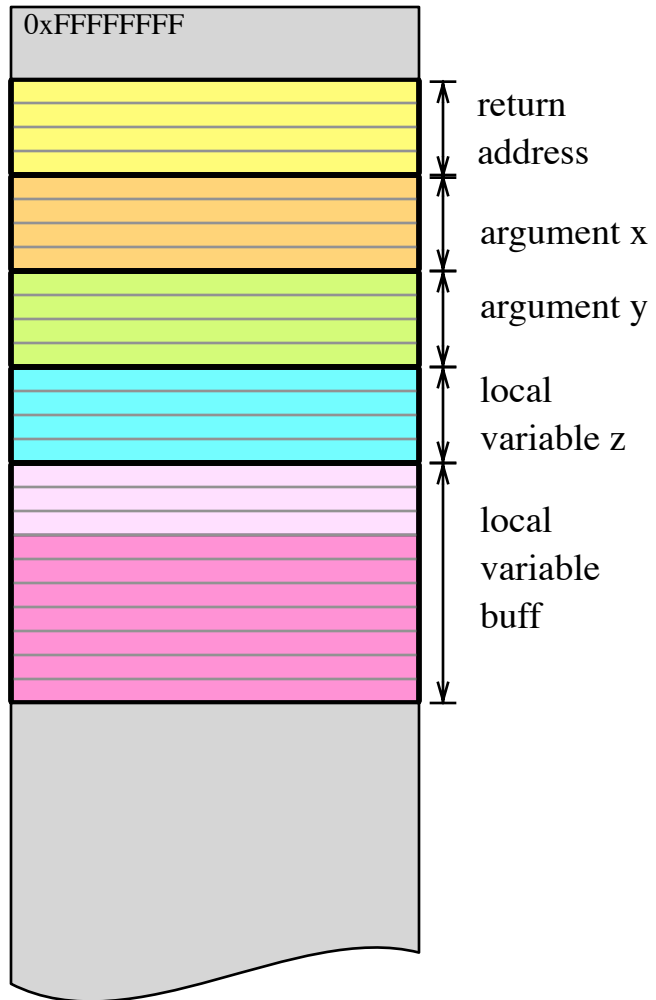
```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000

Buffer Overflow



Buffer Overflow

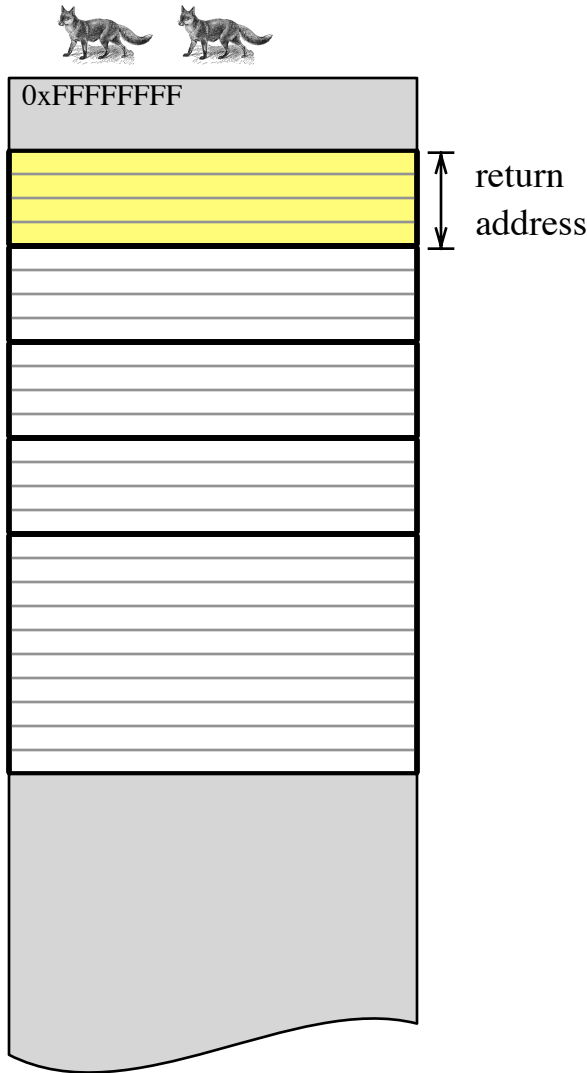


