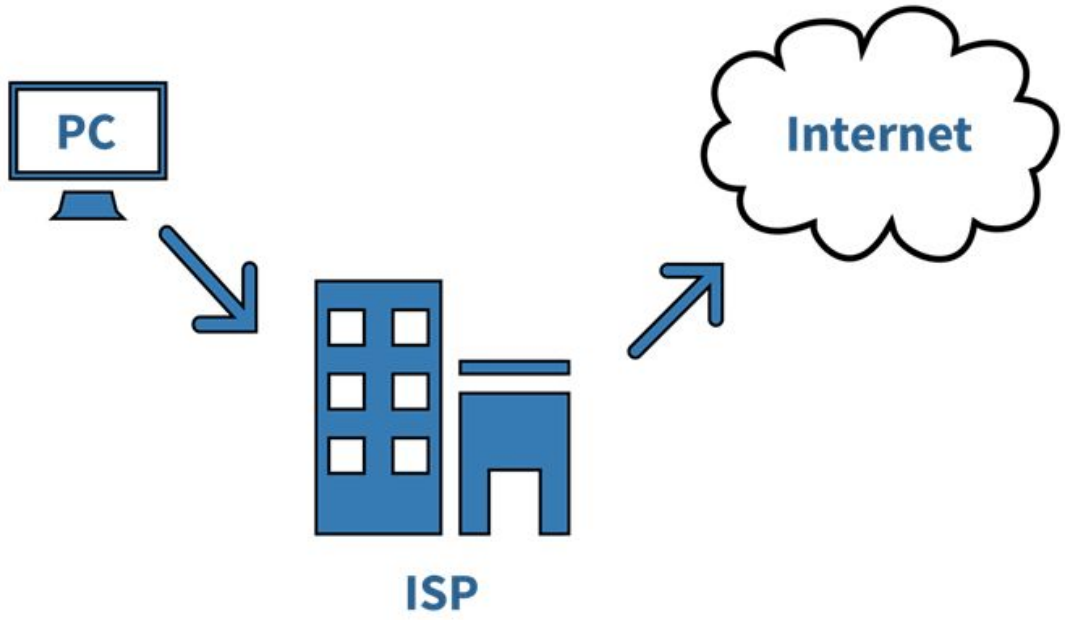
Asosiy tushunchalar. HTML tili.

Internet

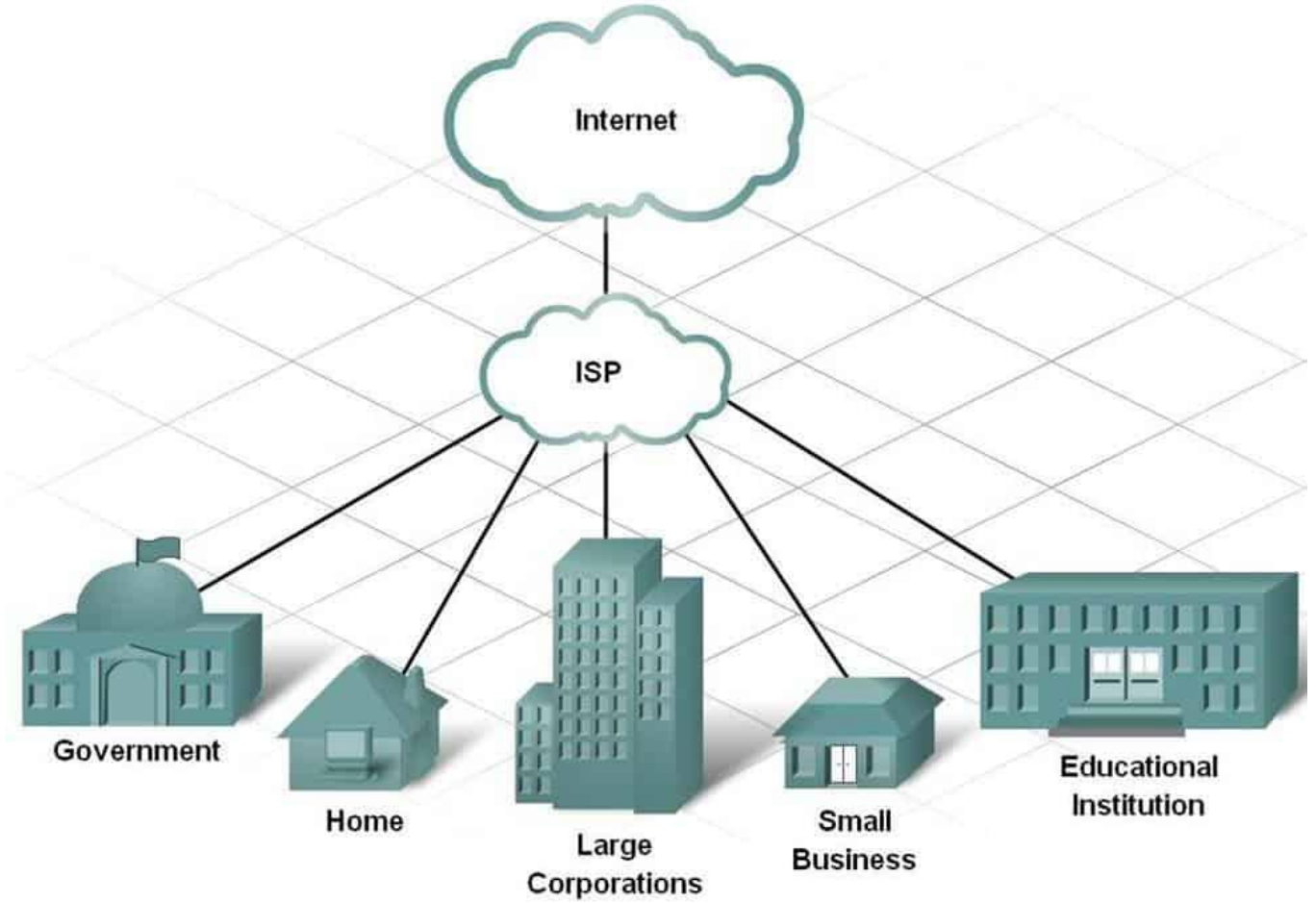
Internet – dunyo bo'ylab joylashgan va yagona tarmoqqa birlashtirilgan minglab kompyuter tarmoqlarining majmuidir.

Internet service provider

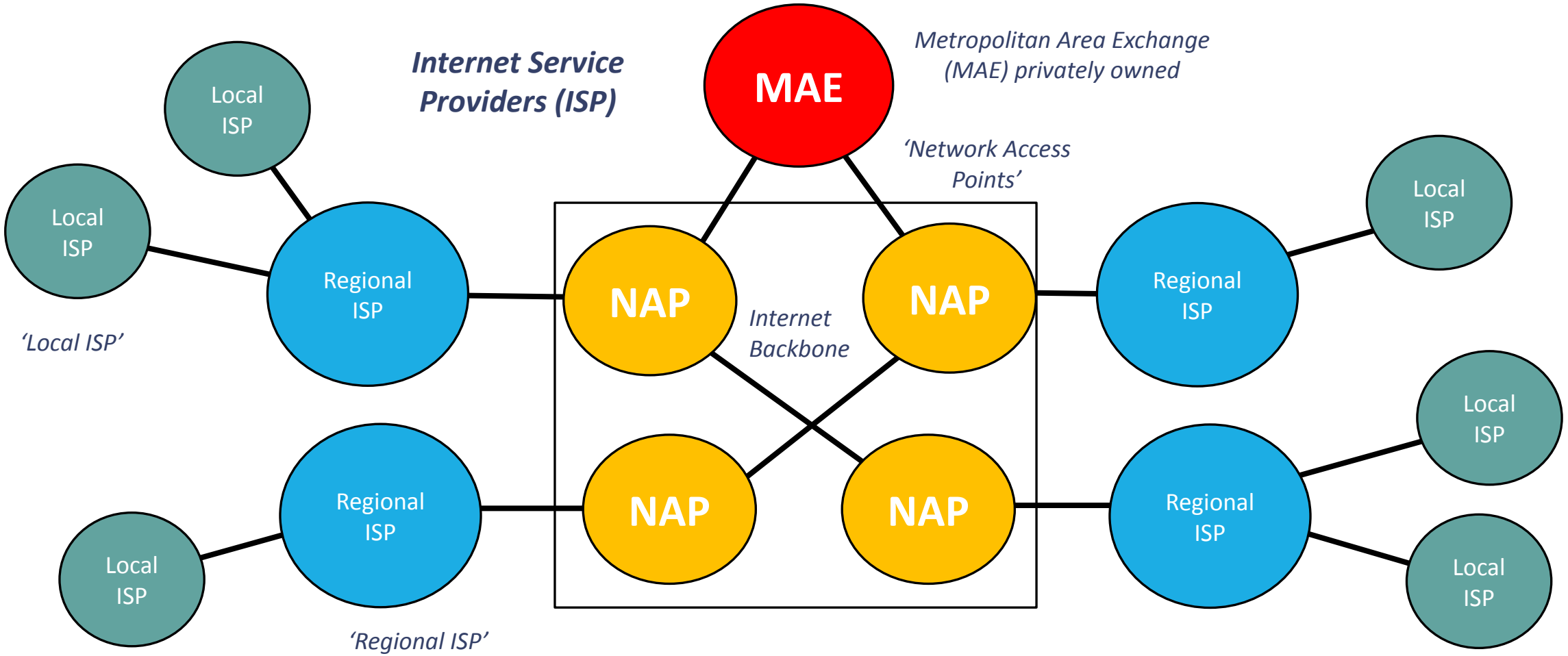
Internet-provayder (ISP) - bu foydalanuvchiga odatda haq evaziga Internetga kirishni ta'minlaydigan kompaniya.



