

CROSS BROWSER COMPATIBILITY

NIC Webinar- Knowledge Sharing among peers
PAN INDIA
on
17th JAN 2019



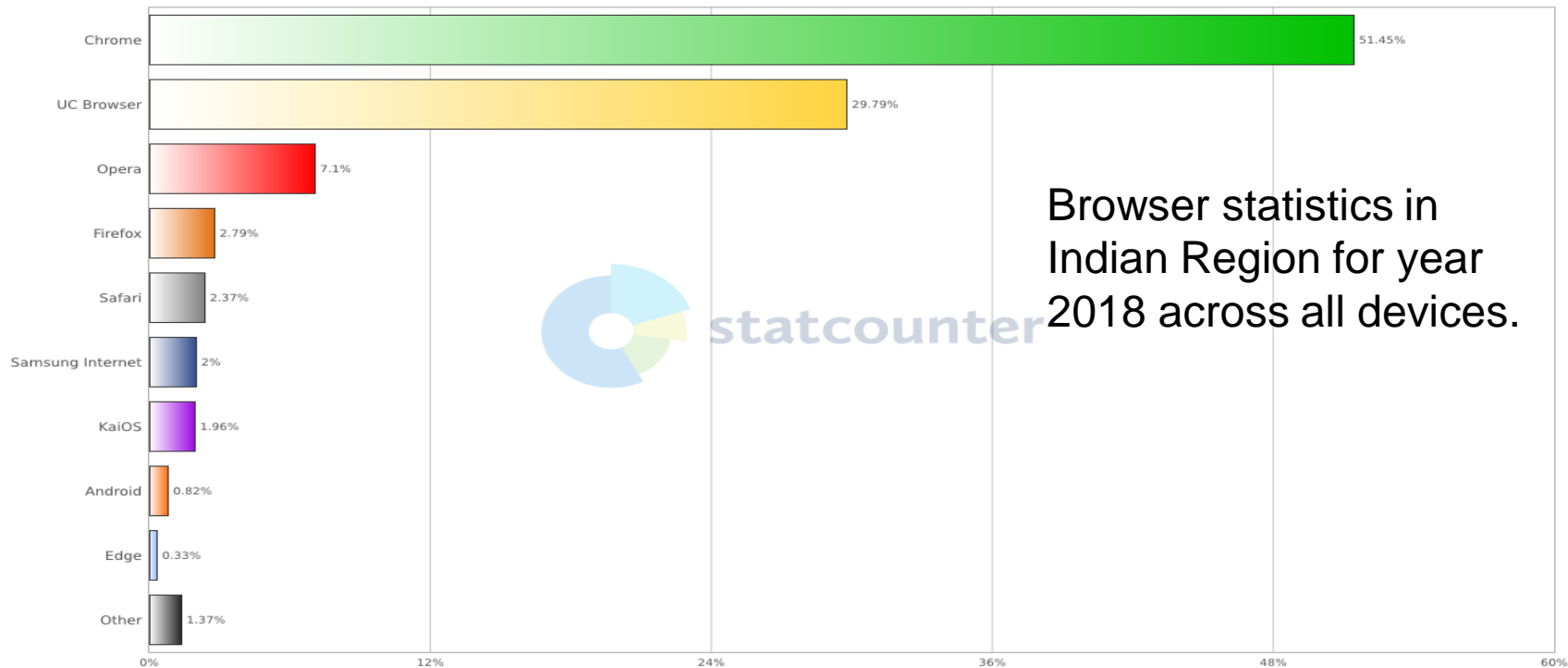
Pooja Singh
Software Quality Group
Scientist –D, NIC HQ

Browser War

- Browser War is a metaphorical term that refers to **competitions for dominance** in usage share in the web browser marketplace.
- The term is often used to denote **two specific rivalries**:
 - ❖ The competition that saw Microsoft's Internet Explorer replace Netscape's Navigator as the dominant browser during the late 1990s
 - ❖ The erosion of Internet Explorer's market share since 2003 by a collection of emerging browsers.



