Battle of Desktop Web Browsers: The Case of Internet Explorer and Mozilla Firefox

Özgür Önday

Abstract

Day by day correspondence is encouraged by computerized advancements through Web locales and web based life, and got to by means of PCs and cell phones (Meeker, Devitt, and Wu, 2009). The PC has changed the manner in which we live, work and play" (Lunenfeld, 2011, p. 143). Specialized gadgets are driving the advancement of innovation guidelines that are ground-breaking for purchasers, yet much progressively incredible and productive for the organizations that control them. A fight proceeds for authority over the manner in which we get to data online by means of Web programs on PCs and cell phones. Internet browsers have been assuming a key job in electronic business and electronic trade. They have extraordinary usefulness that connect a huge number of web clients to the universe of wide the internet. In the event that there were no internet browsers today; there would not be web based business and all the more for the most part there would not be e-business in the good judgment. Along these lines, it isn't too amazing that the challenge among different internet browsers has been anxious in the course of the most recent ten years. Web innovation is one the very pinnacle of developments of our time and has contributed essentially in dispersing and gathering information and data. Viability and proficiency of the procedure relies upon the presentation of the internet browser. Google Chrome is the pioneer of the serious program showcase with Mozilla Firefox as its most grounded rival, and obviously Internet Explorer which has been and is increasing a significant degree of ubiquity among web clients. Picking the superlative internet browser is a troublesome errand because of the extensively huge determination of program projects and absence of substantial examination information. This paper depicts and looks at imperative highlights of Internet Explorer and Mozilla Firefox, which speak to over 15% of the all programs advertise. The presentation of every program is assessed dependent on the general highlights, working framework support, program highlights, convention backing and language support. The paper is finished up with solid comments dependent on the examination.

Keywords: Web Browser, Search Engines, Information Technology, Internet Explorer, Mozilla Firefox.

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I. INTRODUCTION

A web browser is a software program that allows accessing of information on the internet. Followed by the WorldWideWeb software that was written by Tim Berners-Lee and released to the public in 1991, numerous web browsers have been developed and released to the market. As a result, the Internet users have multiple web browsers to choose from which presents the unavoidable question of "Which is the best browser in the market?" Regardless of web browser developers' efforts to remain competitive in the market, the life of web browsers is rather short. Unlike most browsers, including Netscape, Internet Explorer (IE) that was developed by Microsoft in 1995 has remained most popular among internet users.

Next to Netscape, which was introduced to the market in 1998, Mozilla Firefox was released in 2004 to compete with IE. The software codes of Firefox are in the open source format, and any software developers around the world can put their own ideas into this browser. As a result, Firefox's performance effectiveness and efficiency improved every day and gained popularity rapidly.

Browser	Market Share - %	Share
Google Chrome	67.63%	67.63%
Mozilla Firefox	8.83%	8.83%
Internet Explorer	7.26%	7.26%

Figure 1: Market shares by January, 2020 between IE and Firefox

This paper discusses and compares the various features of two leading web browser competitors, Firefox and IE. First of all, a brief history of IE and Firefox is discussed in the next section. This is followed by a comparison of various features such as general features, operating system support, browser features, protocol support, and language support, of both web browsers. Finally, conclusions and comments are stated.

2. HISTORY OF INTERNET EXPLORER AND MOZILLA FIREFOX

Internet Explorer History

The starting point of Internet Explorer is Spyglass Mosaic, the principal mainstream internet browser, created at the National Center for Supercomputing Applications (NCSA) in late 1992. Notwithstanding, neither IE form 1.0, discharged in July 1995, nor IE form 2.0, discharged in November 1995, was especially mainstream until IE form 3.0 with falling templates (CSS) support was discharged in 1996. The form 3.0 additionally gave greater security; be that as it may, specialists and programmers discovered security and protection vulnerabilities a while after its discharge. In September 1997, IE form 4.0 was discharged with supporting Group Policy which is a foundation used to convey and apply at least one wanted setups or approach settings to a lot of focused clients and PCs inside an Active Directory condition for unified administration. Web Explorer 5.0 was another huge discharge in September 1999 with bi-directional content help that permits composing both left-to-right and option to-left headings, ruby characters. The Dynamic HTML (DHTML) of IE 5.5, discharged in 2000, permitted