Internet service provider



Internet service provider



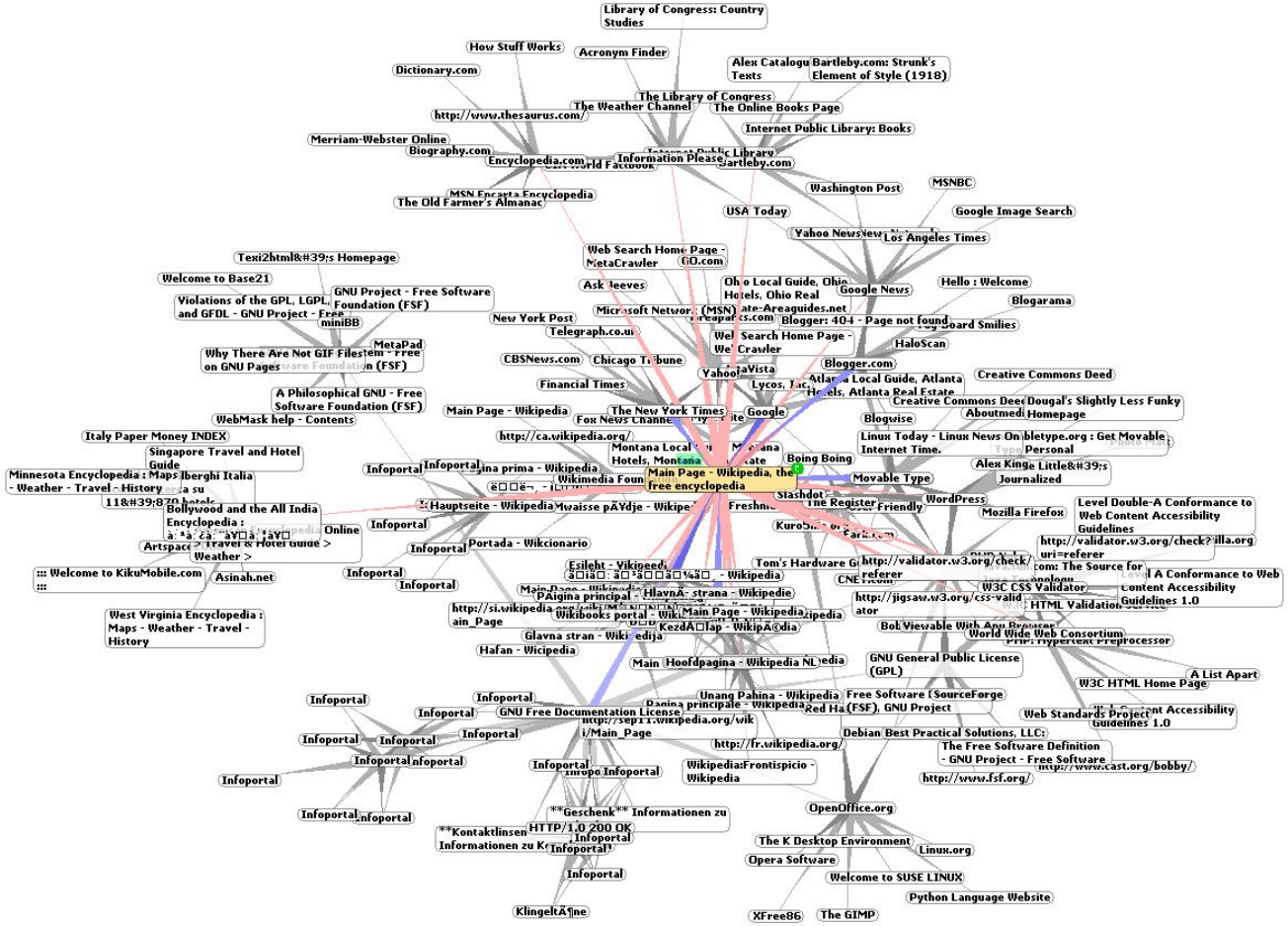
ISP xizmatlari

World Wide Web - WWW

WWW – Internet tarmog'iga ulangan turli kompyuterlarda (qurilmalarda) joylashgan o'zaro bog'liq xujjatlarga kirishni ta'minlovchi taqsimlangan tizim.

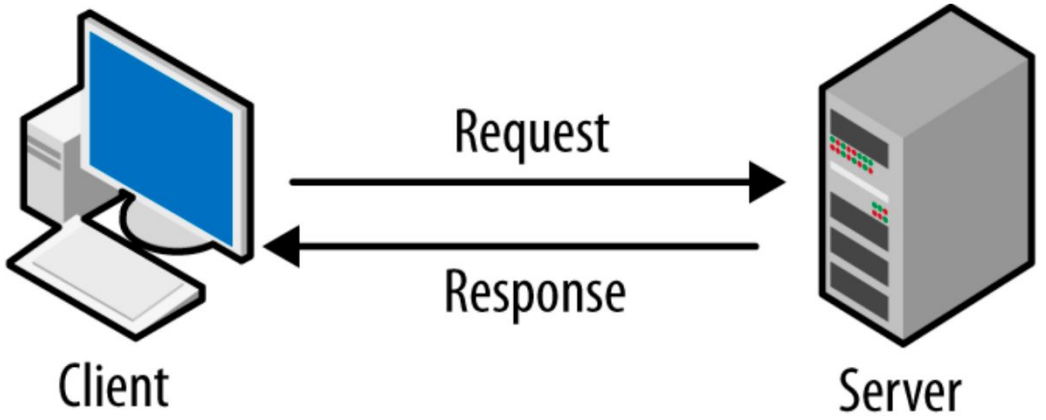
- Web-serverlar tashkil qiladi
- Resurslarining katta qismi gipermatn texnologiyasiga asoslangan
- Web sahifa - gipermatnli hujjat
- Web sayt – umumiy mavzu asosida birlashtirilgan bir nechta web sahifalar (odatda bitta web-serverda, bitta domenda joylashgan bo'ladi)
- Brauzer – web sahifalarni ko'rish va yuklash uchun maxsus dastur
- Ixtirochisi Tim Berners Li (shuningdek, HTTP, URI/URL, HTML)

Wikipedia namunasi

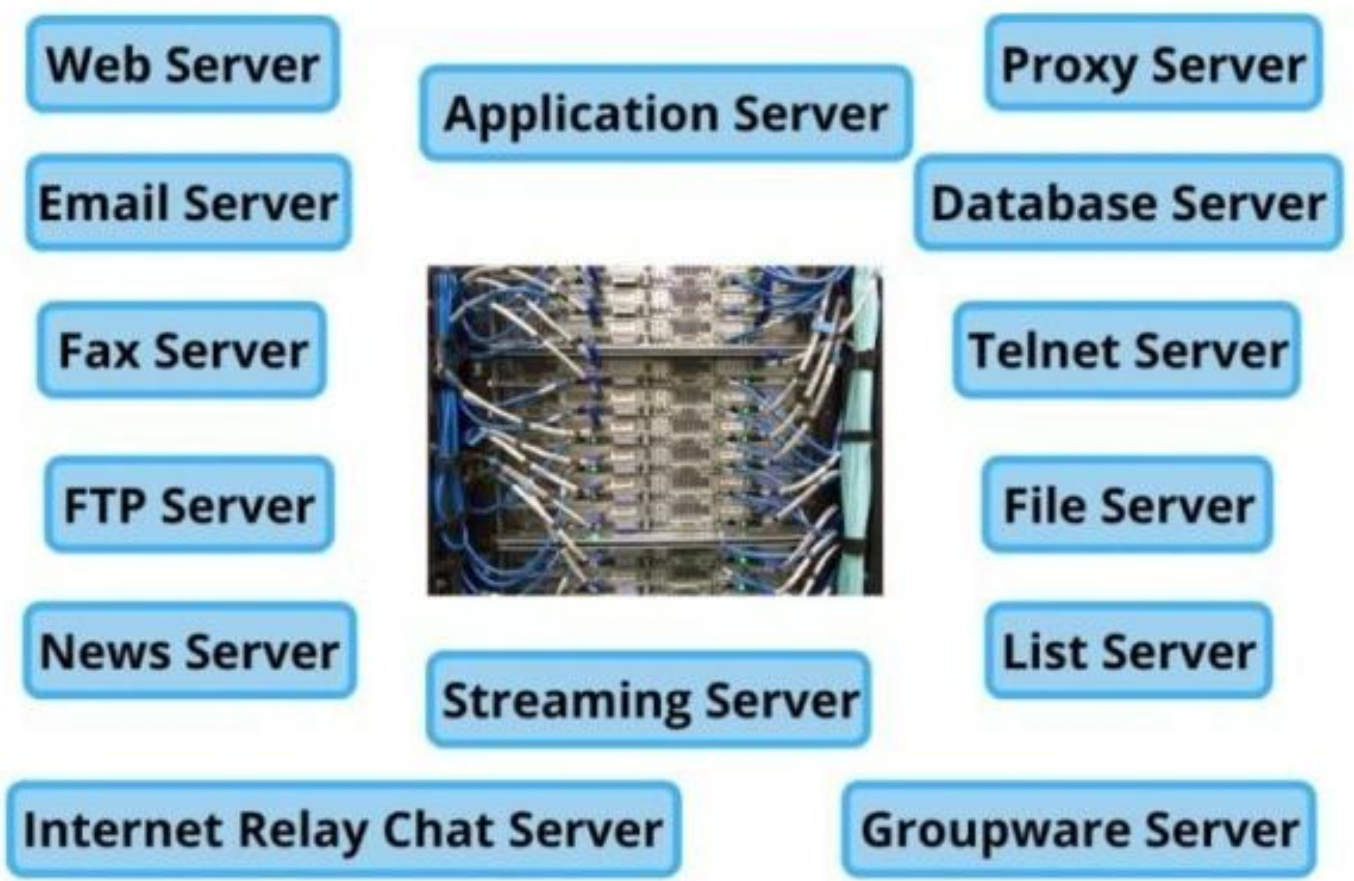


Server

Qurilma: xizmat ko'rsatuvchi dasturiy ta'minot ishlashi uchun alohida ajratilgan, maxsus kompyuter.