```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000

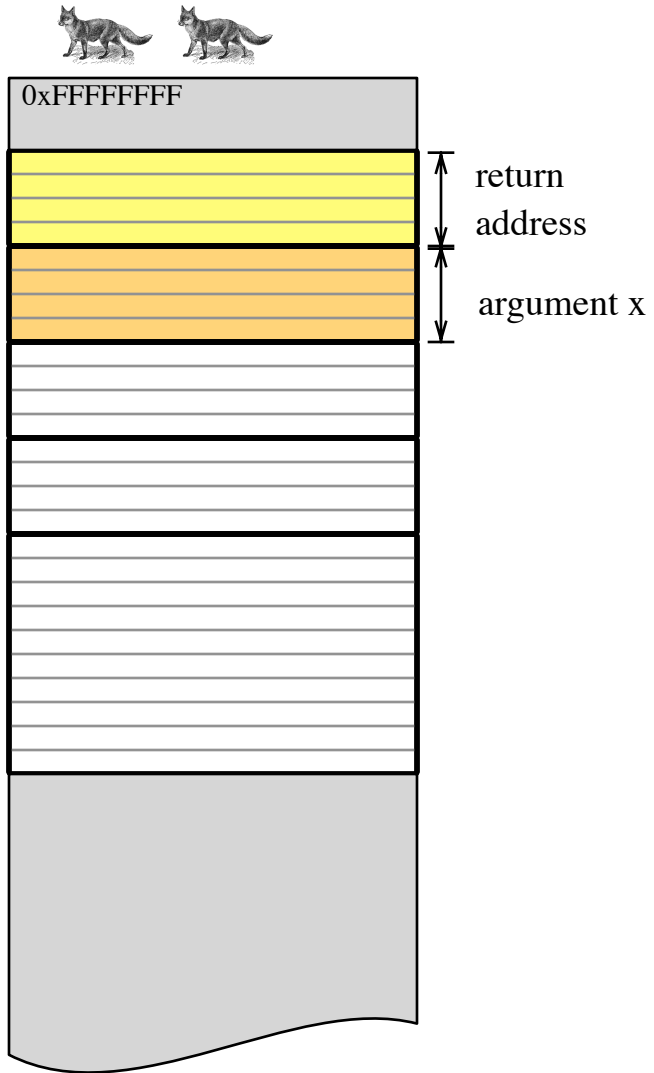
Rewind and try again!

Buffer Overflow



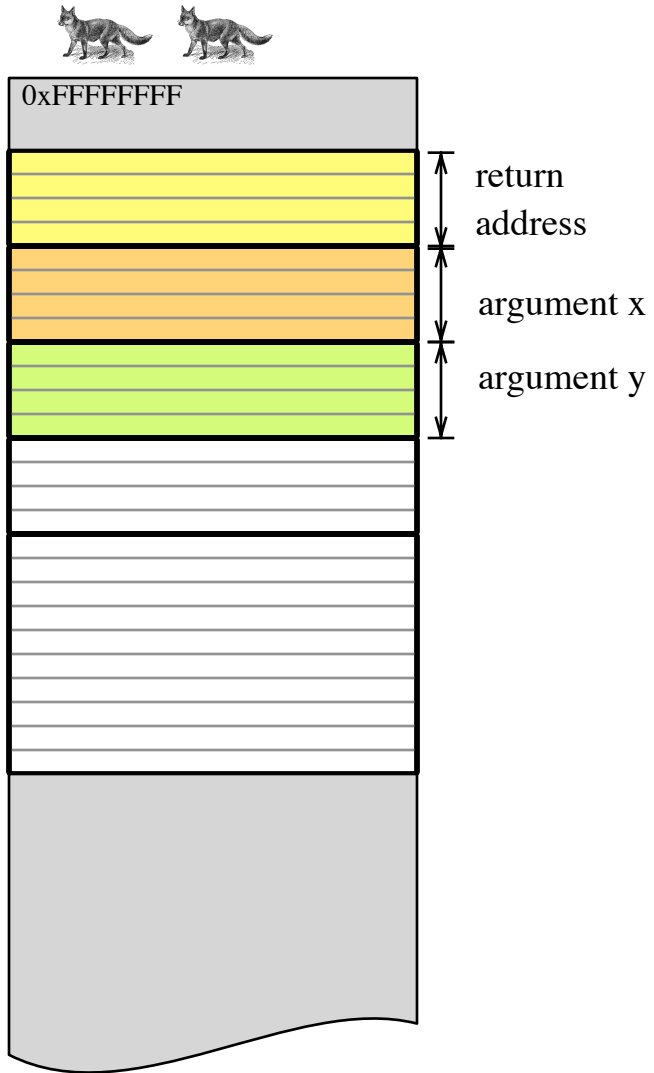
```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}  
  
0x00000000
```

