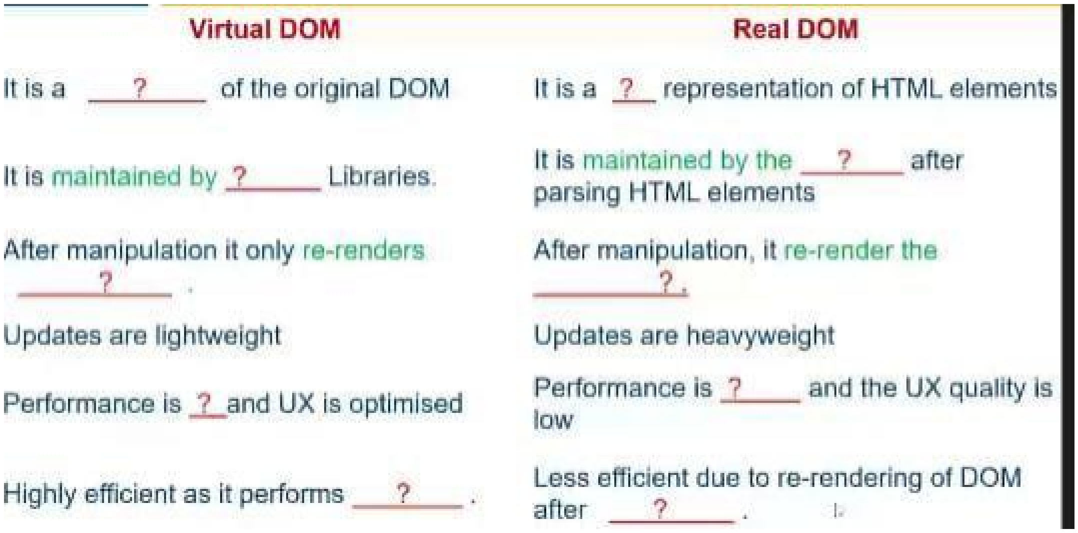
IAD CLASSWORK



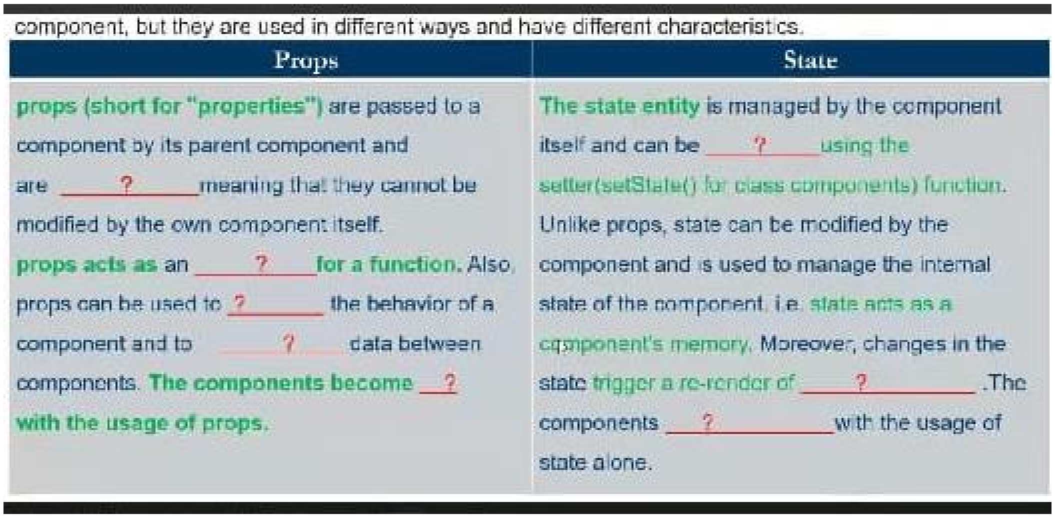
Virtual DOM	Real DOM
It is a ___?___ of the original DOM	It is a _?_ representation of HTML elements
It is maintained by _?___ Libraries.	It is maintained by the ___?___ after parsing HTML elements
After manipulation it only re-renders ___?___ .	After manipulation, it re-render the ______?.
Updates are lightweight	Updates are heavyweight
Performance is _?_and UX is optimised	Performance is _?___ and the UX quality is low
Highly efficient as it performs ___?___ .	Less efficient due to re-rendering of DOM after ___?___ .