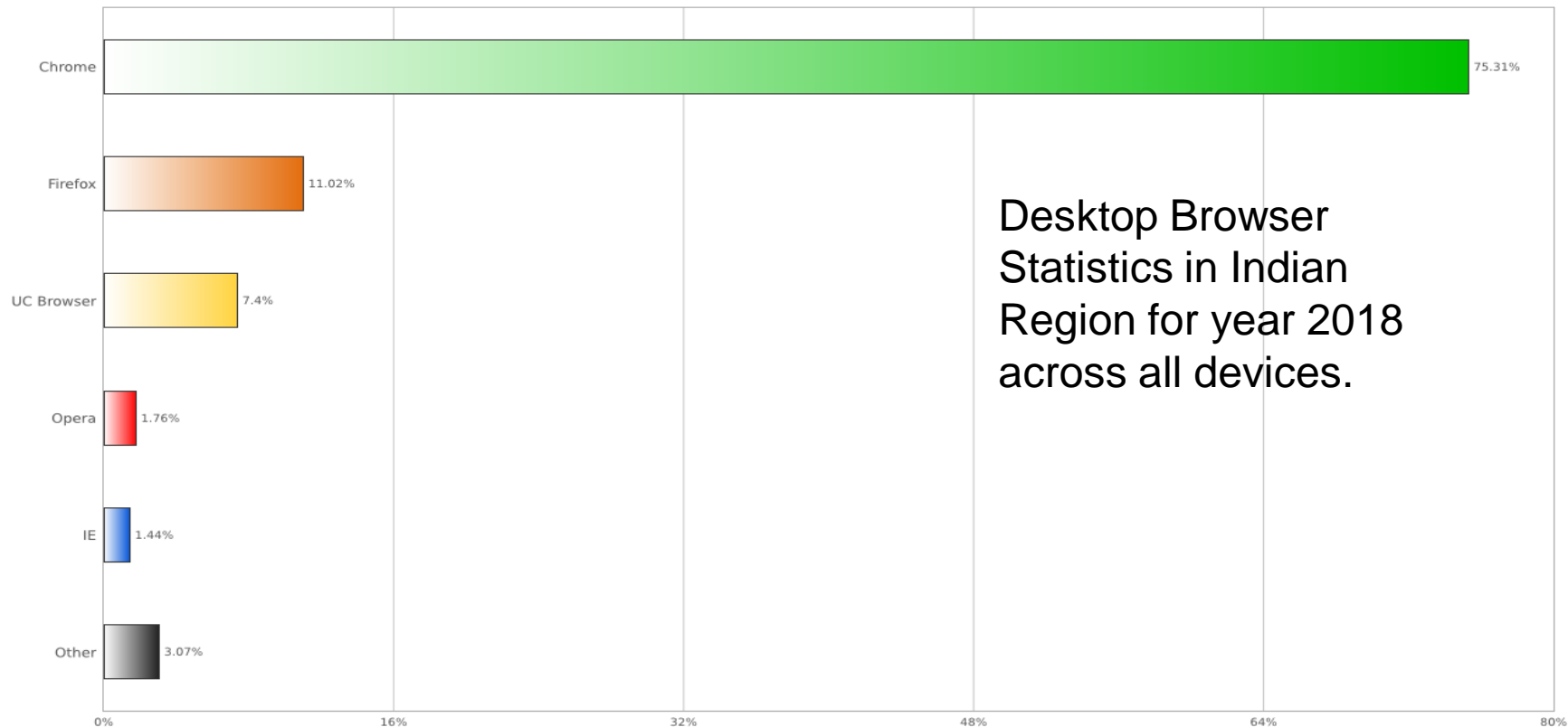
Browser Statistics For All Devices



Browser statistics in
Indian Region for year
2018 across all devices.