Buffer Overflow



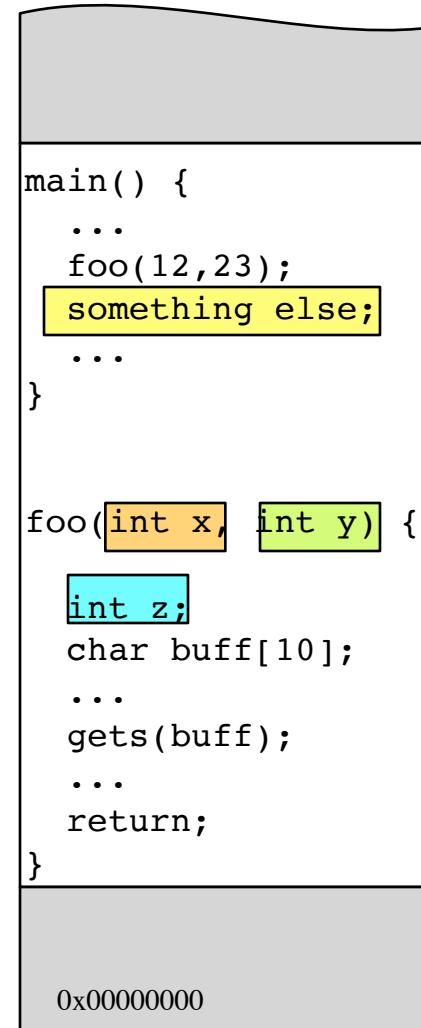
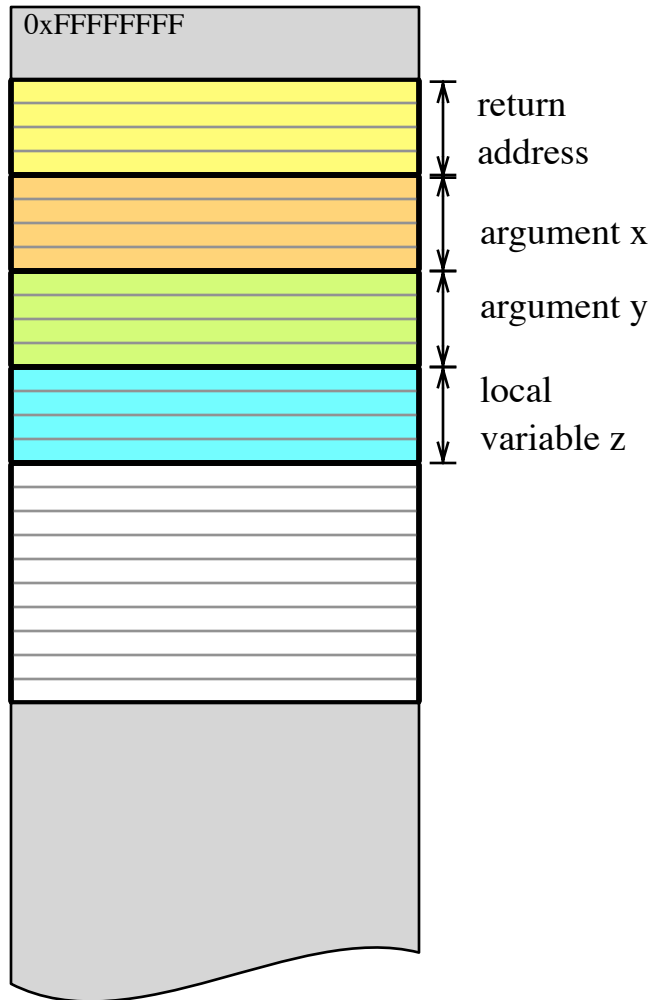
```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}  
  
0x00000000
```