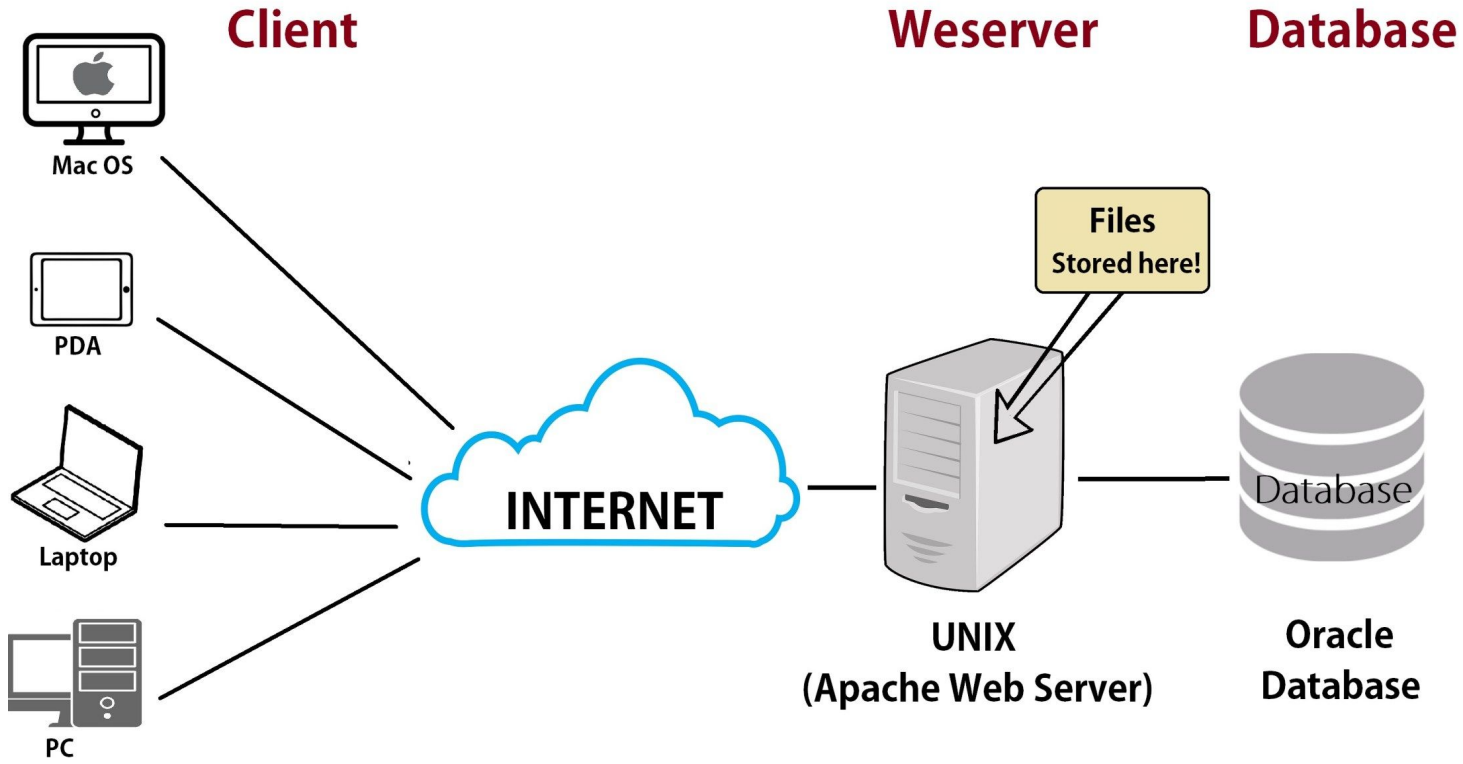


Server turlari



Web server

Web server – mijozlardan (odatda brauzer) HTTP so'rovlarni qabul qiluvchi va HTTP javoblarni (HTML sahifa, rasm, fayl, media va boshqalar bilan) qaytaruvchi server.



Web server

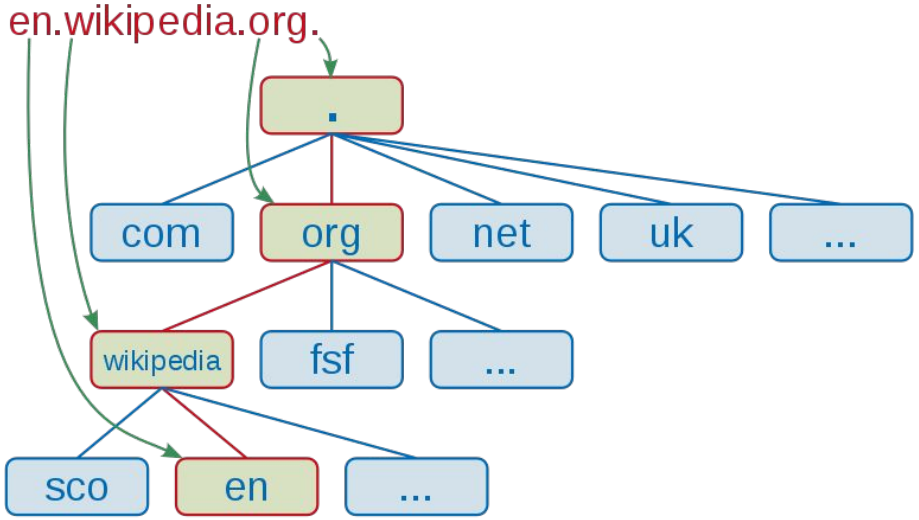
Web serverning qo'shimcha funksiyalari:

- web sahifalar ishlashini avtomatlashtirish;
- resurslarga foydalanuvchilar murojaatlarini jurnalini yuritish;
- foydalanuvchilarni autentifikatsiya va avtorizatsiyadan o'tkazish;
- dinamik yaratiluvchi sahifalarni qo'llash;
- mijozlar bilan himoyalangan aloqalarni o'rnatishda HTTPSni qo'llash.

Web serverlar – Apache, IIS, nginx, lighttpd, Google Web Server, Resin, Openserver va h.k.

Domen nomi

Domen nomi – Internet tarmog'idagi avtonom administrativ birligi hisoblangan "qismlar"ni identifikatsiya qilish uchun ishlatiladigan simvolli nom. Har bir qismi domen deyiladi.



. (nuqta) – nolinchi daraja (asos)
org – birinchi (yuqori) daraja
wikipedia – ikkinchi daraja
en – uchinchi daraja

Domen nomi

.com (commercial) — tijorat organizatsiyalari uchun

.net (networks) — tarmoq bilan ishlovchi kompaniyalar uchun

.org (organizations)— notijorat organizatsiyalar uchun

.info (information) — barcha uchun ochiq bo'lgan domen

.name (personal) — personal saytlar uchun

.pro (professionals) — ma'lum bir soha mutaxassislari uchun

.int — xalqaro organizatsiyalar uchun

.eco — ekologiya bilan bog'liq internet resurslar uchun

.mobi — mobil telefonlar bilan ishlashga mo'ljallangan saytlar va xizmatlar uchun

.museum — muzeylar uchun

.travel — turistik soha uchun

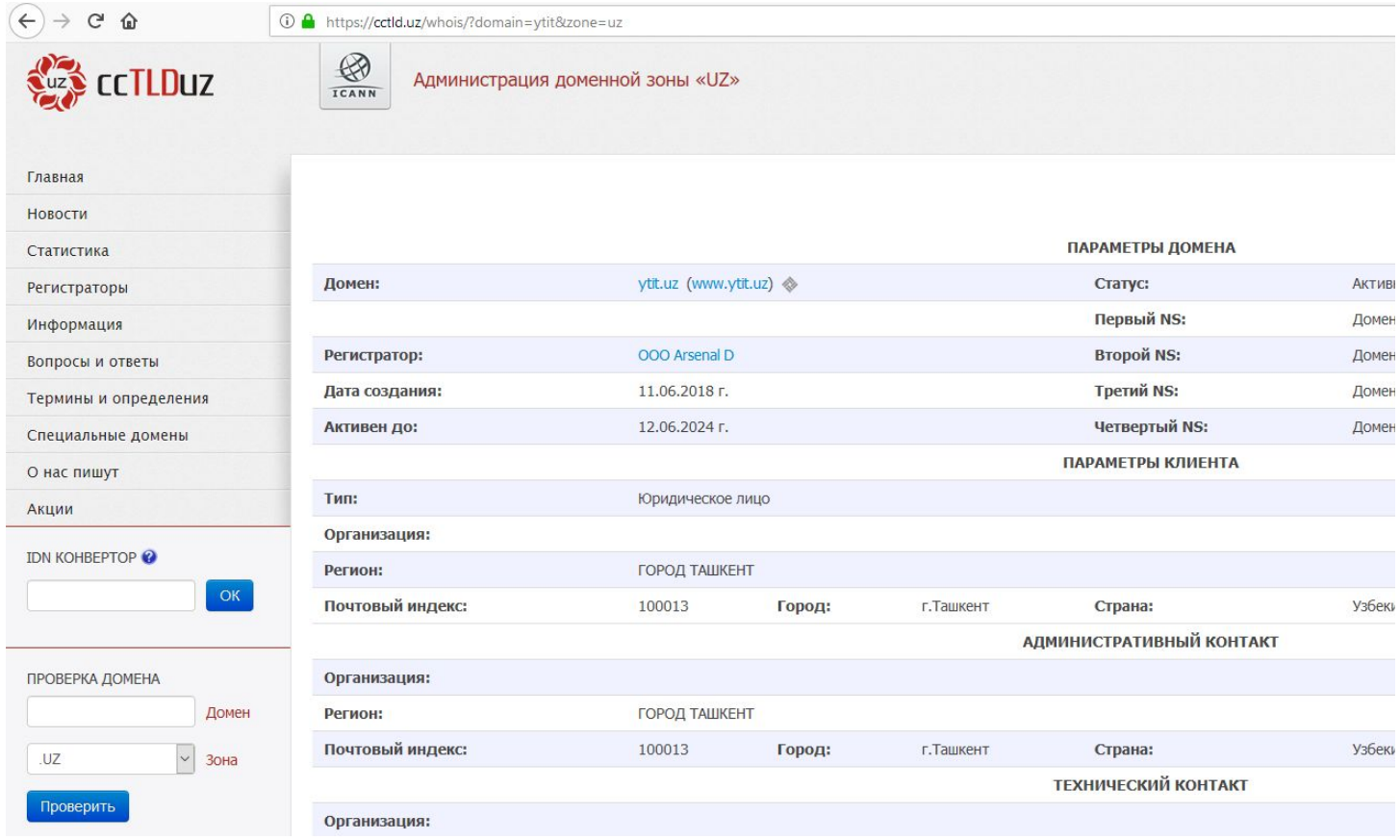
.gov (US Government) — AQSH hukumati uchun