Source: StatCounter
As per 2018

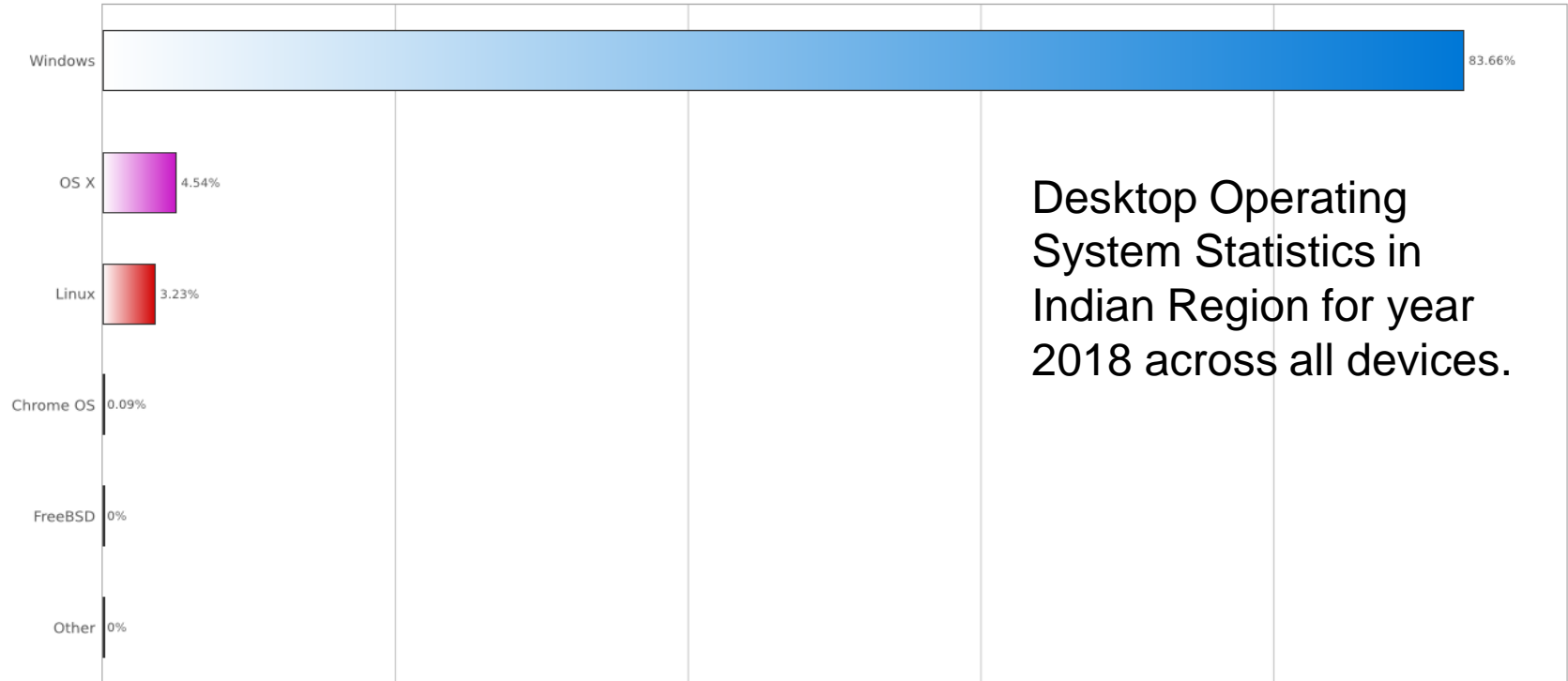
Desktop Browser Statistics



Desktop Browser
Statistics in Indian
Region for year 2018
across all devices.