Buffer Overflow

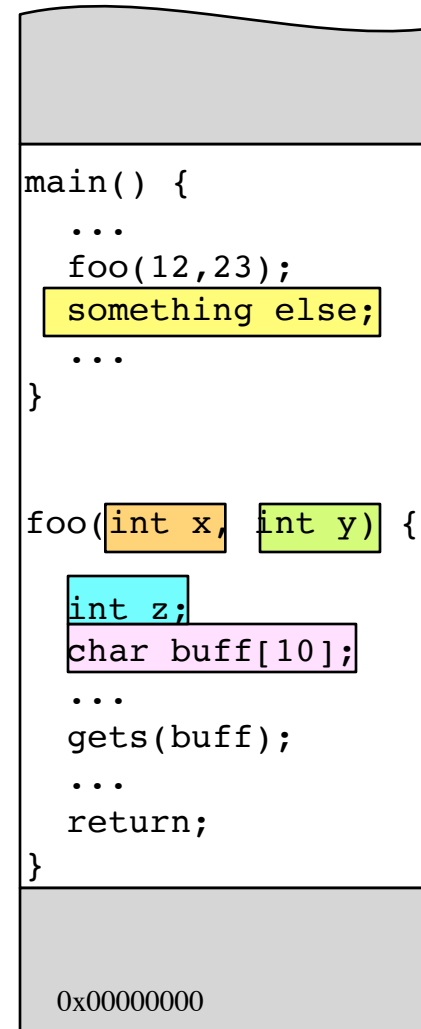
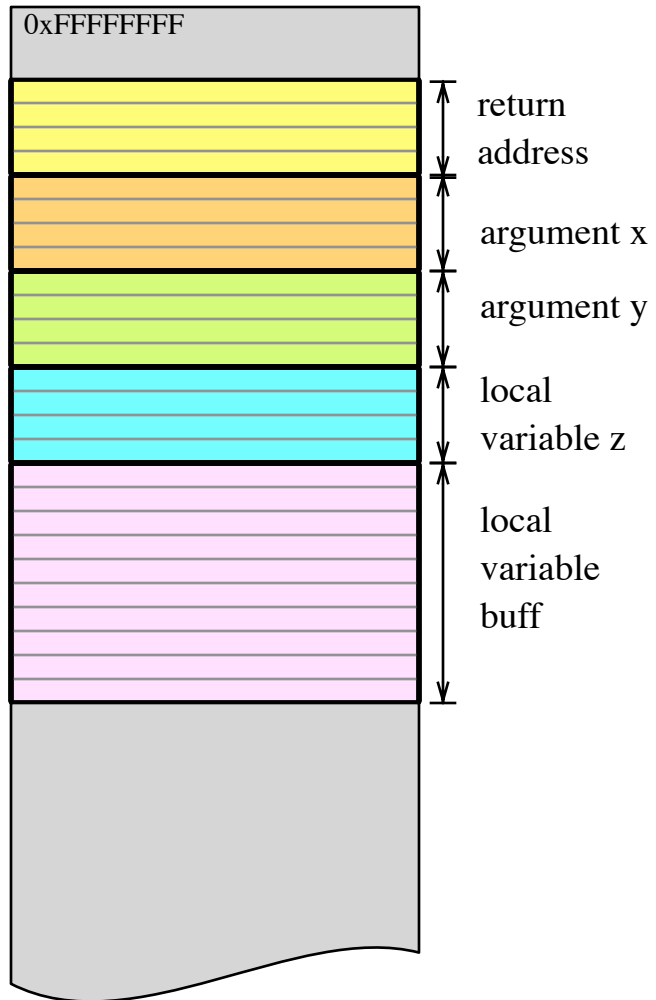


```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}  
  
0x00000000
```