edu (educational) — AQSH OTMlari va ta'lim bilan bog'liq loyihalar uchun

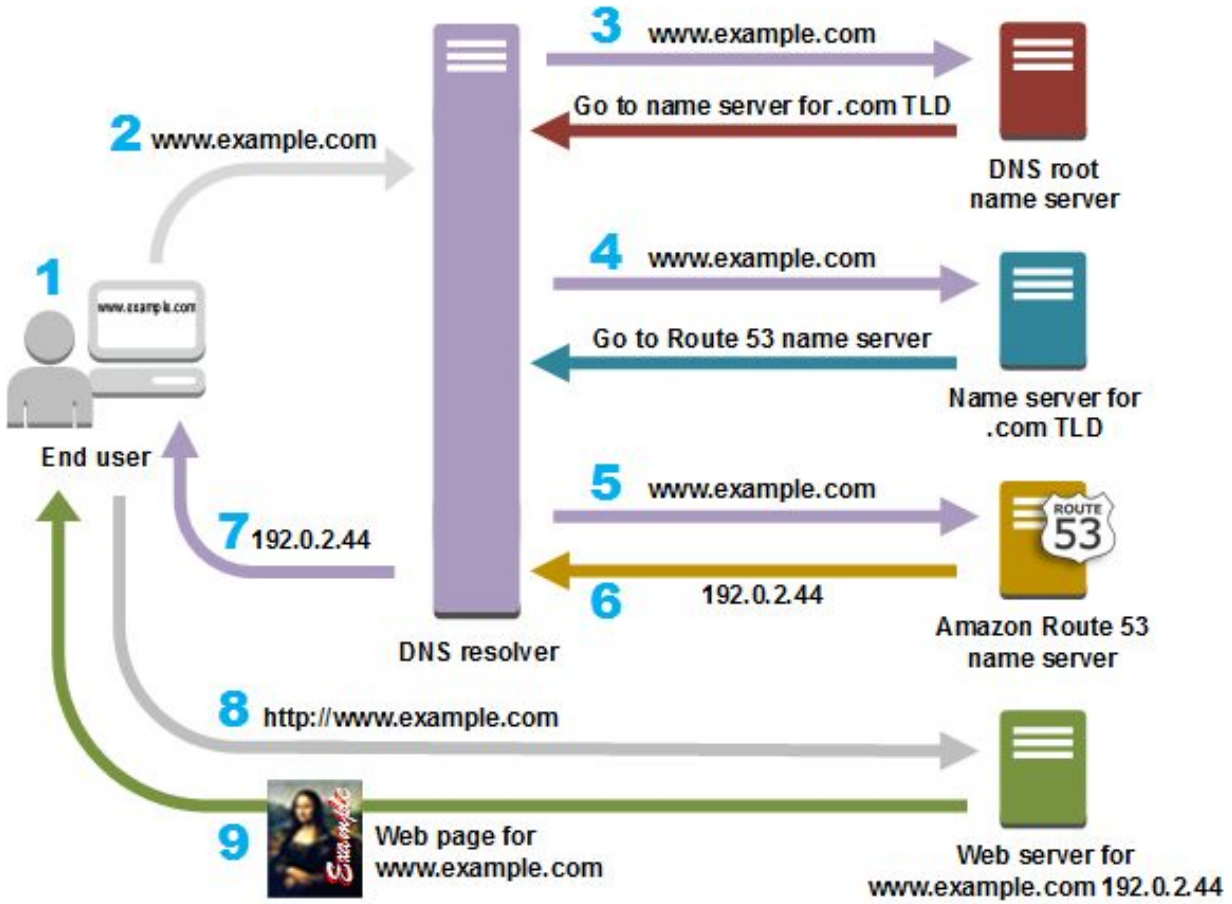
Domen nomlari va IP manzillarni boshqaruvchi korporatsiya (*Internet Corporation for Assigned Names and Numbers*)

Yuqori darajali milliy domen

country code Top-Level Domain, ccTLD https://cctld.uz

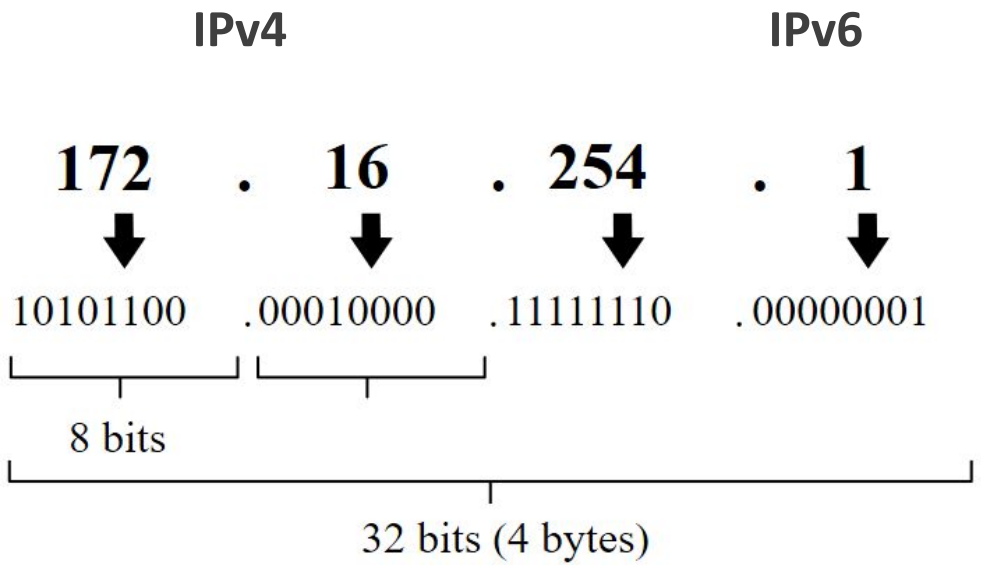


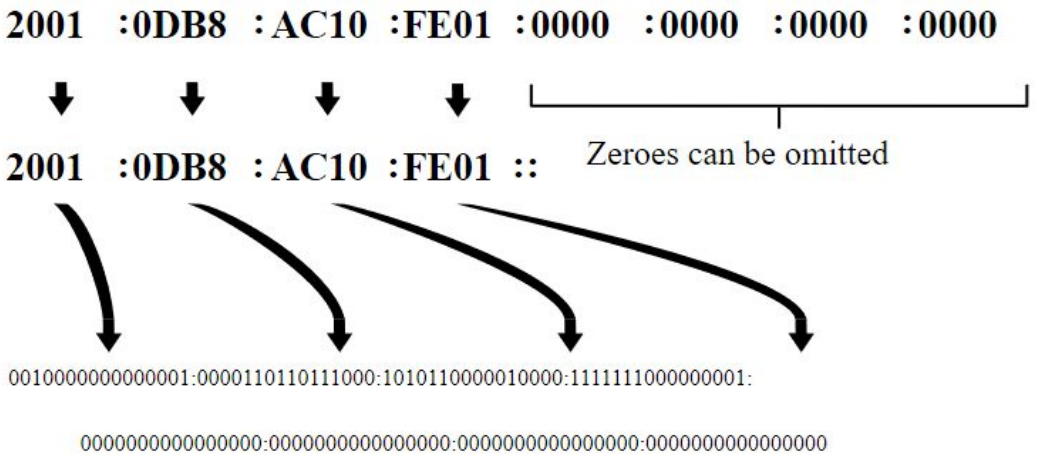
DNS (Domain Name System)



IP manzil

IP manzil (Internet Protocol address) – aloqa uchun Internet protokolidan foydalanadigan, kompyuter tarmog'iga ulangan har bir qurilmaga tayinlangan raqamli metka.