Source: StatCounter
As per 2018

Desktop Operating System Statistics



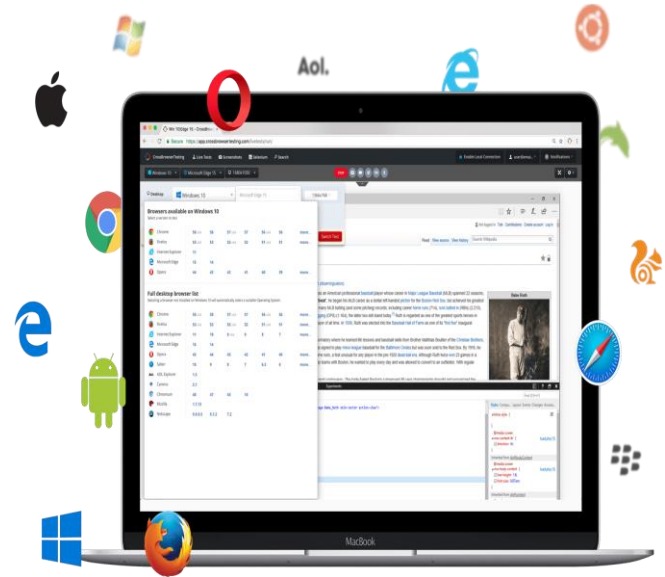
Desktop Operating
System Statistics in
Indian Region for year
2018 across all devices.

Source: StatCounter
As per 2018

What Is Cross Browser Compatibility

✓ Cross-browser compatibility is the ability of a web application or website to look and behave consistently, **across popular browsers** without distortions and errors.

✓ The web applications / websites should also degrade decently and function properly on the **latest versions** of all browsers running on **different operating system(s)**.



Web Application/Web site will look different in different browsers. Not everyone uses the same browser.

Most of the time you can follow standards and get a decent looking website on a specific browser. But there's always variations when working on cross browser.

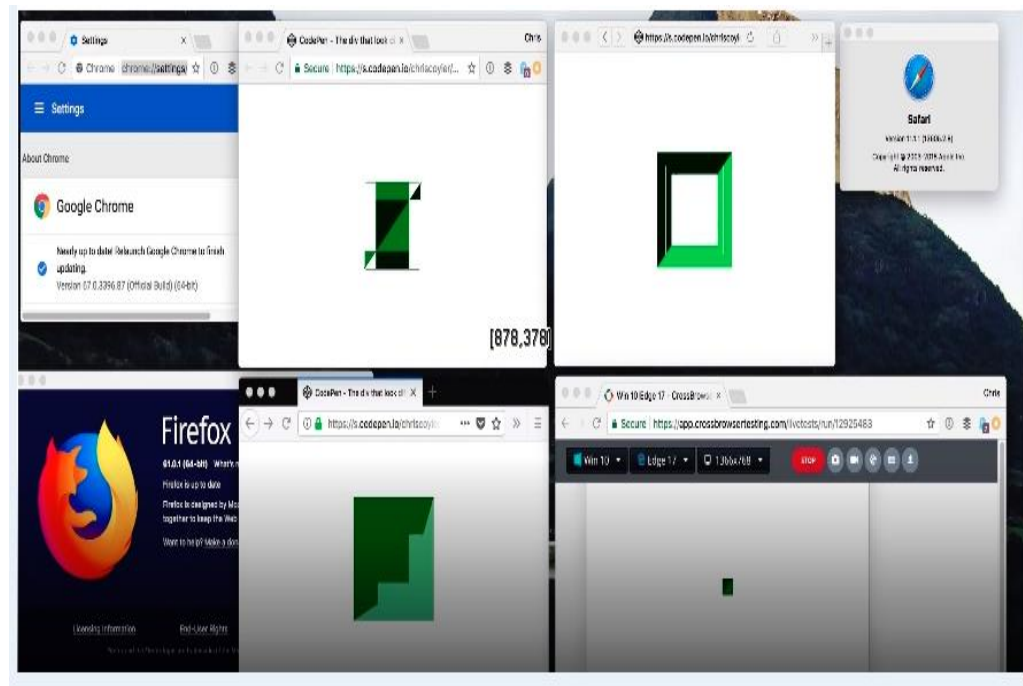
Importance of Cross Browser Compatibility

User can use any browser and version of the browser which cannot be pre determined. Visual errors leaves a bad reputation and could cause users to leave right away .

