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CENTER OF INFORMATION TECHNOLOGY AND SCIENTIFIC COMPUTING

**The Internet and Introduction to website**

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**ID Number:** - ATR/5025/11

**Section:** - 1

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March, 2020

1. **History of Internet[The evolution]**

The [Internet](https://en.wikipedia.org/wiki/Internet) is a worldwide, publicly accessible series of interconnected [computer networks](https://en.wikipedia.org/wiki/Computer_network) that transmit [data](https://en.wikipedia.org/wiki/Data) by [packet switching](https://en.wikipedia.org/wiki/Packet_switching) using the standard [Internet Protocol](https://en.wikipedia.org/wiki/Internet_Protocol).

The Internet’s origin have their roots in a military project, the [Semi-Automatic Ground Environment](https://en.wikipedia.org/wiki/Semi-Automatic_Ground_Environment) (SAGE) program, which networked country-wide radar systems together for the first time. This was created around 1958 as part of an attempt to regain the lead in technology from the Soviet Union which had recently launched Sputnik.

As the Internet’s origin [J.C.R. Licklider](https://en.wikipedia.org/wiki/J._C._R._Licklider) was selected to head the committee of the military project [Semi-Automatic Ground Environment](https://en.wikipedia.org/wiki/Semi-Automatic_Ground_Environment) (SAGE).He envisioned  universal connection as a unifying human revolution. Licklider recruited [Lawrence Roberts](https://en.wikipedia.org/wiki/Lawrence_Roberts_(scientist)) to head a project which implemented a network. In 1969  the first real network ran on packet switching technology by  [Advanced Research Projects Agency Network (ARPANET)](https://en.wikipedia.org/wiki/ARPANET)  which was one of the key networks which our Internet today was based off of. Soon after the first international packet-switched network service was created between U.S. and U.K.On October 29, 1969 Licklider and Roberts interconnected the first two nodes between UCLA and SRI International at Menlo Park, California. UCLA student charley Kline attempted to  send the first text “login” to a computer at Stanford Research Institute . The system crashed at the letter “g” which made it to be the first message ever. An hour later the full text is sent successfully.

Email was first developed in 1971 by [Ray Tomlinson](http://en.wikipedia.org/wiki/Ray_Tomlinson), which started just by sending mails within the ARPANET, he also made the decision to use the “@” symbol to separate the user name from the computer name which later on became the domain name. The other development of 1971 was the Gutenberg project which infesise on making books and documents public domain available electronically.This came to the realization that the future of computing is  in the storage, retrieval and searching of information also. In effect, this was the birth of the eBook.

[Vint Cerf](https://en.wikipedia.org/wiki/Vint_Cerf) and [Bob Kahn](https://en.wikipedia.org/wiki/Bob_Kahn) developed the first description of [TCP](https://en.wikipedia.org/wiki/Transmission_Control_Protocol)  in 1973. The term “Internet” from so-called “inter-network”, was first used in 1974 to describe a single global TCP/IP network detailed in the first full specification of TCP. On the contrary,  in 1978 unsolicited commercial email message (later known as spam), sent out to 600 California Arpanet users by Gary Thuerk.

The European Organization for Nuclear Research ( [CERN](http://public.web.cern.ch/public/)) launched [ENQUIRE](http://en.wikipedia.org/wiki/Enquire) (written by [Tim Berners-Lee](http://en.wikipedia.org/wiki/Tim_Berners-Lee)), a hypertext program that allowed scientists at the particle physics lab to keep track of people, software, and projects using hypertext (hyperlinks).The other invention was emoticon which was proposed by Kevin Mackenzie then Scott Fahlman in 1982 proposed emoticons with color after jocks where the modern emoticon was born.

In 1984, the [National Science Foundation (NSF)](https://en.wikipedia.org/wiki/National_Science_Foundation) commissioned the construction of a 1.5 megabit/second network which became known as [NSFNET](https://en.wikipedia.org/wiki/National_Science_Foundation_Network).  Soon after, other commercial e-mail services were connected such as OnTyme, Telemail, and [CompuServe](https://en.wikipedia.org/wiki/CompuServe). Three [Internet Service Providers (ISPs)](https://en.wikipedia.org/wiki/Internet_service_provider) were also created: [UUNET](https://en.wikipedia.org/wiki/UUNET), [PSINET](https://en.wikipedia.org/wiki/PSINet), and [CERFNET](https://en.wikipedia.org/wiki/CERFnet). More and more seperate networks were created that eventually interconnected with this large, growing network of networks.

One of the first major Internet worms was released in 1988. Referred to as “The Morris Worm”, it was written by Robert Tappan Morris and caused major interruptions across large parts of the Internet. A year later ,1989,  also brought about the [proposal for the World Wide Web](http://www.w3.org/History/1989/proposal.html), written by Tim Berners-Lee. It was originally published in the March issue of MacWorld, and then redistributed in May 1990. It was written to persuade CERN that a global hypertext system was in CERN’s best interest. It was originally called “Mesh”; the term “World Wide Web” was coined while Berners-Lee was writing the code in 1990.

In 1991 the first web page was created which brought a major innovation to the internet. In addition MP3 file file format became the standard to share songs and albums through the internet and the first webcam was also deployed at Cambridge University computer lab. Mosaic, the first graphical web browser, was released in 1993. Both the White House and the United Nations came online, marking the beginning of the .gov and .org domain names. The first big competitor, Netscape Navigator, was released the year following.

In the commercialization of the internet  two major online businesses got their start the same year. The first sale on 'Echo Bay ' was made that year. Echo Bay later became eBay. Amazon.com also started in 1995, though it didn’t turn a profit for six years, until 2001.