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progressively customized web applications, for example, intuitive and vivified sites utilizing a mix of HTML, JavaScript, and CSS. This innovation contributed intensely to the fast development of Ecommerce. In 2001, Internet Explorer form 6 was discharged with Windows XP giving progressively private, dependable, and adaptable innovation than past adaptations utilizing the Platform for Privacy Preferences (P3P). The P3P was created by the World Wide Web Consortium (W3C) to fulfill the web clients' security and security requests, for example, ensuring against following clients' web surfing. Counting the P3P, Internet Explorer Administration Kit (IEAK), Media bar, Windows Messenger combination, and programmed picture resizing were presented right now. The principal beta of IE7 was discharged on July 27, 2005 for specialized testing, and a first open review variant of Internet Explorer 7 (Beta 2 see: Pre-Beta 2 rendition) was discharged on January 31, 2006. The last open rendition was discharged on October 18, 2006. Around the same time, Yahoo! given a post-beta rendition of Internet Explorer 7 packaged with Yahoo! Toolbar and other Yahoo!- explicit customizations. In late 2007 Microsoft declared that IE7 would not be incorporated as a feature of Windows XP SP3, with both Internet Explorer 6 and 7 getting refreshes. Most PC producers, notwithstanding, have pre-introduced Internet Explorer 7 (just as 8) on new XP PC's, particularly netbooks. On October 8, 2007, Microsoft removed the Windows Genuine Advantage portion of IE7, allowing it to be downloaded and presented by those without a genuine copy of Windows.Within a year after IE7's discharge (end of 2006 to end of 2007) bolster calls to Microsoft had diminished 10-20%. On December 16, 2008, a security imperfection was found in Internet Explorer 7 which can be misused with the goal that saltines can take clients' passwords. The next day, a fix was given to fix the defect, assessed to have influenced around 10,000 sites. As of May 2012, evaluations of IE7's worldwide piece of the overall industry were 1.5-5%. IE8 advancement began in or before March 2006. In February 2008, Microsoft conveyed private solicitations for IE8 Beta 1, and on March 5, 2008, discharged Beta 1 to the overall population, despite the fact that with an attention on web engineers. The discharge propelled with a Windows Internet Explorer 8 Readiness Toolkit site advancing IE8 white papers, related programming apparatuses, and new highlights notwithstanding download connections to the Beta. Microsoft Developer Network (MSDN) included new segments itemizing new IE8 innovation. Significant press concentrated on a discussion about Version Targeting, and two new highlights at that point called WebSlice and Activities. The availability toolbox was advanced as something "engineers can endeavor to make Internet Explorer 8 'light up'."

On August 27, 2008, Microsoft made IE8 Beta 2 for the most part accessible. PC World noted different Beta 2 highlights, for example, InPrivate mode, tab detachment and shading coding, and improved models and similarity contrasted with Internet Explorer 7. Two name changes included Activities to Accelerators, and the IE7 Phishing channel renamed Safety Filter in the main Beta to SmartScreen, both joined by gradual specialized changes also. By August 2008, the new element called InPrivate had taken the spotlight.

The first non-beta variant was discharged on March 19, 2009. On January 5, 2009, an apparatus was given by Microsoft to hinder the programmed introduce of Internet Explorer 8 by means of Windows Update. As of May 20, 2009, Windows XPe (Embedded) was not an upheld stage for Internet Explorer 8. There have been no declarations of arranged help.

On May 27, 2010, Microsoft discharged Internet Explorer 8 enhanced for Bing and MSN.