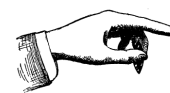
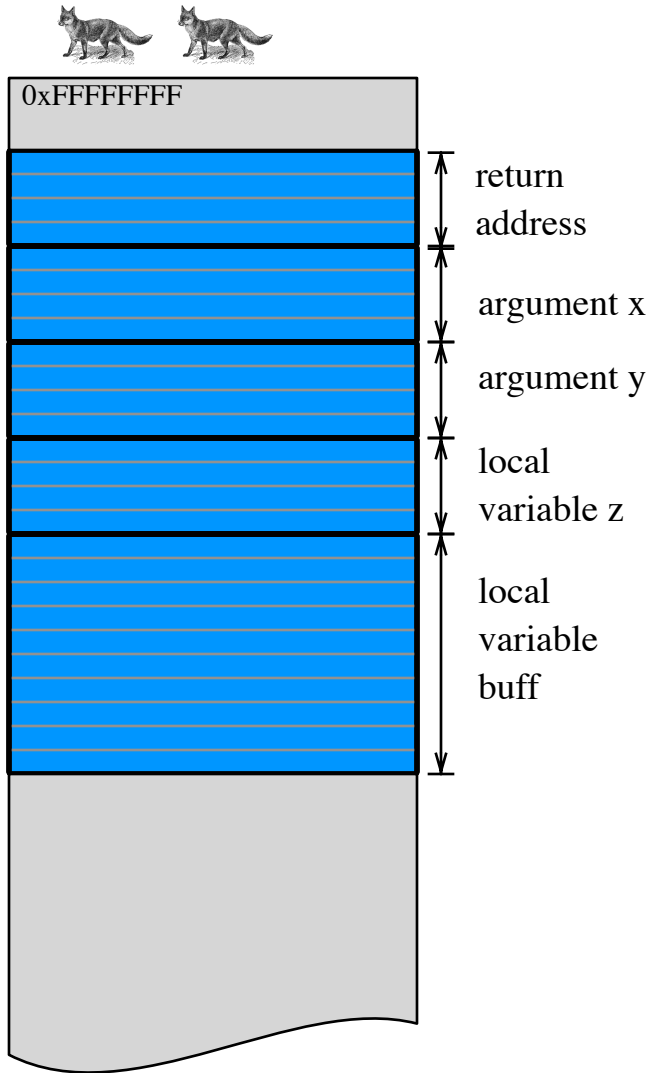

