

ADDIS ABABA UNIVERSITY

ADDIS ABABA INSTITUTE OF TECHNOLOGY

CENTER OF INFORMATION TECHNOLOGY AND SCIENTIFIC COMPUTING

**Assignment one for Fundamental of Web Development**

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# History of the Internet

The world would not be what it has become today without the internet. It touches just about every aspect of how we live, work, socialize, shop, and play. In just a few decades, the internet has gone from a novel way for the US military to keep in touch, to the always-connected heartbeat of the human race. With each passing year, more and more people have gained access to the internet.

Internet started as a defense department network designed specifically to hook up different research centers around a country which began in ARPA the Advanced Research Projects Agency in Arlington Virginia.

Early days

The internet traces its roots to a US defense department project in the 1960s born out of the Cold War, and a desire to have armed forces communicate over a connected, distributed network. The military’s research arm, the Advanced Research Projects Agency (ARPA), began work on a communication project, which led to the creation of ARPANET, one of the earliest iterations of computers talking to each other on a network. ARPANET eventually connected military installations, third-party contractors, and a handful of universities in the US. By the mid-1970s, ARPANET had connected to NORSAR, a US-Norwegian system designed to monitor seismic activity from earthquakes or nuclear blasts, over satellite. The Norwegian system then connected to computers in London, and eventually, other parts of Europe.

The computers used to connect this nascent network together were gargantuan by today’s standards. The SDS Sigma 7, which cost $700,000 which is about $4.8 million in today’s rate the mid-1960s was used by the University of California, Los Angeles to send the first message over ARPANET to Stanford University. SDS, or Scientific Data Systems, an early US computer company staffed by Packard Bell alums, built that first computer that connected to the network. The machine, like its offspring that helped the first people land on the Moon, was not like the computer we know today: It took up a large portion of the room it was in and consisted of a series of cabinets with reel-to-reel tapes, flashing buttons, and toggle switches. There would’ve been a small station with a keyboard and a very basic monitor, but much of the data for the machine would’ve been stored on punch cards. The first message sent was the word “lo;” the researchers were trying to type the word “login” and the system crashed after two letters.

Dial up days

The earliest days of the consumer internet were sound tracked by a cacophony of digital hisses and beeps.

As internet protocols and technologies were standardized, in the late 1980s and early 1990s, universities, businesses, and even regular people started to connect over the internet. But before the invention of the World Wide Web, accomplishing anything was a real chore. Information on the internet was difficult to search for, and almost impossibly dense.

We may not have moved beyond the internet of the early 1990s were it not for Tim Berners-Lee, who was looking for an easier way to find and share research. Berners-Lee, who in 1989 was a researcher working at CERN, the Swiss nuclear research facility, came up with the concept of the World Wide Web, a decentralized repository of  information, linked together and shareable with anyone who could connect to it. He built the first webpage in 1993. Seeing the value in what Berners-Lee and his team had created, CERN opened up the software for the web to the public domain, meaning anyone could use it and build upon it.

Berners-Lee also created the first website browser (initially called World Wide Web and then renamed Nexus). But it wasn’t until a team of former students at the University of Illinois at Urbana–Champaign (UIUC), led by Marc Andreessen, created the Mosaic web browser in 1993 that the web started to take off. Andreessen and his team left the research facility at UIUC to start Netscape, the company that produced the first web browser many people ever used.

By the mid-1990s, Netscape had about 80% of the browser market in the US and Europe. Its only real competitor was Microsoft’s Internet Explorer, which first launched with Windows 95. But Microsoft, a huge company even then, was able to iterate its software faster as the web changed, implementing new technologies like CSS (cascading style sheets—the code that ensures the web is more than just bland pages of text) before Netscape could. Microsoft’s dominance remained pretty much unchallenged until the dawn of the mobile web, but more on that later.

Broadband days

At some point in 2004, for the first time ever, there were more people in the US who had access to broadband internet than dial-up, according to the Pew Research Center. The price of broadband connections had begun to fall as more users signed up. Broadband modems act a little differently than their dial-up predecessors in that they do not need to call out over the phone line to your internet service provider to establish a connection to the internet—they stay connected unless they’re turned off. This coupled with the advent of wifi, broadband has revolutionized the way that people connect to the internet. Before wifi and broadband, accessing the internet was a very static and slow experience, requiring someone to sit in front of a large computer, physically connected to a modem, to access the web. But when wifi started to gain popularity, it made the internet accessible wherever someone had a laptop, tablet, or Palm Pilot and wifi connection.