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Advancement of Internet Explorer 9 started not long after Internet Explorer 8 was discharged. Microsoft started taking highlights proposals through Microsoft Connect not long after Internet Explorer 8 was discharged. The Internet Explorer group concentrated on improving help and execution for HTML5, CSS3, SVG, XHTML, JavaScript, equipment speeding up, and the UI highlighting dexterity and "a clean new plan". Microsoft first reported Internet Explorer 9 at PDC 2009 and talked basically about how it exploits equipment speeding up in DirectX to improve the presentation of web applications and improve the nature of web typography. Afterward, Microsoft declared that they had joined the W3C's SVG Working Group, which started theory that Internet Explorer 9 will bolster the SVG W3C suggestion. This was demonstrated to be valid at MIX 10, where they showed support for essential SVG markup and improved help for HTML5. They additionally reported that they would build the help enormously when the main Internet Explorer 9 Beta was discharged. The Internet Explorer group additionally presented the new JavaScript motor for 32-piece Internet Explorer 9, codenamed Chakra, which utilizes Just-in-time arrangement to execute JavaScript as local code.In mid-September 2011, the Acid3 test was overhauled to expel a couple "outdated and irregular" tests and thus IE9 now finishes the assessment with a score of 100/100. At MIX 10, the primary Internet Explorer 9 Platform Preview was discharged, which highlighted support for CSS3 and SVG, another JavaScript motor called Chakra, and a score of 55/100 on the Acid3 test, up from 20/100 for Internet Explorer 8. On May 5, 2010, the second Internet Explorer 9 Platform Preview was discharged, which highlighted a score of 68/100 on the Acid3 test and quicker execution on the WebKit SunSpider JavaScript benchmark than the primary Internet Explorer 9 Platform Preview. On June 23, 2010, the third Internet Explorer 9 Platform Preview was discharged, which included a score of 83/100 on the Acid3 test and a quicker JavaScript motor than the second Internet Explorer 9 Platform Preview. The third Internet Explorer 9 Platform Preview additionally incorporates support for HTML5 sound, video, and canvas labels, and WOFF. On August 4, 2010, the fourth Internet Explorer 9 Platform Preview was discharged, which includes a score of 95/100 on the Acid3 test and a quicker JavaScript motor than the third Internet Explorer 9 Platform Preview. On September 15, 2010, the Internet Explorer 9 Public Beta was discharged close by Platform Preview 5, highlighting another UI. Rather than the reviews, the Beta replaces any recently introduced adaptation of Internet Explorer. The 6th Internet Explorer 9 Platform Preview was discharged on October 28, 2010, and incorporates support for CSS3 2D changes and HTML5 semantic components. The seventh Internet Explorer 9 Platform Preview was discharged on November 17, 2010, and includes better JavaScript execution.

These sneak peaks were not full forms of Internet Explorer 9, as they were for trying the most recent variant of the Trident design motor. They were for web designers to send input on the upgrades made, worked in corresponding with some other introduced programs, and were sneak peaks of the renderer innovation just, containing moderate UIs and lacking customary interface components, for example, a location bar and route catches. Microsoft refreshed these sneak peaks roughly at regular intervals. On November 23, 2010, two updates for the Internet Explorer 9 Public Beta were discharged. KB2448827 carries enhancements to unwavering quality and fixes strength issues from the past beta discharge. There are very little subtleties of settled issues uncovered by Microsoft. In addition, KB2452648 settle the in-constructed criticism issue with Internet Explorer 9 and the most recent rendition of Windows Live Sign-in Assistant. These updates can be gotten from Windows Update or the Microsoft Download Center site. Around the same time, Internet Explorer fabricate 9.0.8027.6000 dependent on Internet Explorer 9 Platform Preview 7 was spilled. On February