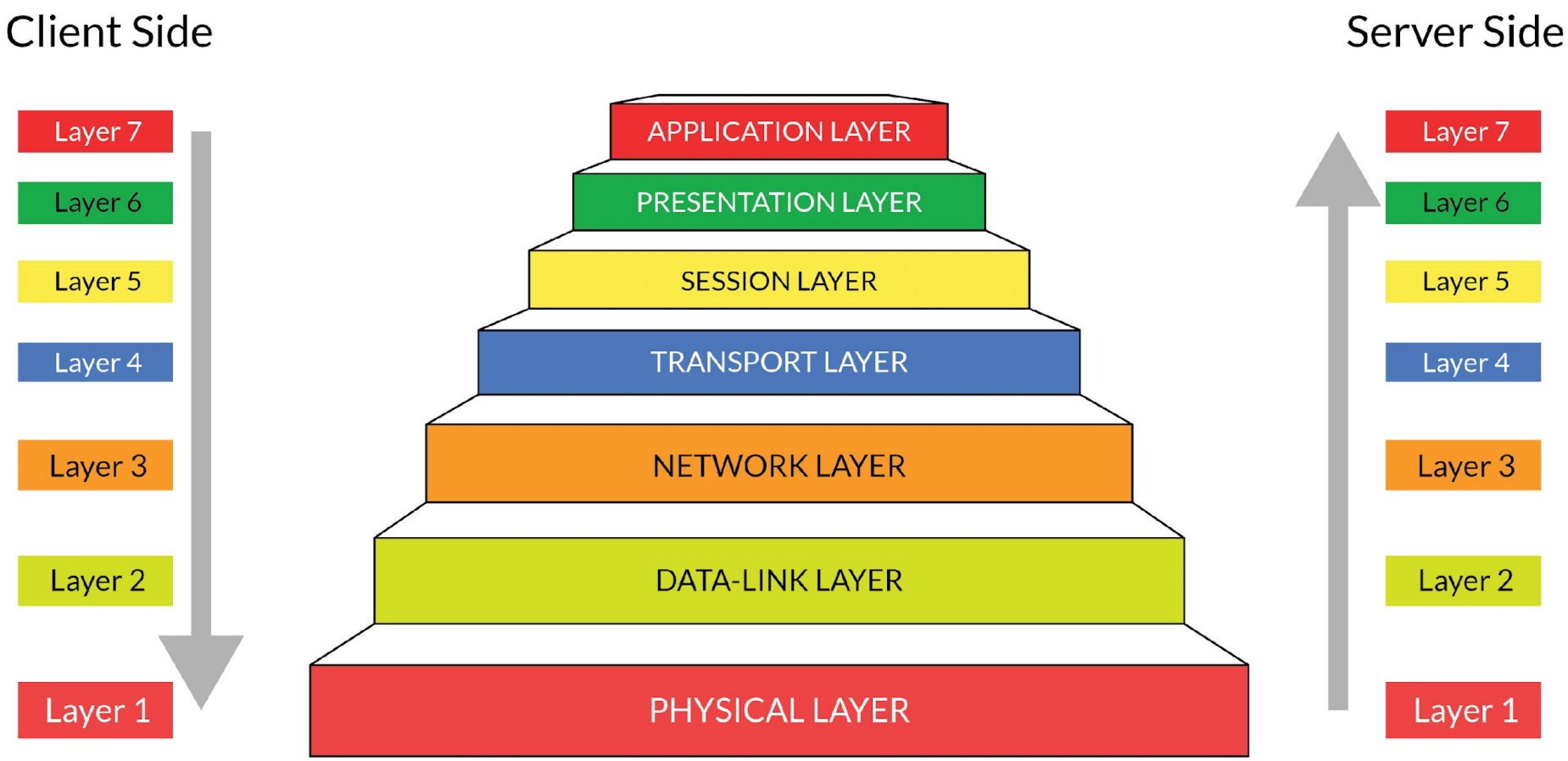
OSI modeli

Tarmoq - bu ikki yoki undan ortiq qurilmalarni bog'lanishidan hosil bo'ladigan aloqadir.

Tarmoqning ishlashi uchun OSI modeli va TCP/IP steki zarur hisoblanadi.

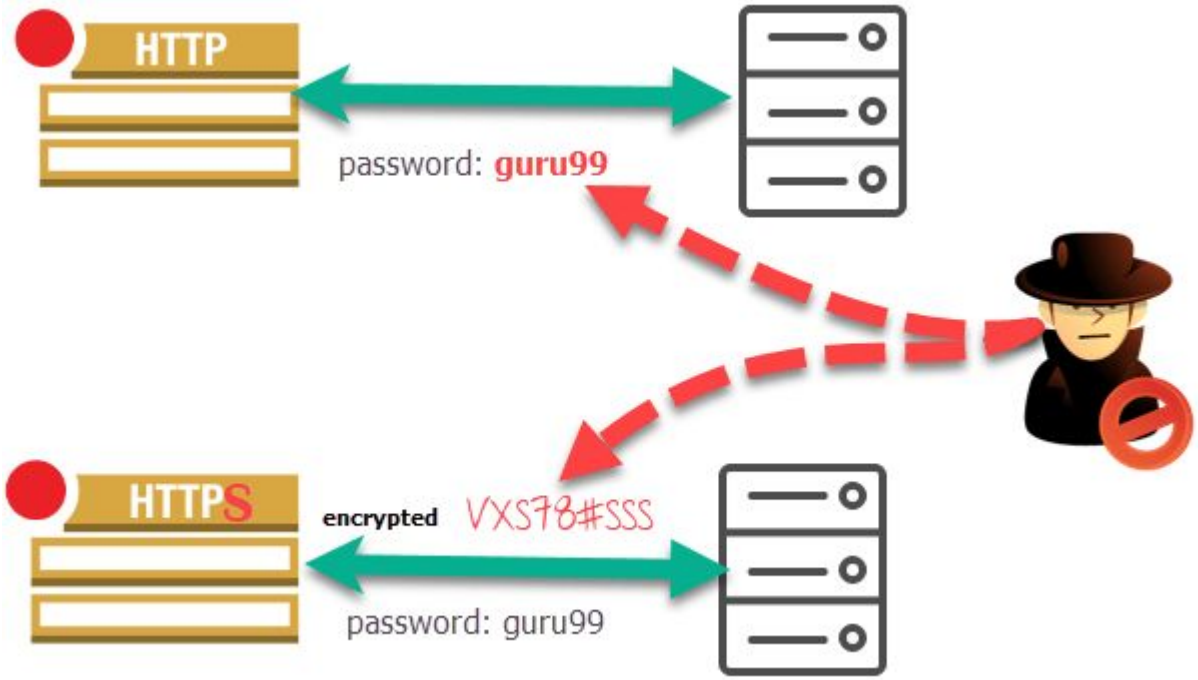
OSI (Open System Interconnection) modeli 7ta pog'onadan iborat.

OSI modeli


Client Side
Server Side
Layer 7
Layer 6
Layer 5
Layer 4
Layer 3
Layer 2
Layer 1
APPLICATION LAYER
PRESENTATION LAYER
SESSION LAYER
TRANSPORT LAYER
NETWORK LAYER
DATA-LINK LAYER
PHYSICAL LAYER
Layer 7
Layer 6
Layer 5
Layer 4
Layer 3
Layer 2
Layer 1

Web dasturchi uchun zarur protokollar

- HyperText Transfer Protocol (HTTP)
- Telnet
- File Transfer Protocol (FTP)
- Hypertext Transfer Protocol Secure (HTTPS)
- IP Security (IPSec)



Brauzer

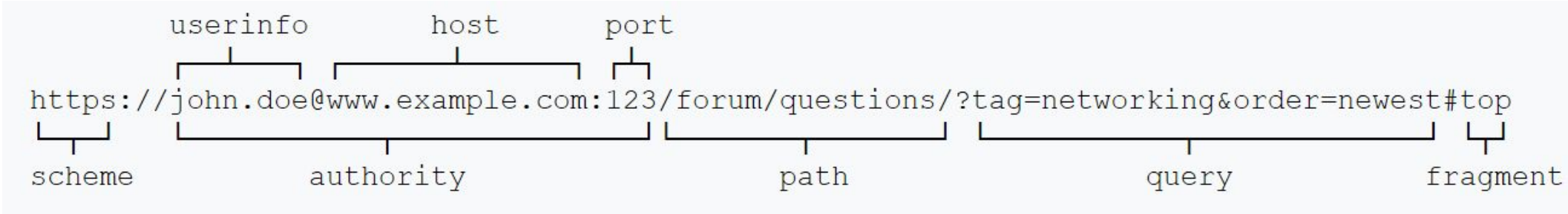
Brauzer – web hujjatlar, kompyuter fayllari va kataloglarni o'zida saqlovchi sahifalarni ko'rishga, web ilovalarni boshqarishga va boshqa masalalarni yechishga mo'ljallangan dastur.

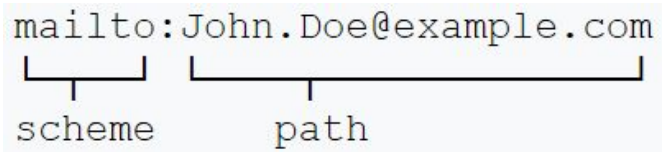
URI, URL, URN

Uniform Resource Identifier (URI)

Uniform Resource Name (URN)

Uniform Resource Locator (URL)