Answer of Virtual Dom

It is a **lightweight copy** of the original DOM.
It is maintained by **JavaScript** Libraries.
After manipulation it only re-renders **the changed parts**
Performance is **high** and UX is optimized.
Highly efficient as it performs **fewer actual DOM manipulations**.

Answer of Real Dom

It is a **tree-like** representation of HTML elements.
It is maintained by the **browser** after parsing HTML elements.
After manipulation, it re-renders **the entire DOM**.
Performance is **low** and the UX quality is low.
Less efficient due to re-rendering of DOM after **every change**.



component, but they are used in different ways and have different characteristics.

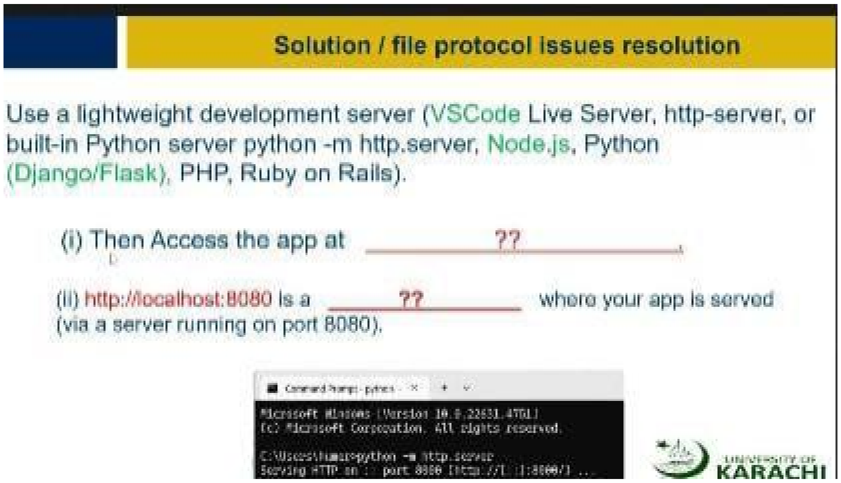
Props	State
props (short for "properties") are passed to a component by its parent component and are _____?_____meaning that they cannot be modified by the own component itself. props acts as an _____?_____for a function. Also props can be used to _?_____ the behavior of a component and to _____?_____ data between components. The components become __?__ with the usage of props.	The state entity is managed by the component itself and can be _____?_____using the setter(setState() for class components) function. Unlike props, state can be modified by the component and is used to manage the internal state of the component. i.e. state acts as a component's memory. Moreover, changes in the state trigger a re-render of _____?_________ .The components __?_________with the usage of state alone.

Answer of Props blanks

Immutable
Interface
Configure
Reusable

Answer of State blanks

Modified
Component
Become dynamic and interactive



Solution / file protocol issues resolution

Use a lightweight development server (VSCode Live Server, http-server, or built-in Python server python -m http.server, Node.js, Python (Django/Flask), PHP, Ruby on Rails).

(i) Then Access the app at _______________??_______________.

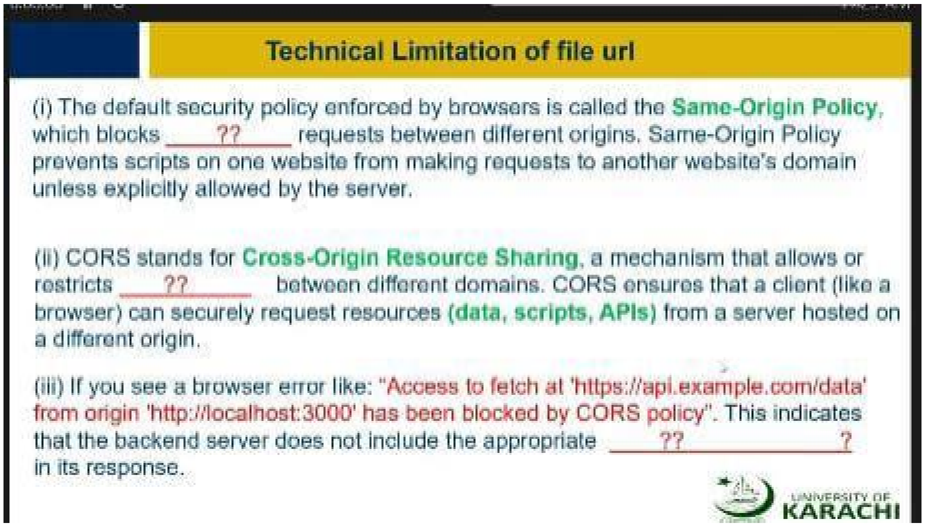
(ii) http://localhost:8080 is a _________??_________ where your app is served (via a server running on port 8080).

```
Microsoft Windows [Version 10.0.22631.4751]
(c) Microsoft Corporation. All rights reserved.

C:\Users\huma>python -m http.server
Serving HTTP on :: port 8000 (http://[::]:8000/) ...
```