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10, 2011, the Internet Explorer 9 Release Candidate and Platform Preview 8 were discharged. The Release Candidate adaptation included improved execution, a Tracking Protection highlight, a refined UI, support for more web benchmarks, and different enhancements. The last form of Internet Explorer 9 was freely discharged during the South by Southwest (SXSW) Interactive meeting in Austin, Texas, on March 14, 2011. Web Explorer 10 was first reported on April 12, 2011 at the MIX 11 meeting in Las Vegas. Right now, displayed a demo rendition of Internet Explorer 10 alongside a demo form of Windows 8. Around the same time, a Platform Preview of Internet Explorer 10 was discharged on the Microsoft Internet Explorer Test Drive site. It just backings Windows 7; later stage reviews just help Windows 8. Web Explorer 10 Platform Preview 1 backings CSS3 framework design, CSS3 adaptable box format, CSS3 multi-section design, CSS3 slope, and full equipment speeding up. Commentators' reactions to the arrival of Internet Explorer 10 Platform Preview were fluctuated; be that as it may, they noticed how soon (29 days) after the arrival of Internet Explorer 9 Microsoft started discussing the following form. While Don Reisinger of eWeek recorded his mentioned highlights for the following adaptation, Michael Muchmore of PC Magazine tried Platform Preview 1's presentation and HTML5 support with both Microsoft's and outsiders' test suites. In his test, Platform Preview 1 performed superior to Internet Explorer 9 yet not in every case superior to anything the contending internet browsers. On September 13, 2011, Microsoft discharged the designer see of Windows 8 to overall population, which accompanied Internet Explorer Developer Preview (the principal full program manifestation of Internet Explorer 10). Despite the fact that Internet Explorer is the last significant internet browser among Mozilla Firefox, Google Chrome, Opera, and Safari to help spell checking, it is the main work area program on Windows to help auto-revision. Web Explorer 10 was discharged to assembling alongside Windows 8 and Windows Server 2012. The last arrived at general accessibility on September 4, 2012 while the previous arrived at general accessibility on October 26, 2012. A review of Internet Explorer 10 for Windows 7 and Windows Server 2008 R2 was discharged on November 13, 2012. It isn't good with past renditions of Windows. Web Explorer 11 is highlighted in Windows 8.1, which was discharged on October 17, 2013. It incorporates an inadequate component for synchronizing tabs. It is a significant update to its designer devices, upgraded scaling for high DPI screens, HTML5 prerender and prefetch, equipment quickened JPEG deciphering, shut subtitling, HTML5 full screen, and is the principal Internet Explorer to help WebGL and Google's convention SPDY (beginning at v3). This rendition of IE has highlights devoted to Windows 8.1, including cryptography (WebCrypto), versatile bitrate gushing (Media Source Extensions) and Encrypted Media Extensions. Web Explorer 11 was made accessible for Windows 7 clients to download on November 7, 2013, with Automatic Updates in the next weeks. Web Explorer 11's client specialist string currently distinguishes the operator as "Trident" (the fundamental format motor) rather than "MSIE". It additionally declares similarity with Gecko (the format motor of Firefox). Web Explorer 11 was made accessible for Windows Server 2012 and Windows Embedded 8 Standard in the spring of 2019 Microsoft Edge, authoritatively uncovered on January 21, 2015, has supplanted Internet Explorer as the default program on Windows 10. Web Explorer is still introduced in Windows 10 so as to keep up similarity with more established sites and intranet destinations that require ActiveX and other Microsoft inheritance web innovations.

As per Microsoft, advancement of new highlights for Internet Explorer has stopped. Be that as it may, it will keep on being kept up as a major aspect of the help arrangement for the variants of Windows with which it is incorporated.