Broadband speeds are generally faster than dial-up. In the US, the Federal Communications Commission (FCC) considers a broadband connection—at least for a fixed line, rather than a cellular connection—one that can achieve speeds of 25 Mbps for downloads and 3 Mbps for uploads. This could certainly change in the future—the definition has changed in the past—but for now, it accurately portrays what most of the country has access to.

Cellular data

Mobile broadband—connecting to the internet through a cell phone—has exploded in popularity over the last few years. At the end of 2013, there were about 1.9 billion smartphone subscriptions in the world, and by the end of 2018, there were about 5.3 billion—that’s a jump of about 180% in five years.

The first truly useful mobile data standard was 3G in 2003, when radio technology first allowed for more than calls and texts to be sent over the air.

As 5G wireless networks are deployed around the world today, many with the  promise of download speeds over 1 Gigabit per second; compared to LTE, which maxes out at around 25 Mbps in the US, and connections so airtight it’ll feel like you’re in the same room as someone thousands of miles away. It’s easy to see how the internet could progress from its simple roots, but not what form it will take.

# View the 5 – 10 popular websites of your choice from web archive URL and put your observation and assessment.

1. Youtube.com
2. Apple.com
3. Facebook.com
4. Amazon.com
5. EBay.com

This are the websites I’ll review for this question. We all know how websites have evolved and become more and more interactive as each year progressed, and as I believe it this progression is ongoing and it will last to many years to come.

**YouTube**

|  |  |  |
| --- | --- | --- |
| 2006 | The YouTube in 2005 and 2006 were more or less the same. As we can see the coloring of the website looks familiar from the one we know right now. It has a red and white theme, which has been familiar to this day. |  |
| 2008 | As we can see the site has received some revision within 2 years but. This version of YouTube has had some improvements but there is nothing drastic. Major change I saw the placement of the search bar. |  |
| 2010 | The search bar again has been revised but it still has the same features from back in 2008. |  |
| 2012 | By far this is the most customized YouTube version I have seen. It has some major changes like the theme changed to black and white and the options had changed place to the left hand side of the website. |  |
| 2014 | This version of YouTube has come back to the original theme which is red and white. It still came with the improvements of the options being in the left hand side of the website. |  |
| 2016 | This version of YouTube didn’t have a drastic change from the earlier years. |  |
| 2018 | This version of YouTube didn’t have a drastic change from the earlier years. |  |
| 2020 | This is the current version of YouTube we all know today. It has the almost same functionalities from the other 3-4 versions. But one change is the look of the options had been upgraded to a newer cleaner version. |  |

Overall, YouTube has had some major changes throughout the years like the 2012. They changed the UI of the whole website and they surely got it to the older theme after then.

**Apple**

|  |  |  |
| --- | --- | --- |
| 2006 | This is the 2006 website of apple. It has a nice UI for its time. The Apple website is usually a site where they put their latest new products. |  |
| 2008 | This version of the website has changed in the style department. It has basically changed in the menu options on the top. In their 2008 website they advertised the iPhone 3G model. |  |
| 2010 | The 2010 website has not really changed much. It has an overall same look on the website. This website is advertising the iPhone 4 model. |  |
| 2012 | This version of the website has had some changes that can be seen, for example the menu tile has had some change. This version of website is introducing the MacBook Pro. |  |
| 2014 | This version looks different but the menu tile looks the same, the thing that has changed is the aspect ratio of the website has changed. |  |
| 2016 | The apple website of this time had major changes. One change that I can see is the menu tile being gone and they modified how they presented the phone upfront. |  |
| 2018 | This version of the website looks like the one before where they just put up the apple product they want to show you and keep the simplistic look so that the user doesn’t feel overwhelmed. |  |
| 2020 | This is the current version of the website. They kept the simplistic look but made some changes with the color choices. |  |

Overall, Apple makes amazing websites that only gets the users to familiarize with their different products. They keep things simple thinking they will not overwhelm the user and only focus on their products.

**Facebook**

|  |  |  |
| --- | --- | --- |
| 2006 | This is the 2006 version of Facebook website has some features that has the user and password field on the left side of the page |  |
| 2008 | This version of the facebook login page has the username and password on the left hand side and the option to create a new account on the right hand side of the page. |  |
| 2010 | This version of the website looks more familiar to the one to the current facebook login page with only some minor change. |  |
| 2012 | This version of facebook is targeted to the mobile phone users. The cellular data bubble started in that era and facebook was a company that used that as an advantage to increase their overall users. |  |
| 2014-2020 | This is the current version of the facebook login page and it has served for a partially long. The facebook login page has been consistent with its UI for almost 5-6 years. |  |

Overall, facebook hasn’t really shifted with its UI really often and for the most part of it. It’s nice that they are keeping a consistent user interface giving their users.

