

HTML Injection Attack

HTML Injection

- When hosting static pages
 - You control all the content
 - Limited opportunity for attackers
- When hosting user-submitted content
 - You lose that control
 - Must protect against attacks
 - **Never trust your users!!**

Never Trust Your Users!

Never Trust Your Users

- You may want to think your users will all act in good faith
 - For most users, this will be true
- Besides your intended users, who else can access your app?
 - **EVERYONE!**

HTML Injection

- You are now handling user data and sending it to other users
- You're building a form that accepts user data and serves it to all other users
- What happens when a user enters this:
 - "<script>maliciousFunction()</script>"

HTML Injection

- "<script>maliciousFunction()</script>"
- This attack is called an HTML/JS injection attack
 - This string is uploaded to your server
 - Your server stores this string
 - Your server send this string to all users who use your app
 - Their browsers run the injected JS

HTML Injection

- To prevent this attack:
 - Escape HTML when handling user submitted data
- Escape HTML
 - Replace &, <, and > with their HTML escaped characters
 - '&' -> &
 - '<' -> <
 - '>' -> >

HTML Injection

- The escaped characters & and < > will be rendered as characters by the browser
- Browser does not treat these as HTML

Demos