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Mozilla Firefox History

The undertaking started as a test part of the Mozilla venture by Dave Hyatt, Joe Hewitt, and Blake Ross. They accepted the business prerequisites of Netscape's sponsorship and designer driven element creep traded off the utility of the Mozilla program. To battle what they saw as the Mozilla Suite's product swell, they made an independent program, with which they expected to supplant the Mozilla Suite. On April 3, 2003, the Mozilla Organization reported that they wanted to change their concentration from the Mozilla Suite to Firefox and Thunderbird. The people group driven SeaMonkey was framed and in the long run supplanted the Mozilla Application Suite in 2005. The Firefox venture has experienced a few name changes. The incipient program was initially named Phoenix, after the legendary feathered creature that rose triumphantly from the cinders of its dead antecedent (right now, the "remains" of Netscape Navigator, after it was sidelined by Microsoft Internet Explorer in the "Main Browser War"). Phoenix was renamed because of a trademark guarantee from Phoenix Technologies. The substitution name, Firebird, incited an extraordinary reaction from the Firebird database programming venture. The Mozilla Foundation consoled them that the program would consistently bear the name Mozilla Firebird to maintain a strategic distance from disarray. After further weight, Mozilla Firebird became Mozilla Firefox on February 9, 2004. The name Firefox was said to be gotten from an epithet of the red panda, which turned into the mascot for the recently named venture. The Firefox venture experienced numerous adaptations before rendition 1.0 was discharged on November 9, 2004. For the contraction of Firefox, Mozilla favors Fx or fx, however it is frequently shortened as FF. In 2016, Mozilla declared an undertaking known as Quantum, which tried to improve Firefox's Gecko motor and different segments to improve Firefox's exhibition, modernize its engineering, and progress the program to a multi-process model. These enhancements came in the wake of diminishing piece of the overall industry to Google Chrome, just as worries that its exhibition was passing in correlation. In spite of its enhancements, these progressions required existing additional items for Firefox to be made contradictory with more up to date forms, for another expansion framework that is intended to be like Chrome and other ongoing programs. Firefox 57, which was discharged in November 2017, was the main form to contain improvements from Quantum, and has subsequently been named Firefox Quantum. A Mozilla official expressed that Quantum was the "greatest update" to the program since rendition 1.0. On May 3, 2019, the termination of a moderate marking declaration caused Firefox to naturally handicap all program augmentations (additional items). Mozilla started the turn out of a fix presently, utilizing their Mozilla Studies segment.

3.   METHODOLOGY

Our methodology contains self made web browser evaluation checklist. It contains 40 related matters to measure its point. According to taken point there will be recommendations for each browser.

WEB BROWSER EVALUATION CHECKLIST

Name of Web Browser: Internet Explorer

Address (URL): http://www.microsoft.com/windows/internet-explorer/default.aspx

QUESTION	*ANSWER*	*HOW TO SCORE*	*Pts*
CONTENT			

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OPERATING SYSTEM SUPPORT:

1. Does the web browser support Windows OS?	*1* **Y / N**	Y = +10 pts. N = -10 pts.	+10 pts.
2. Does the web browser support Mac OS X?	2 **Y / N**	Y= +5 pts. N= -5 pts.	+5 pts.
3. Does the web browser support Linux?	3 **Y / N**	Y= +5 pts. N= -5 pts.	-5 pts.
4. Does the web browser support BSD?	4 **Y / N**	Y= +5 pts. N= -5 pts.	-5 pts.

BROWSER FEATURES:

5. Does the web browser provide bookmark managing?	*3* **Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.
6. Does the web browser provide download managing?	*6* **Y / N**	Y = +2 pts. N = -2 pts.	-2 pts.
7. Does the web browser provide password managing?	*7* **Y / N**	Y = +2 pts. N = -2 pts.	+2 pts.
8. Does the web browser provide form managing?	*8* **Y / N**	Y =+3 pts N = -3 pts.	+3 pts.
9. Does the web browser provide spell checking?	*9* **Y / N**	Y = -2 pts. N = +2 pts.	-2 pts.
10. Does the web browser provide search engine toolbar?	10 **Y / N**	Y =+3 pts N = - 3 pts.	+3 pts.