**Amazon**

|  |  |  |
| --- | --- | --- |
| 2001 | Amazon is a site that a many major changes over the years. This version of amazon is slightly different from the other versions by the theme of the page. Usually amazon sites are blue and white but this site is red and white. |  |
| 2004 | In this version they have changed to the theme we all know today. The consistency of the website theme hasn’t really change much since then. |  |
| 2007 | The change this version of the website has made was on the menu tile the color of it is also changed slightly to a lighter blue. |  |
| 2010 | This version made the change in the menu tile but this is a different change from earlier version. This version introduced the search bar in the menu tile. |  |
| 2013 | This version of the website has changed in the top tile with the exclusion of the blue bar and the menu that was found on the left hand side that was on the earlier versions. |  |
| 2016 | This version of the amazon website has a futuristic look form the other earlier version. The way the animations work looks so seamless. |  |
| 2020 | This is the current version of the website. It is not as different |  |

Overall, amazon is a multi-billion dollar company and with this data we can see how they developed their website throughout the course 19 years.

**EBay**

|  |  |  |
| --- | --- | --- |
| 2002 | EBay is an e-commerce website like amazon. It had many versions before landing to the version we know today. This is the 2002 version website. As we can see the colors were very bright and just like the logo of the website. |  |
| 2004 | This version of the website has some minor changes but nothing much significant. The style of the website has been more modified and looks more modern |  |
| 2007 | This version of the website has some minor changes like the navigation bar got more modern. |  |
| 2010 | This version of the website isn’t much more different from the other version, some minor changes include the exclusion of the yellow bars in the navigation. |  |
| 2013 | This version of the website has the biggest jump from the other versions. This version is more modern features like the organization of the website’s navigation bar. |  |
| 2016 | This version is has excluded the navigation bar on the left side that were included in the previous versions. |  |
| 2020 | This is the latest version of the website right now. |  |

Overall, EBay has made some significant changes from the earlier times.

# List 5 website each on the 12 categories you learned

1. Portal - is a specially designed website that brings information from diverse sources, like emails, online forums and search engines, together in a uniform way. Usually, each information source gets its dedicated area on the page for displaying information often, the user can configure which ones to display. The extent to which content is displayed in a "uniform way" may depend on the intended user and the intended purpose, as well as the diversity of the content.

* Addis Ababa University portal :- <https://portal.aau.edu.et/> This is a portal for the Addis Ababa university students. This portal is used for checking grades and also for registration.
* Manager Portal |Envestnet :- <https://www.envestnet.com/managerportal> Leverage an enhanced manager portal to access key metrics that can dive better decisions on distribution and scales.
* AASTMT Student Portal: - <https://studentportal.aast.edu/> This is a portal for the students of the AASTU students.
* UAB Medicine, Patient Portal: - <http://www.uabmedicine.org/> this portal is used for the patient recording purposes that is sited in Britain.
* Forest Hills Pediatrics:- <https://www.foresthillspediatrics.com/> To insure the proper medication is refilled, Forest Hills Pediatrics this portal was made.

1. News – “An online newspaper is the online version of a newspaper, either as a stand-alone publication or as the online version of a printed periodical.” English Wikipedia describes news websites like this. There are many news websites and here are some;

* Yahoo! News - <http://news.yahoo.com/> 175,000,000 – Estimated unique monthly visitors
* Google News - <http://news.google.com/> 150,000,000 – Estimated unique monthly visitors
* Huffington Post - <http://www.huffingtonpost.com/> 110,000,000 – Estimated unique monthly visitors
* CNN - <http://www.cnn.com/> 95,000,000 – Estimated unique monthly visitors
* Fox News - <http://www.foxnews.com/> 70,000,000 – Estimated unique monthly visitors

1. Informational – Informational websites are those sites that are created in order to provide a customized and branded resource for potential and active customers, members, investors and so forth. These websites are usually content and design-driven. A great informationalwebsite can act as an excellent sales tool for your company. Here are some of the informational websites:

* The Verge :- <http://www.theverge.com/> This website’s homepage meets you with a colorful and huge puzzle of hot stories’ headlines, showing glimpse of the articles. The top stories are given more space to draw the reader’s attention to the hottest news.
* Mosaic Art Now :- <http://www.mosaicartnow.com> The website maintains trendy simplistic and unser0friendliness, being very responsive to any screen size. The deep customization resulted a varied content display.
* Conde Nast :- <http://www.condenast.com> The giant content slider in the header is really helpful in finding the Conde Nast’s beliefs.
* Airbnb:- <https://airbnb.com> This website includes the date and destination in a smart search form which is the first info that visitors will see
* William Mcdounough :- <http://www.mcdonough.com> the section of the website are customizes. The hero slider functionally rather complex, there is a unique tag cloud on the home page.

