

### Using an illustration, explain how the www works

1. User - researcher who want to find information on the web
2. Web browser - you have a web browser installed on your computer
3. Domain name service - web browser doesnt store the actual location of the website instead it relies on a central index system , the DNS . the system transforms user friendly domain names like [www.google.com](http://www.google.com) into numerical addresses( IP addresses) that computers can understand
4. Request - enter website name into web browser
5. Connection - web browser uses internet connection to communicate with the DNS.
6. Response - the DNS looks up the website name and provides the corresponding IP address back to the web browsers.
7. Web server - web browser now has the IP address it sends a request to the we server at that specific location . this request specifies the desired web content.

### Reasons why validating web pages requires us to use web standards

1. Cross web compatibility - standards ensure web pages are rendered consistently across different web browsers .
2. Accessibility - standard include guidelines for creating accessible websites
3. Search engine optimization - Search engines rely on well-structured, semantic HTML to understand and index web content accurately.
4. Future compatibility -
5. Security - web standards help mitigate security vulnerabilities
6. Maintainability and scalability. - web standards promote clean, modular code that is easier to scale, maintain and update over time .
7. Interoperability - web standards fostre interoperability by promoting open vendor- neutral technologies that are compatible across different platforms and ecosystems.

### Action that may be carried out on a digital photo before being used in a website

1. Resize
2. Optimize compression
3. Format conversion -
4. Crop and edit
5. Image accessibility

### CSS box properties

1. Padding
2. Margin
3. Background-color
4. Border
5. Width
6. height

### Access keys challenges

1. Conflict with browser and assistive technology shortcuts ...access keys may conflict existing keyboard shortcuts used by web browsers or assistive technologies , leading to unexpected behaviour or difficulty in accessing certain features .
2. Inconsistencies across platforms
3. Learning curve - users may not be aware of access keys or may find it difficult to remember the access keys

CSS code to make all first letter of all paragraphs be large and coloured green

```
p::first-letter{  
Font-size: large;  
Color: green;  
}
```

Most common pseudo-classes

**:hover:** Applies styles when an element is hovered over by the mouse pointer.

**:active:** Applies styles to an element while it is being activated (clicked on or tapped).

**:focus:** Applies styles to an element when it gains focus, typically via keyboard navigation or by being clicked.

**:visited:** Applies styles to links that have been visited by the user.

New attributes for html 5 <input>

1. **Min** -minimum value that input can take
2. **Max** - maximum value that input should take
3. **List** - list of predefine options
4. **Multiple** - input field can accept multiple values
5. **Placeholder** - hint or example text that is displayed in the input field when it is empty
6. **Required**
7. **Step**
8. **Type**
9. **Autocomplete** - specifies that the input field should have autocomplete enabled or disabled
10. **Autofocus** - Specifies that the input field should automatically gain focus when the page loads.

### why is it s bad design practice to use table for layout

1. Semantics...tables are used to show tabular data not for controlling layout
2. Accessibility -
3. Maintenance - tables are rigid and inflexible for layout purposes
4. Performance - tables increase complexity of html document and increase load times
5. Responsive design - tables do not adapt well to different screen sizes
- 6.