Answers:

Then Access the app at http://localhost:8080
http://localhost:8080 is a *URL (Uniform Resource Locator)* where your app is served (via a server running on port 8080).



Technical Limitation of file url

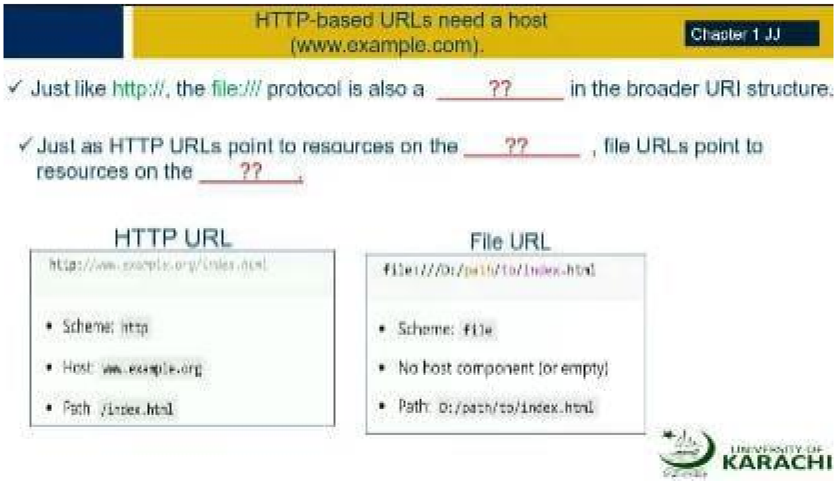
(i) The default security policy enforced by browsers is called the **Same-Origin Policy**, which blocks ____??____ requests between different origins. Same-Origin Policy prevents scripts on one website from making requests to another website's domain unless explicitly allowed by the server.

(ii) CORS stands for **Cross-Origin Resource Sharing**, a mechanism that allows or restricts ____??____ between different domains. CORS ensures that a client (like a browser) can securely request resources **(data, scripts, APIs)** from a server hosted on a different origin.

(iii) If you see a browser error like: "Access to fetch at 'https://api.example.com/data' from origin 'http://localhost:3000' has been blocked by CORS policy". This indicates that the backend server does not include the appropriate ____??____________?____ in its response.

Answers:

Cross-origin
cross-origin requests
CORS headers



HTTP-based URLs need a host (www.example.com).

✓ Just like http://, the file:/// protocol is also a ____??____ in the broader URI structure.

✓ Just as HTTP URLs point to resources on the ____??____ , file URLs point to resources on the ____??____.

HTTP URL

http://www.example.org/index.html

- Scheme: http
- Host: www.example.org
- Path: /index.html

File URL

file:///D:/path/to/index.html

- Scheme: file
- No host component (or empty)
- Path: D:/path/to/index.html

Answers:

Just like `http://`, the `file://` protocol is also a **URI scheme** in the broader URI structure

Just as HTTP URLs point to resources on the web, file URLs point to resources on the local file system.

1. JSX stands for: **JavaScript XML**
2. Client-side vs. Server-side Rendering:

    - **Client-Side Rendering (CSR):**
      Client-side rendering (CSR) renders content in the user's browser using JavaScript and CSR offers a more dynamic user experience.
    - **Server-Slide Rendering:**
      Server-side rendering (SSR) generates HTML on the server before sending it to the client and SSR improves initial load time and SEO.
3. DOM stands for: **Document Object Model**