1. Business/Marketing - Web marketing is the process of using the Internet to market your business. It includes the use of social media, search engines, blogging, videos, and email. Promoting a business takes effort. There are a variety of ways to do it. Traditional advertising in newspapers, on the radio and television, direct mail, and billboards has been around for decades. Here are some of the business/ marketing websites:

* Trip Advisor :- <https://www.tripadvisor.com/> If your business caters to tourists, Tri[Advisor can be a valuable marketing tool.
* FourSquare for Business :- <http://business.foursquare.com/> IN addition to your own website and social media sites, a listing on four square can help customers find you.
* LinkedIn :- <https://www.linkedin.com/> LinkedIn is a great way ti network with other business owners and find great workers. But it can also be used to help customers learn more about you.
* Twitter :- <https://twitter.com/> Twitter has become an important way to network with other business owners, but it can also be used for promotion.
* Yelp: - <https://www.yelp.com/> The mere mention of popular social review site Yelp tends to strike fear in business owners everywhere.

1. Educational – Educational websites are websites that help students learn on things they are interested in. Educational websites might be free like some courses on udacity from google they also have paid courses.

* Coursera :- <http://www.cousera.org/> Course era is a website that partners with universities and organizations around the world. This brings a wide variety of topics and perspectives to one searchable database.
* TED-Ed.com :- <https://ed.ted.com/> Another great destination for more general learning is TED-Ed. From the same people that brought you the all-encompassing, motivational web series,
* Khan Academy:- <https://www.khanacademy.org/> partnering with many post-secondary schools, Khan Academy offers a useable, well organized interface.
* NHS.uk :- <http://www.nhs.uk/Pages/HomePage.aspx>
* edX :- <https://www.edx.org/> Another great option for free online education. Also bringing together courses from many different schools, the site has impressive, quality information for everyone.

1. Entertainment - Entertainment blends entertaining interactive functionality and content including live video streaming, video chat communications, multi-player gaming, music and videos streaming, with [social networking service](https://en.wikipedia.org/wiki/Social_networking_service) such as social graph management, [forums](https://en.wikipedia.org/wiki/Internet_forum), [reviews](https://en.wikipedia.org/wiki/Reviews), ratings, and [geo-location](https://en.wikipedia.org/wiki/Geo-location) options. It is the foundation for a more immersive, interactive, enriching and engaging content consumption experience through social channels.

* Netflix: - <https://www.netflix.com/> Netflix is the world’s leading Internet television network with more than 36 million members in 40 countries enjoying more than one billion hours of TV shows and movies per month including original movies.
* Hulu plus: - <https://www.hulu.com/start> offers unlimited instant streaming of current hit shows, classic series and acclaimed movies.
* Rolling stone: - <https://www.rollingstone.com/> Rolling stone magazine is one of the most esteemed establishment in the music world. Naturally its website became one of the most influential source for artists and consumers.
* ESPN :- <http://espn.go.com/> is the web extension of the mighty Entertainment and sports programming Network which provides comprehensive sports coverage since 1979.
* Time magazine :- <https://time.com/> Time has the world’s largest circulation for a weekly news magazine, and has a readership of 25 million, 20 million of which are in the US.

1. Advocacy – An advocacy website contains content that describes a cause, opinion, or idea (i.e. business/marketing sites). These web sites usually present views of a particular group or association. Sponsors of advocacy websites include the Democratic National Committee, the Society for the Prevention of Cruelty to Animals, and the Society to Protect Human Rights.

* World Advocacy :- <http://www.worldadvoacy.com>
* Greenpeace :- <http://www.greanpeace.org>
* Environmental Defense Action Fund :- <http://undoit.org>
* Jane Goodall institute :- <http://janegoodall.org>
* Freedom Forum :- <http://www.freedomforum.org/>

1. Blog - A blog short for “weblog” is an online journal or informational website displaying information in the reverse chronological order, with the latest posts appearing first. It is a platform where a writer or even a group of writers share their views on an individual subject.