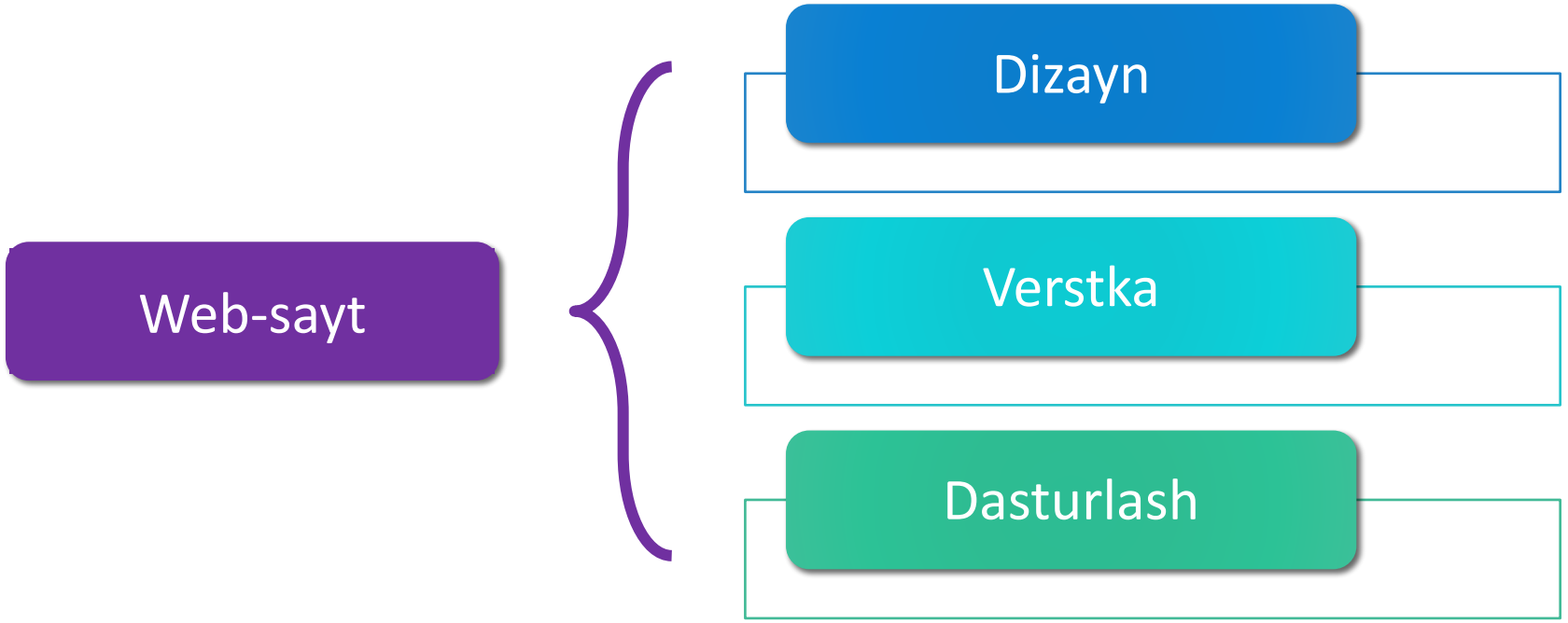




Web sayt, web sahifa

Web sayt – o'zaro mantiqan bog'langan bir nechta web sahifalar.

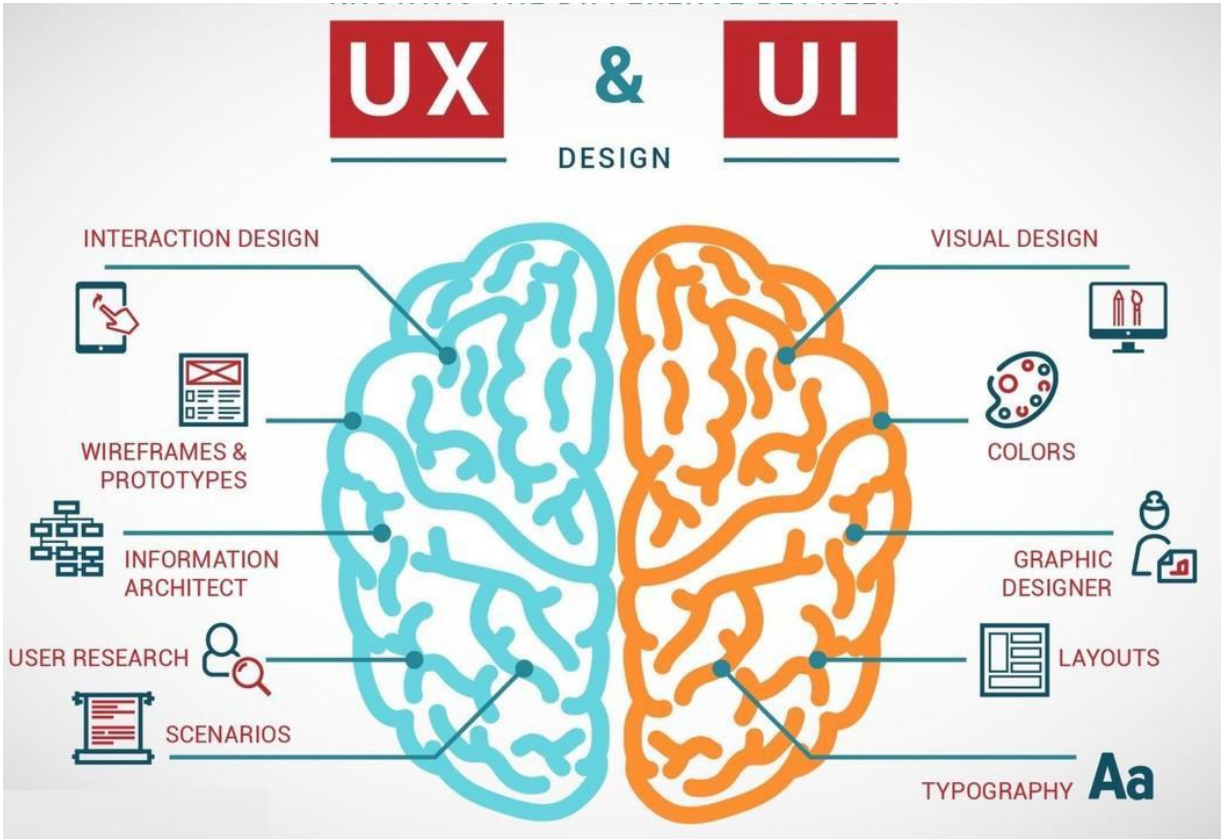
Birinchi web sayt - info.cern.ch (Tim Berners-Li, 1991 yil 6 avgustda ishga tushgan)



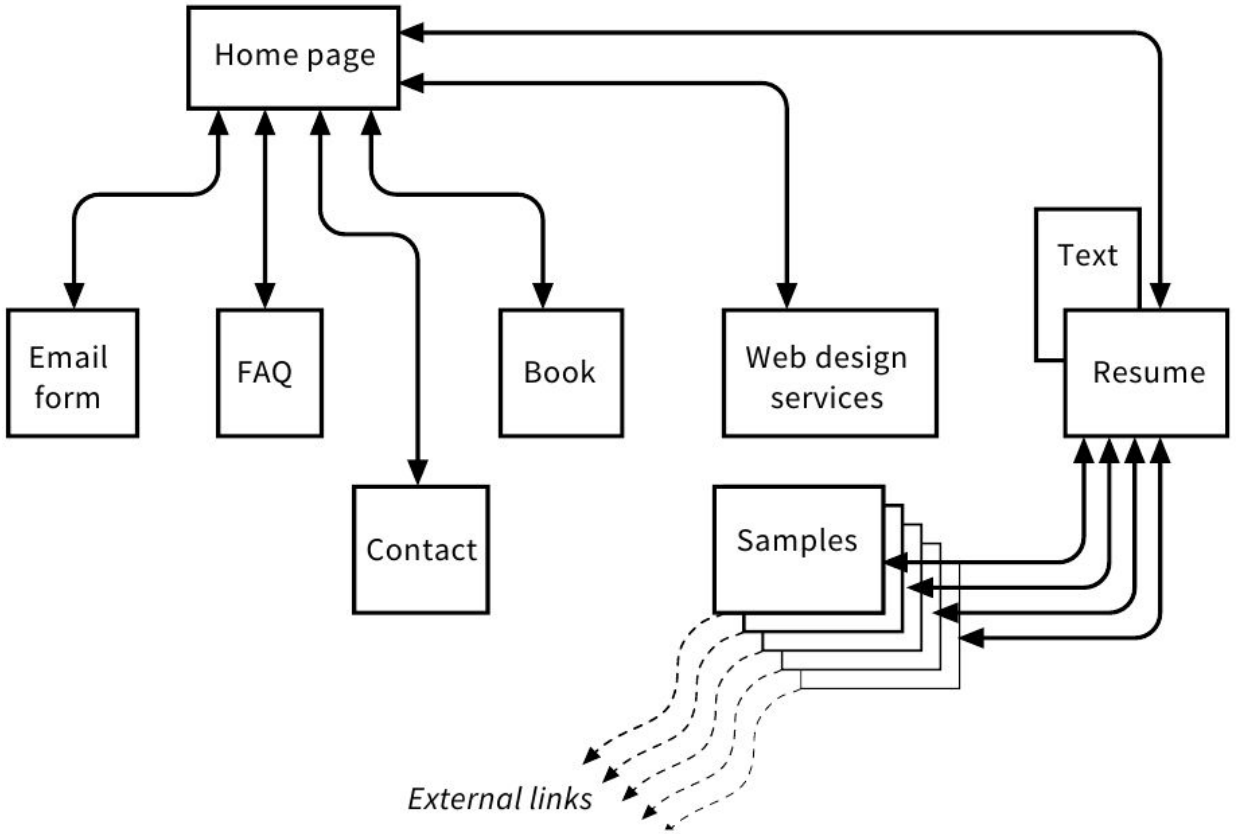
Web dizayn (UX/UI)