ACCESIBILITY FEATURES:

11. Does the web browser have tabbed browsing feature?	11 **Y / N**	Y=+4 pts. N=-4 pts.	+4 pts.
12. Does the web browser have pop-up blocking feature?	*12* **Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.
13. Does the web browser have incremental finding feature?	*13* **Y / N**	Y = +1 pts. N = -1 pts.	+1 pts.
14. Does the web browser have ad filtering feature?	*14* **Y / N**	Y = +1 pts.	+1 pts.

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	15	N = -1 pts.	+2 pts.
15. Does the web browser have full-text history search?	Y / N	Y = +2 pts. N = -2 pts.	
WEB TECHNOLOGY SUPPORT:		Y = +1 pts.	
16. Does the web browser have CSS 2.1 web technology feature?	16 Y / N	N = -1 pts.	+1 pts.
17. Does the web browser have frames web technology feature?	17 Y / N	Y = +2 pts. N = -2 pts.	+2 pts.
18. Does the web browser have NAV Links web technology feature?	18 Y / N	Y =+2 pts. N =-2 pts.	-2 pts.
19. Does the web browser have XHTML 1.1 web technology feature?	19 Y / N	Y =+2 pts. N =-2 pts.	-2 pts.
20. Does the web browser have Web Forms 2.0 web technology feature?	20 Y / N	Y =+3 pts. N =-3 pts.	-3 pts.
21. Does the web browser have Voice XML web technology feature?	21 Y / N	Y =+3 pts. N =-3 pts.	-3 pts.
MOBILE WEB TECHNOLOGY SUPPORT:	22		
22. Does the web browser have C-HTML mobile web technology support?	Y / N	Y = +5 pts. N = -5 pts.	-5 pts.
23. Does the web browser have HDML mobile web technology support?	23 Y / N	Y = +4 pts. N = -4 pts.	-4 pts.
24. Does the web browser have I-Mode mobile web technology support?	24 Y / N	Y=+2 pts. N=-2 pts.	-2 pts.
	25		

25. Does the web browser have XHTML Mobile Profile mobile web technology support?	**Y / N**	Y = +3 pts. N = -3 pts.	-3 pts.
26. Does the web browser have WML mobile web technology support?	*26* **Y / N**	Y = +3 pts. N = -3 pts.	-3 pts.
PLUGINS & SYNDICATED CONTENT SUPPORT:	*27*		
27. Does the web browser have ActiveX support?	**Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.

28. Does the web browser have NPAPI support?	*28* **Y / N**	Y = +3 pts. N = -3 pts.	-3 pts.
29. Does the web browser have JAVA support?	*29* **Y / N**	Y = +5 pts. N = -5 pts.	+5 pts.
30. Does the web browser have RSS support?	*30* **Y / N**	Y = +2 pts. N = -2 pts.	+2 pts.
PROTOCOL SUPPORT: 31. Does the web browser have Hypertext Transmission Protocol (HTTP) support?	*31* **Y / N**	Y = +5 pts. N = -5 pts.	+5 pts.
32. Does the web browser have E-Mail protocol support?	*32* **Y / N**	Y = +3 pts. N = -3 pts.	-3 pts.
33. Does the web browser have File Transfer protocol (FTP) support?	*33* **Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.
34. Does the web browser have Bit Torrent protocol support?	*34* **Y / N**	Y =+3 pts. N = -3 pts.	-3 pts.
IMAGE FORMAT SUPPORT: 35. Does the web browser have JPEG image format support?	*35* **Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.

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36.				
Does the web browser have GIF image format support?	*36* Y / N	Y = +3 pts. N = -3 pts.	+3 pts.	
37. Does the web browser have PNG image format support?	*37* Y / N	Y = +3 pts. N = -3 pts.	+3 pts.	
38. Does the web browser have TIFF image format support?	*38* Y / N	Y = +3 pts. N = -3 pts.	-3 pts	
39. Does the web browser have SVG image format support?	*39* Y / N	Y = +3 pts. N = -3 pts.	-3 pts.	
40. Does the web browser have SVG image format support?	*40* Y / N	Y = +3 pts. N = -3 pts.	-3 pts.	

