Web Concepts:

1. HTTPS:

Using HTTP Secure has three main benefits:

* Authentication
* Data integrity
* Secrecy

1. Mixed Content:
   1. Occurs when initial http is overloaded with https, but other resources (as image, font, video, styles,scripts) are loaded over an insecure http connection.
   2. This is called mixed content because both HTTP and HTTPS content are being loaded to display the same page, and the initial request was secure over HTTPS
   3. **Passive mixed content** refers to content that doesn't interact with the rest of the page, and thus a man-in-the-middle attack is restricted to what they can do if they intercept or change that content. Passive mixed content includes images, video, and audio content, along with other resources that cannot interact with the rest of the page.
   4. **Active mixed content** interacts with the page as a whole and allows an attacker to do almost anything with the page. Active mixed content includes scripts, stylesheets, iframes, flash resources, and other code that the browser can download and execute.
   5. Always use https:// URLs when loading resources on your page.
   6. Use the Content-Security-Policy-Report-Only header to monitor mixed content errors on your site.
   7. Use the upgrade-insecure-requests CSP directive to protect your visitors from insecure content.