### In 1995 Geocities, the Vatican , java and JavaScript were introduced for the first time. ActiveX was launched by Microsoft the following year.In 1996 and 1997 HoTMailL (the first webmail service), “weblog” (the first blog) were launched.Google went live in 1998, making a way by which people find information online. As well, [Napster](http://en.wikipedia.org/wiki/Napster) launched, opening up the gates to mainstream file-sharing of audio files over the internet.

2000 was the year of the [dotcom collapse](http://en.wikipedia.org/wiki/Dotcom_bubble" \l "The_bubble_bursts), resulting in huge losses for legions of investors. Hundreds of companies closed, some of which had never turned a profit for their investors.In the next year,2001, Wikipedia was launched that paved the way for collective web content generation/social media. By 2003 Skype was onair giving user-friendly interface to voice and IP calling. MySpace became the most popular social network at that time.Another major advance in 2003 was the signing of the Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003, better known as the [CAN-SPAM Act](http://en.wikipedia.org/wiki/CAN-SPAM_Act).Social media–sites and web applications that allow its users to create and share content and to connect with one another–started around this period(2004). [Facebook](http://facebook.com/) launched in 2004, though at the time it was only open to college students and was called “The Facebook”; later on, “The” was dropped from the name, though the URL [http://www.thefacebook.com](http://thefacebook.com/) still works.

In 2005 Youtube was the next to be launched by bringing free online video hosting and sharing.[Hulu](https://www.hulu.com/welcome?orig_referrer=https://www.webfx.com/blog) was first launched in 2007, a joint venture between ABC, NBC, and Fox to make popular TV shows available to watch online.One of the biggest innovation of 2007 was almost certainly the [iPhone](http://www.apple.com/iphone/), which was almost wholly responsible for renewed interest in mobile web applications and design. The 2008  U.S Presidential election placed the Internet squarely at the forefront of politics and campaigning.

 Indeed, the Internet has severely matured since its birth many years ago. Today almost 4.39 billion people use the Internet. The Internet Corporation for Assigned Names and Numbers (ICANN) is the authority that coordinates the assignment of unique identifiers on the Internet, including domain names, Internet Protocol addresses, and protocol port and parameter numbers. Because the Internet is a distributed network comprising many voluntarily interconnected networks, the Internet, as such, has no governing body.

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

3. List 5 website each on the 12 categories you learned

1. Try to view their look in different years wen archives
2. **What are the guidelines to evaluate 2-5 websites based on the guideline and put your judgment.**
3. **Technical consideration** - the page should be stable that is consistently available.Functioning  links and special features such as audios, it is disconcerting if "Error" messages appear.Secured form of payment if  there is a fee for using the site.
4. **Purpose** - clear reflection of the site’s purpose though it’s content, can be to entertain, educate or sell.Advertising should not overshadow the content.
5. **Content** - should be comprehensible, appropriate, and of value to the intended audience.There should be enough information,which are logical, to make visiting the site worthwhile, since information on how often the site is visited may indicate its usefulness.If the site promote social  biases, it should be rejected or critically reviewed If there are large amounts of information on the site, there should have outline of topics that allows users to find topics and move among them easily. A search function for locating information within the site would also be useful. A "last updated" notification is a useful feature since the information current and accurate.Copyright information is also needed.
6. **Authorship/Sponsorship** - the name of the individual or company creating the website should be stated clearly with contact information for users to make comments or ask questions.References for the information source should be provided.Site violating copyright statues or other laws should not be linked, listed oe recommended.
7. **Functionality** - language usage should be clear, easy to understand and concise.Navigating the site should be easy.Required "plug-ins" or other helper applications should be clearly identified, and navigational buttons should be of a consistent shape and location.Descriptive content  and invitational appearance for links provided in the site.If search function is there it should be clearly stated how it is conducted.Consistency in the use of features such as headers, backgrounds, fonts, and colors. A text-only option is useful for sites with a lot of graphics; otherwise, download time may be too lengthy. Generally, wait time should not exceed 15-20 seconds.Images conveying important messages such as page titles or links should come with alternative text so that visually impaired users using screen readers will hear the relevant text when the cursor is over the image. Audio clips that convey important content (such as lyrics or announcements) must have optional links to readable text for hearing-impaired users.
8. **Design/Aesthetics** -  appropriately appealing design to its intended audience.Easly readable texts with no destructing graphics, fonts, and backgrounds.There should be appropriate white space.The design elements and features on the site, such as searchable databases, animations, graphics, sound files, and transitional pages, should be labeled and explained clearly.Links should not lead to so many levels that it is difficult for users to get back to the page they started from.The color scheme should not be too gaudy and hurtful to the eye. Most experts recommend that a site contain no more than four colors, with a limit of seven throughout the site. The most important consideration, however, is whether the colors distract from the intended message.

The following table describes website  guideline fulfillment comparison of Amazon.com and Leetcode.com.

|  |  |  |
| --- | --- | --- |
| Selected guidelines | Amazon | Leetcode |
| Technical consideration | Consistent | Consistent |
| Purpose | Described correctly | Described correctly |
| Content | Contains the right information | Contains the right information |
| Functionality | Great | Great |
| Authorship | Stated clearly | Stated clearly |
| Design | Great | Great |

In general it can be seen from the table above that both the websites fulfilled the guidelines stated. Amazon is a commercial website used all over the world  with consistent and functional tools on the web with great design.Its purpose is clearly described within its content which made it on the top and reliable.As for Leetcode it is a website for developers to practice for programmers on problem solving. Alike amazon leetcode also satisfied the guidelines to be fulfilled as a website.

References

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