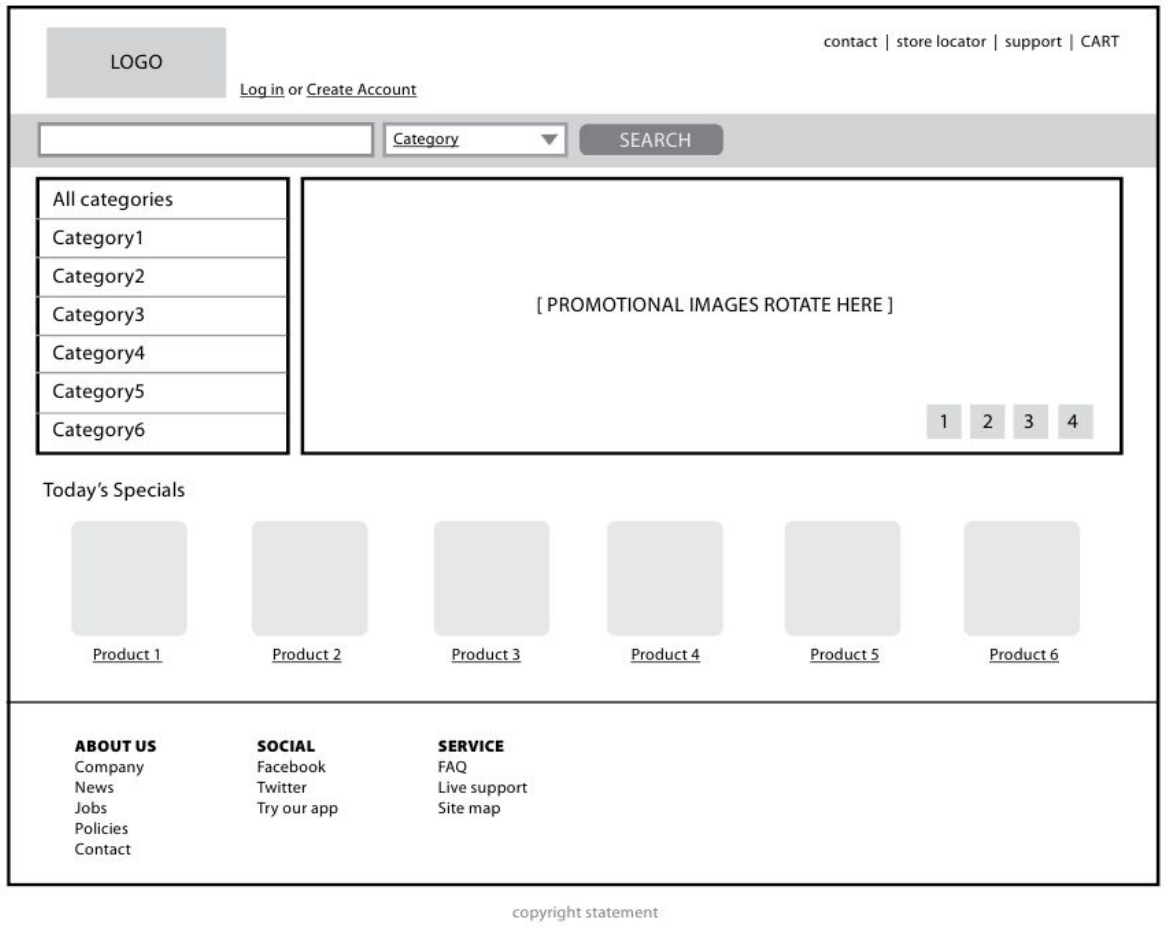
UX (User Experience) – foydalanuvchi malakasi, ya'ni foydalanuvchi interfeys bilan ishlaganda qanday malaka (taasurot) olishi. O'z maqsadiga erisha oldimi va bu qanchalik oson / qiyin bo'ldi.

UI (User Interface) – foydalanuvchi interfeysi, ya'ni interfeys qanday ko'rinishi, ranglarning o'zaro mosligi, foydalanuvchiga biror tugmani bosish qulaymi, undagi matnni o'qish osonmi va h.k.



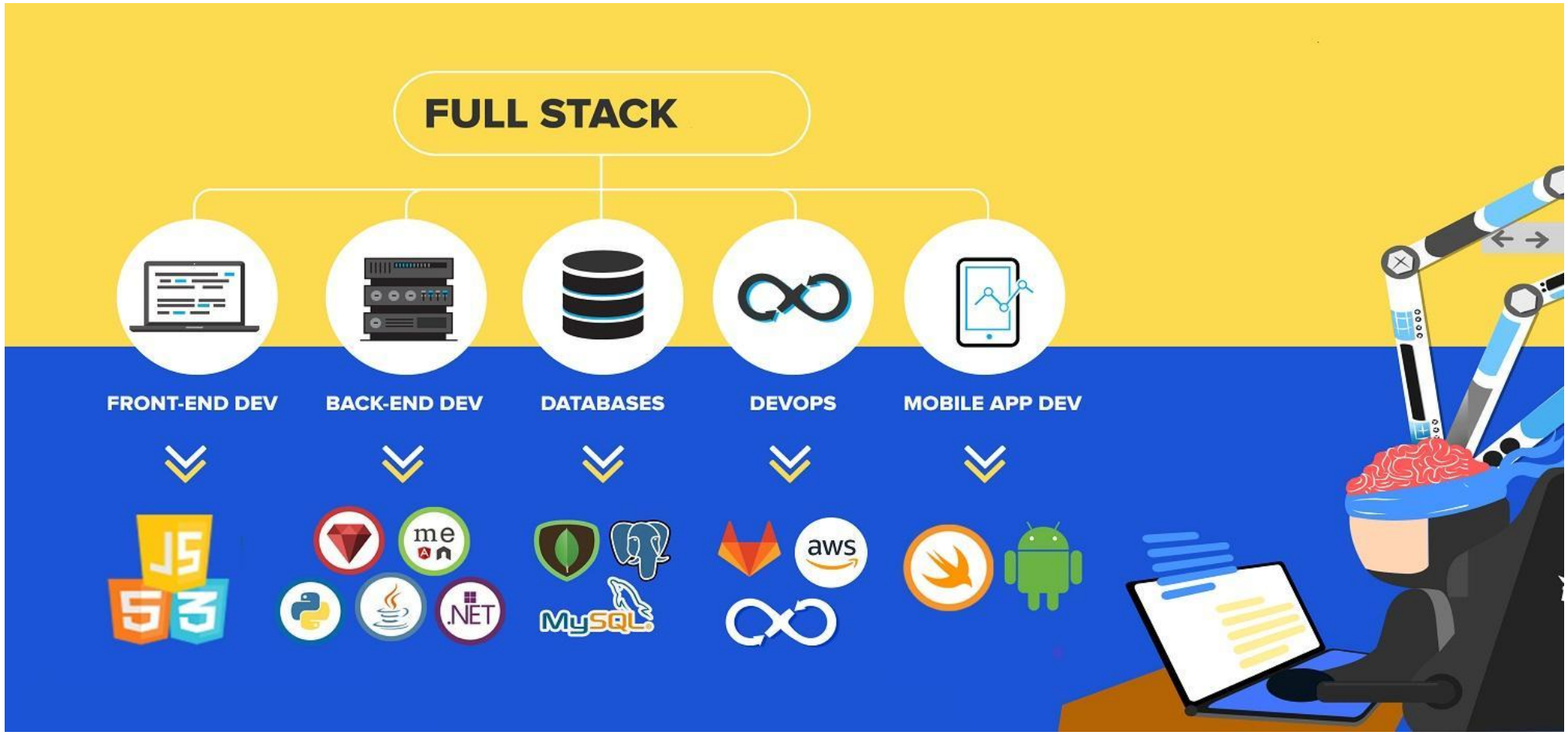
Web dizayn (UX/UI)





Web dasturchilar rollari

Web dasturchilar rollari



Boshqa rollar

Dasturchilar darajasi

HTML tili

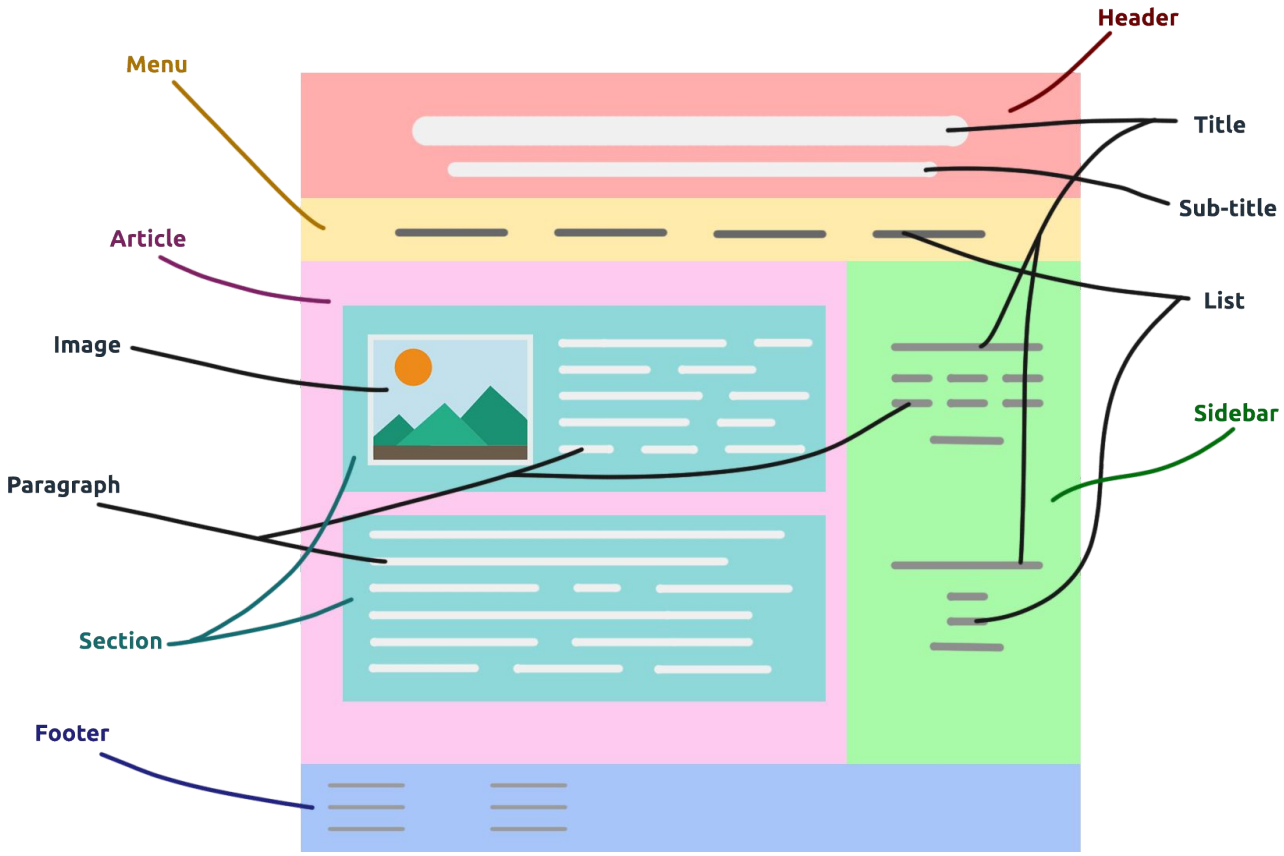
HTML tili (*HyperText Markup Language, Gipermatnli belgilash tili*) britaniyalik olim Tim Berners-Li tomonidan taxminan 1989-1991-yillarda yaratilgan.