Total Points for Internet Explorer: 5 pts.

WEB BROWSER EVALUATION CHECKLIST

Name of Web Browser: Mozilla Firefox

Address (URL): http:// www.mozilla.com/firefox/

Q UESTION	*ANSWER*	*HOW TO SCORE*	*P t s*
CONTENT			
OPERATING SYSTEM SUPPORT:			
12. Does the web browser support Windows OS?	*1* Y / N	Y = +10 pts. N = -10 pts.	+10 pts.
13. Does the web browser support Mac OS X?	2 Y / N	Y= +5 pts. N= -5 pts.	+5 pts.
14. Does the web browser support Linux?	3 Y / N	Y= +5 pts. N= -5 pts.	+5 pts.
15. Does the web browser support BSD?	4 Y / N	Y= +5 pts. N= -5 pts.	+5 pts.
BROWSER FEATURES:		Y = +3 pts.	
16. Does the web browser provide bookmark managing?	*3* Y / N	N = -3 pts.	+3 pts.

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17. Does the web browser provide download managing?	6 Y / N	Y = +2 pts. N = -2 pts.	+2 pts.
18. Does the web browser provide password managing?	7 Y / N	Y = +2 pts. N = -2 pts.	+2 pts.
19. Does the web browser provide form managing?	8 Y / N	Y =+3 pts N = -3 pts.	+3 pts.
20. Does the web browser provide spell checking?	9 Y / N	Y = -2 pts. N = +2 pts.	+2 pts.
21. Does the web browser provide search engine toolbar?	10 Y / N	Y =+3 pts N = - 3 pts.	+3 pts.
ACCESIBILITY FEATURES:			
22. Does the web browser have tabbed browsing feature?	11 Y / N	Y=+4 pts. N=-4 pts.	+4 pts.
12. Does the web browser have pop-up blocking feature?	12 Y / N	Y = +3 pts. N = -3 pts.	+3 pts.
13. Does the web browser have incremental finding feature?	13 Y / N	Y = +1 pts. N = -1 pts.	+1 pts.
14. Does the web browser have ad filtering feature?	14 Y / N	Y = +1 pts. N = -1 pts.	-1 pts.
15. Does the web browser have full-text history search?	15 Y / N	Y = +2 pts. N = -2 pts.	-2 pts.

WEB TECHNOLOGY SUPPORT:		Y = +1 pts.	
16. Does the web browser have CSS 2.1 web technology feature?	16 Y / N	N = -1 pts.	+1 pts.
17. Does the web browser have frames web technology feature?	17 Y / N	Y = +2 pts. N = -2 pts.	+2 pts.

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Question	No.	Scoring	Points
18. Does the web browser have NAV Links web technology feature?	18 Y / N	Y =+2 pts. N =-2 pts.	-2 pts.
19. Does the web browser have XHTML 1.1 web technology feature?	19 Y / N	Y =+2 pts. N =-2 pts.	+2 pts.
20. Does the web browser have Web Forms 2.0 web technology feature?	20 Y / N	Y =+3 pts. N =-3 pts.	-3 pts.
21. Does the web browser have Voice XML web technology feature?	21 Y / N	Y =+3 pts. N =-3 pts.	-3 pts.
MOBILE WEB TECHNOLOGY SUPPORT:	22		
22. Does the web browser have C-HTML mobile web technology support?	Y / N	Y = +5 pts. N = -5 pts.	+5 pts.
	23		-4 pts.
23. Does the web browser have HDML mobile web technology support?	Y / N	Y = +4 pts. N = -4 pts.	
	24		+2 pts.
24. Does the web browser have I-Mode mobile web technology support?	Y / N	Y=+2 pts. N=-2 pts.	
	25		
25. Does the web browser have XHTML Mobile Profile mobile web technology support?	Y / N	Y = +3 pts. N = -3 pts.	-3 pts.
	26	Y = +3 pts.	
26. Does the web browser have WML mobile web technology support?	Y / N	N = -3 pts.	-3 pts.
PLUGINS & SYNDICATED CONTENT SUPPORT:	27	Y = +3 pts.	
27. Does the web browser have ActiveX support?	Y / N	N = -3 pts.	-3 pts.
	28	Y = +3 pts.	
28. Does the web browser have NPAPI support?	Y / N	N = -3 pts.	+3 pts.