Buffer Overflow



Buffer Overflow



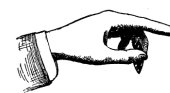
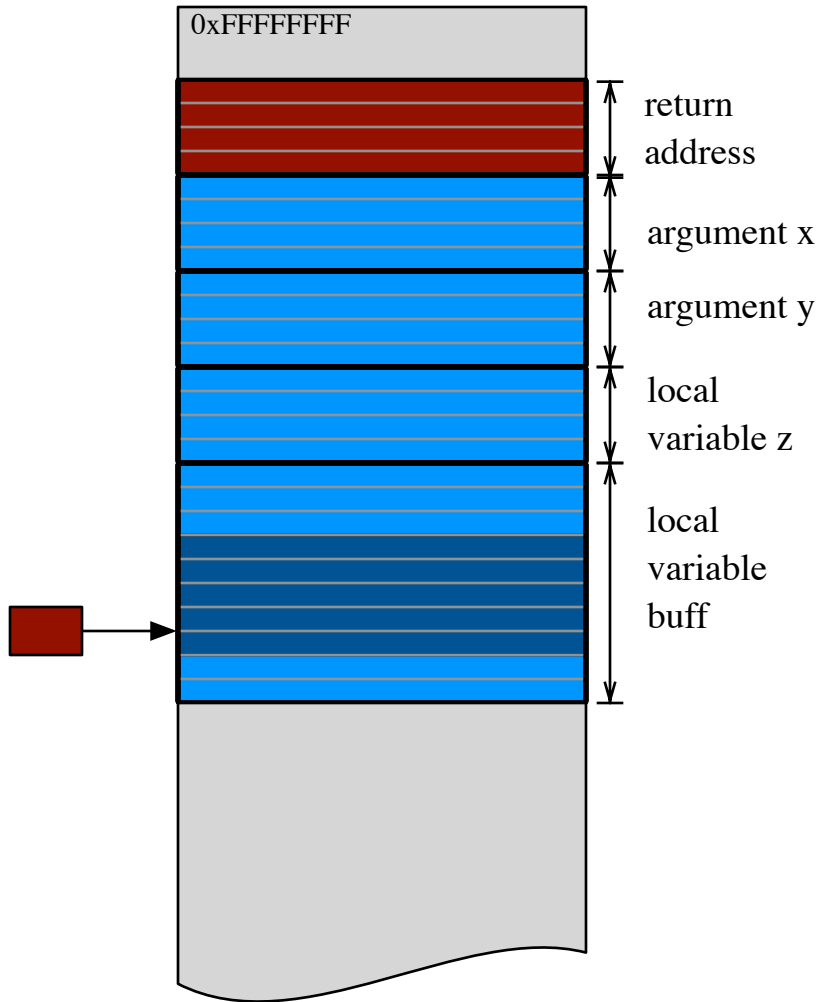
Buffer Overflow



```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000

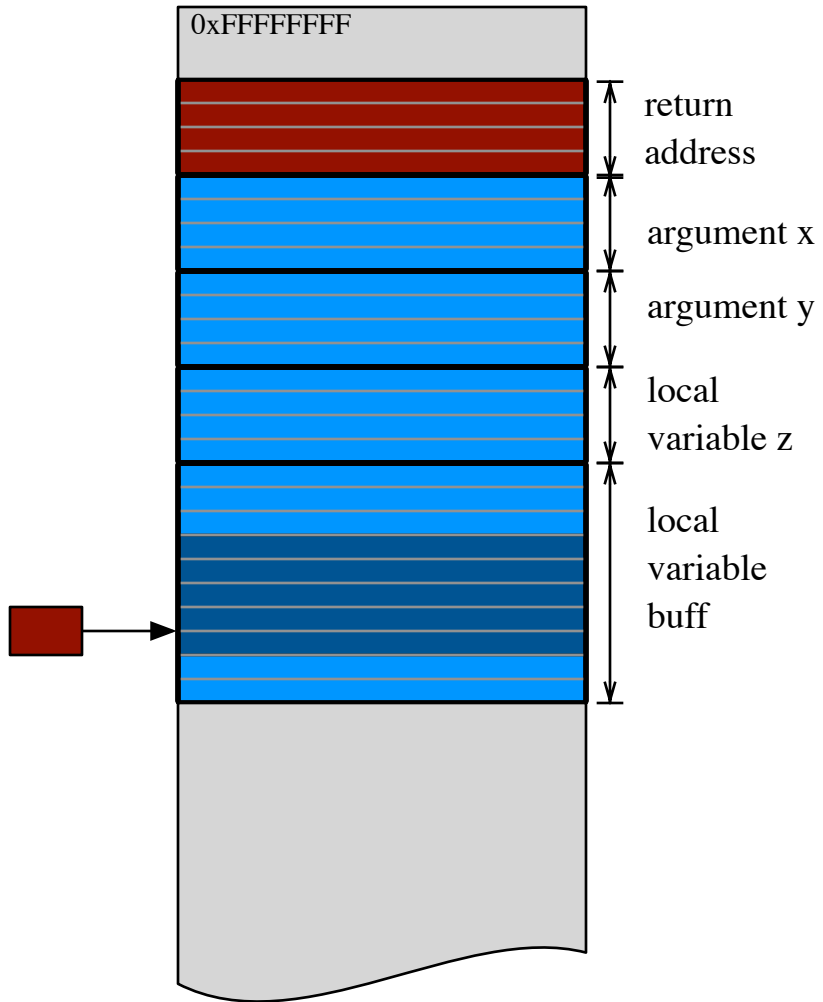
Buffer Overflow



