

## 1 | First, what is user input?

Anything that the user types.

## 2 | Input Validation

The process by which user input is edited and "validated" in hopes of not affecting the running of program and change how the program behaves.

## 3 | Need for Input Validation

### 3.1 | eval

The eval directive

### 3.2 | Cross-site Scripting

JavaScript is able to be embedded into HTML. Clients could inject JS in HTML or into input fields and run arbitrary client-side JS on other people's sites.

### 3.3 | SQL Injection

XSS, but with SQL. This time its more dangerous because SQL code runs server and you could cause random changes to the server infrastructure.

### 3.4 | Buffer Overflows

The storage capacity of the current buffer is exceeded, but should the next bit also be allocated for a different purpose, the previous variable could overwrite it.

### 3.5 | Specially crafted files

Falty null pointer, etc.