

1. What does it mean to escape data? How does escaping data help us avoid malicious code?

Escaping data is the process of sanitizing user input to get any malicious characters that may accidentally be interpreted as code rather than user input. If the data is not correctly escaped, the application may run malicious code that a user could inject and manipulate the web application with. Escaping data makes sure that nothing gets interpreted in the wrong way. Usually, special characters get encoded to other characters so that the input is harmless.

2. Please read through:

<https://www.codecademy.com/article/what-is-rest>

a. What is REST? What is meant by Statelessness?

REST stands for Representational State transfer. It is an architectural style for providing standards between various computers on the web. It basically makes it easier for various systems to communicate with each other. Statelessness means that the server does not need to know any information about the state that the client is in, and the same goes for the other way around. This lets the server and the client understand any message received without looking at previous messages.

b. What is a resource?

A resource is any piece of information that can be stored and transmitted between a client and a server. Resources can be identified by Uniform Resource Identifiers, and can be modified and formed by HTTP requests.

c. Look at the section on Path design: In a RESTful architecture paradigm what would be the proper way to create a path for: (provide URL and HTTP method):

i. getting a list of users?

GET /users

ii. getting a particular user?

GET /users/id

iii. saving a user?

POST /users/id

3. What is a Cookie?

A cookie is a small piece of data like a username or a password that are used to track a user's browsing activity. They can be used for authentication, user preferences, and to manage sessions. There are two types of cookies- persistent and session. They can be used for targeted advertising as well.

4. What is a Session?

A session is a way of maintaining information about a user's interaction on the webpage.

When a user enters a webpage, the site may create a session for the person. A session might also keep track of information about the user's interactions with the website. Each session has a unique ID, which can be passed as a parameter in a URL and may be stored in cookies. Sessions can be used to provide a more personalized experience while on the web application, like saving shopping cart contents, login information, etc.