Users are able to access all content and execute all the basic functions on the web application/website.

CSS

```
div {  
  outline: inset 100px[557,204];  
  outline-offset: -125px;  
}
```



Why Cross Browser Incompatibility ??

Multiple Browser Options – Google Chrome, Firefox, Mac Safari, Internet Explorer to name a few.

With Different Versions– Google Chrome (71, 70, 69), Firefox (64, 63, 62), Mac Safari(12, 11, 10), IE (11, 10, 9) and so on

Why Cross Browser Incompatibility ??

Run on Different Computer Platforms—
Windows 10, Windows 7, Mac, Linux,
etc.

With Different Screen Sizes— From
640x360 pixels to 1024x768 pixels

Why Cross Browser Incompatibility ??

Each browser treats HTML, CSS and Java script differently.

HTML Errors – Mistakes that break the web pages/ web forms

Mistakes Leading to Cross-Browser Incompatibility



Use of browser-specific features to achieve certain effects without fallbacks for other browsers.



Use of Incomplete or outdated DOCTYPE or No DOCTYPE at all



No CSS Reset - Every browser renders a page differently if it lacks any CSS styling.



Developers who are over-reliant on a single toolset, may miss cross-browser compatibility bugs.

Planning For Cross-browser Compatibility

Follow Thumb Rule

- ✓ Target for major Browsers which cover more than 90% of browser market share.
- ✓ Design to support the last two versions of the major browsers.

Select platforms to support

- ✓ Further analyze and decide based on various statistics like which platforms and browsers to check for compatibility.

Planning For Cross-browser Compatibility

Check across browsers

- ✓ It is vital to check website/web application across different browsers.

Plan and Design

- ✓ Take cross browser compatibility into consideration from design phase itself.
- ✓ Follow Best practices for cross browser compatibility

Best Practices for Cross Browser Compatibility



Best Practices for Cross Browser Compatibility

Make use of Browser's Developer tools for debugging issues and finding errors

- Firefox dev tools
- Chrome dev tools
- IE/Edge dev tools
- Safari dev tools
- Opera dev tools

Understand which browsers have implemented web features before using them site.