* WordPress :- <http://www.wordpress.org>
* Wix :- <http://www.wic.com>
* Weebly :- <http://www.weebly.com>
* Medium :- <http://www.medium.com>
* Ghost :- <http://www.ghost.org>

1. Wiki - A wiki is a Web site that allows users to add and update content on the site using their own Web browser. This is made possible by Wiki software that runs on the Web server. Wikis end up being created mainly by a collaborative effort of the site visitors.

* Wikitravel :- <https://wikitravel.org/en/Main_Page> it’s a much better source of information than of TripAdvisor. It’s been online since 2003 and is overseen by a team of administrators.
* Wikihow :- <https://www.wikihow.com/Main-Page> is popular wiki for anyone who wants to learn how to do something.
* WikiBooks :- <https://en.wikibooks.org/wiki/Main_Page> wikiBooks makes out list of wiki sites thanks to its incredible repository of open content textbooks, annotated texts, instructional guides and manuals.
* Wiktionary :- <https://en.wiktionary.org/wiki/Wiktionary:Main_Page> Print dictionaries can be expensive. The complete Second Edition of the Oxford English Dictionary runs to 20 volumes, weighs 140 pounds, and costs more than $500 to buy on Amazon. Even a subscription to the OED’s website costs $90 per year.
* Wikispecies :- <https://species.wikimedia.org/wiki/Main_Page> Wikispecies is to the 21st century what “On the Origin of Species” was to the 19th century. It aims to be a complete catalog of all **Animalia, Plantae, fungi, bacteria, archaea,** and**Protista in the world**

1. Social Network – The Cambridge dictionary explains it like this “A website or computer program that allows people to communicate and share information on the internet using a computer or mobile phone.” Let us see some of the social network websites.

* Facebook:- <http://www.facebook.com/> Facebook is one of the leading social media networks with over 1 billion users.
* WhatsApp :- <https://www.whatsapp.com/> It arrived on the scene much later than Facebook, but has been able to capture the imagination of millions of people across the world by giving them the ability to communicate and share instantly with individuals and groups.
* Instagram :- <http://www.instagram.com/> Instagram was launched as a unique social networking platform that was completely based on sharing photos and videos.
* Baidu Tieba :- <http://tieba.baidu.com/> Offered by Baidu of China, a search engine company, Baidu Tieba known as Postbar internationally is a social forum network based on the keyword searches in the Baidu search engine.
* Skype :- <http://skype.com/> Skype, owned by Microsoft, is one of the most popular communication-based social networking platforms.

1. Content Aggregator: - A content aggregator website is a site that collects data from other sources across the internet and puts the information in one place where users can access it. The collected is based on a keyword or a group of related keywords. But it is not plagiarism.

* Alltop:- <https://alltop.com/> is one of the biggest names in content aggregation and deservedly sits in forst place of the list
* Popurls:- <http://popurls.com/> is a site which Alltop drew its inspiration. Popurls pulls in content from a variety of social networks, blogs, and news organizations.
* The Web List:- <http://theweblist.net/> functions similarly ro popurls in that that it’s a one-page aggregator website that collects from a huge variety of sources
* WP News Desk:- <http://wpnewsdesk.com/> is a content aggregator website that focuses specifically on WordPress. It automatically pulls in content from a variety of WordPress blogs and companies and display posts on the front page.
* Blog Engage:- <http://www.blogengage.com/> as the spam indicator suggest, Blog Engage’s standsrds are nowhere near as strict as Alltop.

1. Personal - A personal website is a group of web pages that someone creates about themselves. It basically contains things that are personal. It doesn't have to be about you, and it doesn't have to contain personal information but it does need to be personal.

* Nia Shanks:- <https://www.niashanks.com/> There’s a lot to like about this personal website. The design is nice and clean and favors a more minimal style.
* Simon Sinek: - <https://startwithwhy.com/> the design really shines here and makes this one of the best personal website there is.
* Ellen Skye Riley:- <http://ellensriley.com/> This is honestly one of the best personal website we’ve ever seen. Riley does an excellent job at showing her incredible gifted design skills, and enjoys her site is informative and extremely fun to parous.
* Tim Harford :- <http://timharford.com/> The use of the whitespace on this page really works wonders. It drives the eye to main column where the content is focal point.
* Joshua McCartney:- <https://www.joshuamccartney.com/> McCartney’s website grabs your attention as soon as you seen it. This is a great example of something that simply looks great.

# What are the guidelines for evaluating the value of a Web site? Try to evaluate 2-5 websites based on the guideline and put your judgment