```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000

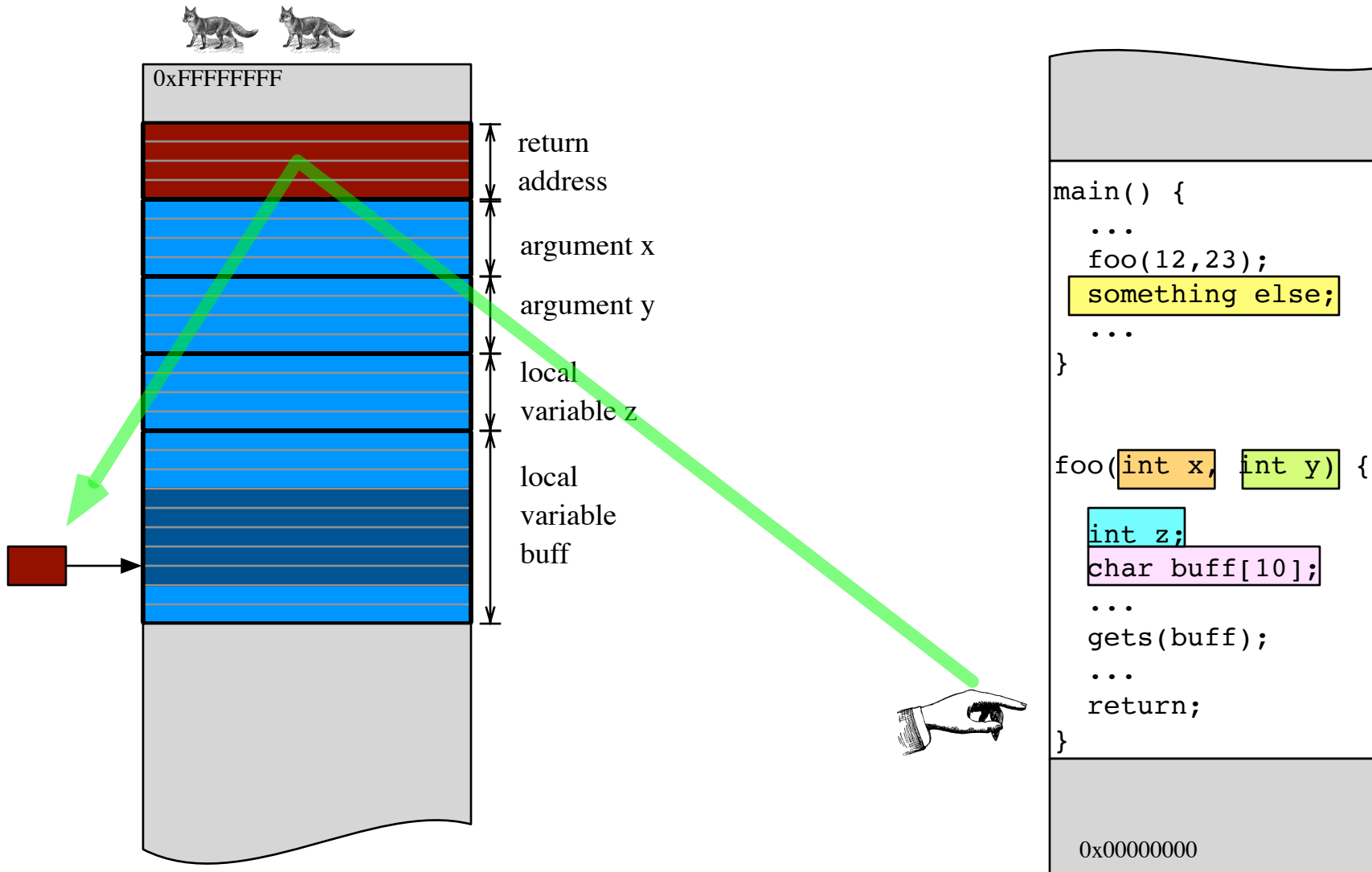
Buffer Overflow



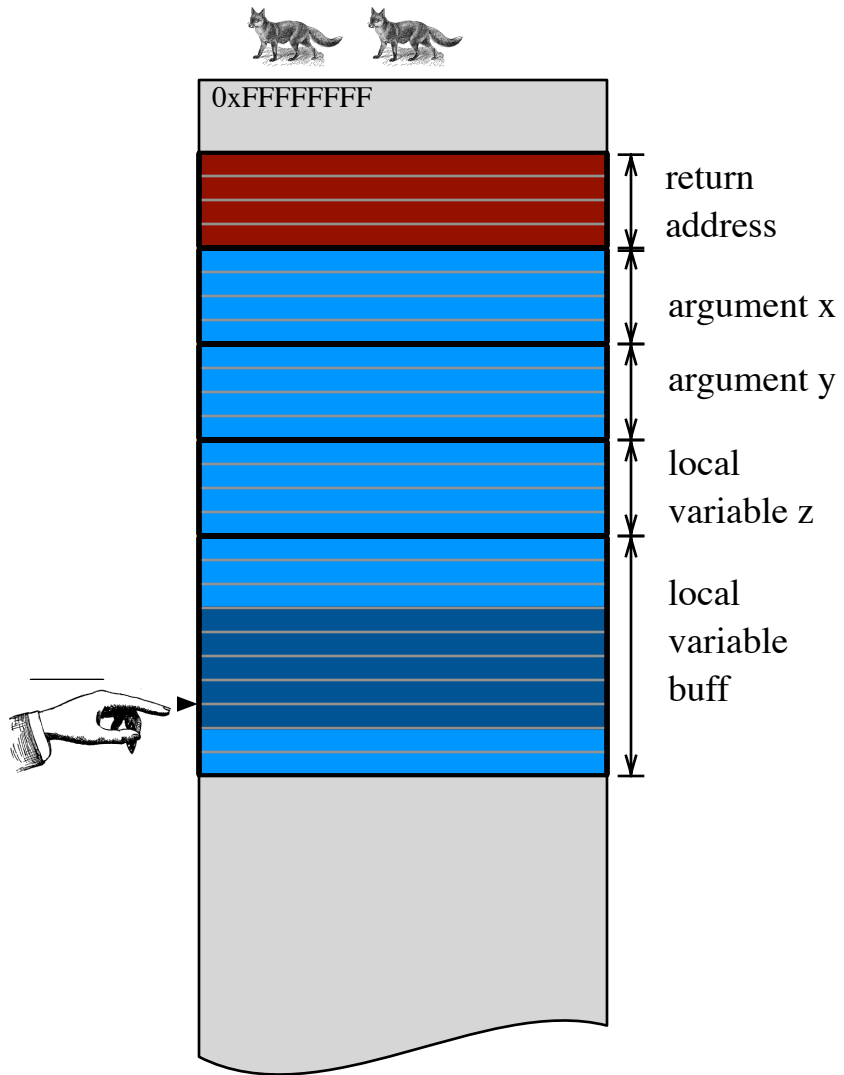
```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000

Buffer Overflow



Buffer Overflow



```
main() {  
    ...  
    foo(12,23);  
    something else;  
    ...  
}  
  
foo(int x, int y) {  
    int z;  
    char buff[10];  
    ...  
    gets(buff);  
    ...  
    return;  
}
```

0x00000000