- CanIUse

- Kangax's ECMAScript compatibility tables

Best Practices for Cross Browser Compatibility

Older Browser Detection Scripts

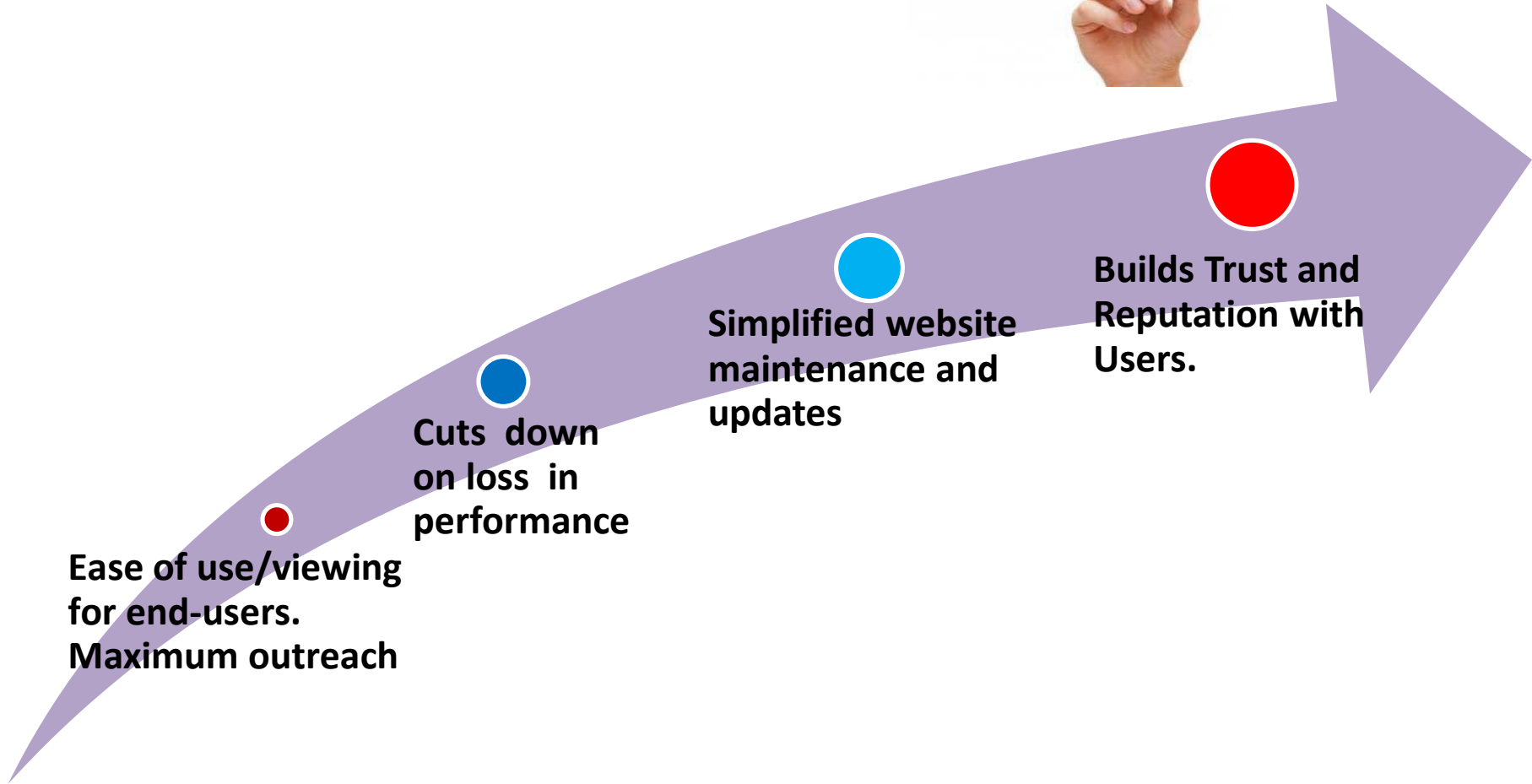
Use cross-browser friendly libraries and frameworks

Modernizr helps you identify and handle implementation differences between browsers

Explore and use coding tools that can improve cross-browser compatibility

- E.g. Autoprefixer, CSSNext plugins make it possible to write pure, modern CSS that does not break in older browsers

Cross Browser Compatibility Testing BENEFITS



Takeaways for Cross-Browser Compatibility

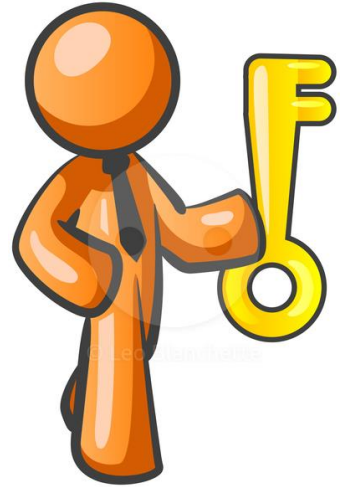
Add Disclaimer to the web application mentioning the browsers and corresponding version best supported.

Consider cross browser compatibility from design phase itself

Design to support the last two versions of the major browsers

Always test across major available browser before going for deployment

Explore and use open source tools available to check cross browser compatibility e.g. Galen Framework



Thank you !

support-sqg@nic.in

IP No: 5294