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29. Does the web browser have JAVA support?	*29* **Y / N**	Y = +5 pts. N = -5 pts.	+5 pts.
30. Does the web browser have RSS support?	*30* **Y / N**	Y = +2 pts. N = -2 pts.	+2 pts.

PROTOCOL SUPPORT: 31. Does the web browser have Hypertext Transmission Protocol (HTTP) support?	*31* **Y / N**	Y = +5 pts. N = -5 pts.	+5 pts.
32. Does the web browser have E-Mail protocol support?	*32* **Y / N**	Y = +3 pts. N = -3 pts.	-3 pts.
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34. Does the web browser have Bit Torrent protocol support?	*34* **Y / N**	Y =+3 pts. N = -3 pts.	+3 pts.
IMAGE FORMAT SUPPORT: 35. Does the web browser have JPEG image format support?	*35* **Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.
36. Does the web browser have GIF image format support?	*36* **Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.
37. Does the web browser have PNG image format support?	*37* **Y / N**	Y = +3 pts. N = -3 pts.	+3 pts.
38. Does the web browser have TIFF image format support?	*38* **Y / N**	Y = +3 pts. N = -3 pts.	-3 pts
39. Does the web browser have SVG image format support?	*39*	Y = +3 pts. N = -3 pts.	-3 pts.

		Y / N		-3 pts.
		40	Y = +3 pts.	
40.	Does the web browser have SVG image format support?	Y / N	N = -3 pts.	

Total Points for Mozilla Firefox: 53 pts.

4. CONCLUSIONS AND RECOMMENDATIONS

This paper offered a correlation of two driving internet browsers, Internet Explore and Firefox, alongside their short chronicles. Settling on a choice on deciding the further developed program among IE and Fx is clear founded on the different figures in the tables. Notwithstanding, settling on such a choice isn't as goal as it appears when managing individuals. Most of normal clients will in general incline toward the items they are as of now acquainted with.

Some recommendations can be:

- **Integrated/completely safe software understanding** should be reflected out in all areas of Internet Explorer.
- **Lacking support & accessibility features** that take place at competitor software should be attached to the new versions of Internet Explorer.
- Open source project cannot directly apply to Internet Explorer hereafter but **user involvement** to software should be provided by Microsoft.
- **More financial resources should be allocated on vertical integration** strategy of the company – although it is not the creator of the web browser marketplace because it is already an industry creator company; it may not go bankrupt but it may lose some of its brand power due to that market.
- **Most importantly, Microsoft should differentiate IE more and more** as much as it can like what it did for Edge.
- **Mozilla should protect its innovative position** in the web browser marketplace because it mostly survives due to being most innovative company in that market.
- **Mozilla should work with people who gives extra care to openness of ideas, applications** in order to stay innovative. Continuous data flow from voluntary contributors to open source project should be analyzed carefully by Mozilla. With related to this it should also take into consideration that what type of data is required by Firefox project, when will it be used etc.

Taking everything into account, it is somewhat hard to dispassionately choose the champ of internet browser rivalry at this stage. So as to stay solid in the market, designers should additionally recognize and meet the necessities of web clients. All things considered, seriousness of the internet browser showcase is a decent sign of organizations' degree of exertion in supporting clients.

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