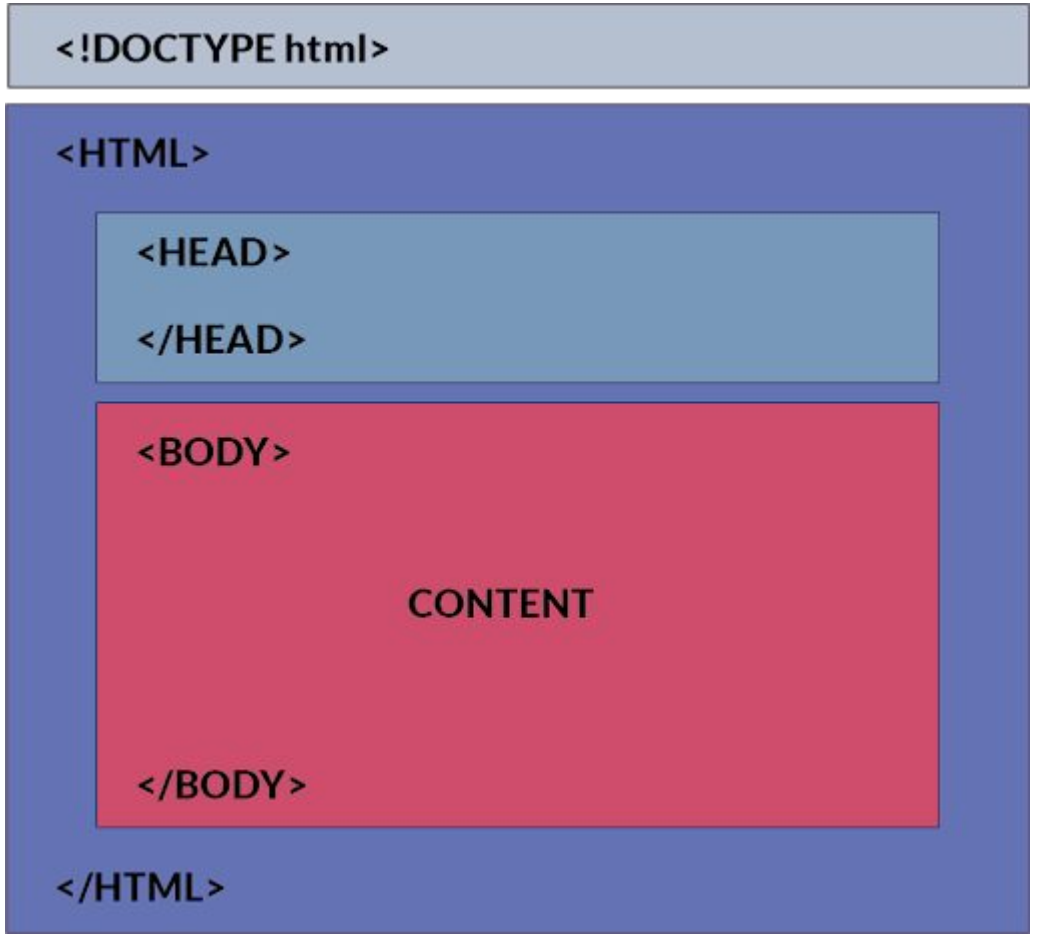
- HTML 2.0 – 1995-yil 22-sentabrda standart sifatida ma’qullangan;
- HTML 3.2 – 14.01.1997 yil;
- HTML 4.0 – 18.12.1997 yil;
- HTML 4.01 (sezilarli o‘zgartirishlar kiritilgan) – 24.12.1999 yil;
- ISO/IEC 15445:2000 (ISO HTML nomlanadi) – 15.05.2000 yil.
- HTML 5 – 28.10.2014 yil.
- HTML 5.1 – 01.11.2016 yil
- HTML 5.2 – 14.12.2017 yil.

HTML formatidagi hujjatlar .html yoki .htm kengaytmasiga ega.

www.w3.org - World Wide Web Consortium (W3C) web sayti (WWW uchun xalqaro standartlar organizatsiyasi)

HTML tili


Header
Menu
Title
Sub-title
Article
List
Image
Sidebar
Paragraph
Section
Footer


<!DOCTYPE html>
<HTML>
<HEAD>
</HEAD>
<BODY>
CONTENT
</BODY>
</HTML>

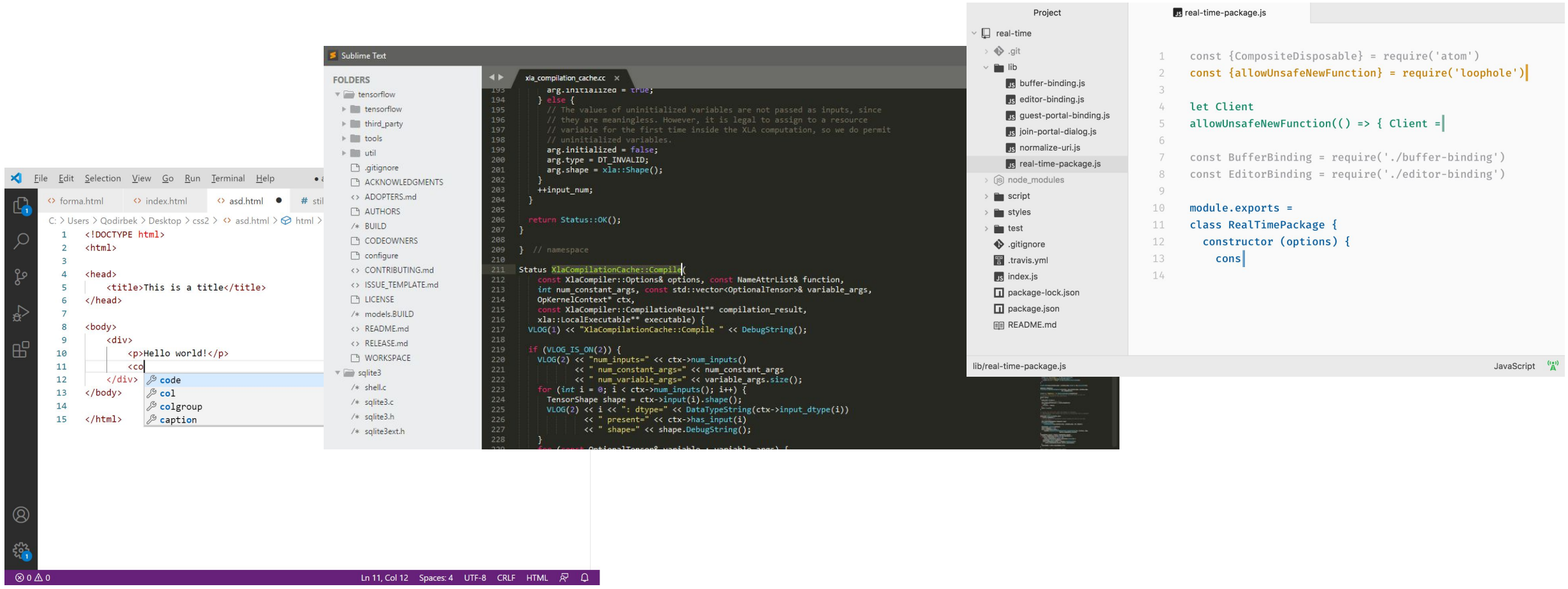
Kod yozish uchun

HTML, CSS, JS da kod yozish uchun oddiy matn muharriri kifoya. Lekin maxsus kod muharrirlaridan foydalanish qo'shimcha imkoniyatlar taqdim etadi, masalan, rangli kod, kod qismlariga ko'ra avtomatik to'ldirish, teglarni avtomatik yopish, xatolarni aniqlash va h.k.

Ko'p qo'llaniladigan kod muharrirlari:

- Visual Studio Code (https://code.visualstudio.com/)
- Sublime Text (https://www.sublimetext.com/)
- Atom (https://atom.io/)
- Brackets (http://brackets.io/)
- CodeKit (https://codekitapp.com/; Mac only)
- Adobe Dreamweaver (https://www.adobe.com/products/dreamweaver.html)
- Coda (https://panic.com/coda/)
- Webstorm (https://www.jetbrains.com/webstorm/)

Code muharrirlari



Nomlashdagi qoidalar

- Fayllar uchun to'g'ri kengaytma tanlash kerak, .html yoki .htm. Rasmlar uchun odatda .gif, .png, .jpg (.jpeg) yoki .svg formatlari ishlatilishi maqsadga muvofiq;
- Fayl nomlarida ' ' (probel) belgisini umuman ishlatmang! Uning o'rniga '-' yoki '_' (tire, tag chiziq) belgilarini ishlating, masalan: birinchi-kurs.html yoki birinchi_kurs.html;
- Maxsus belgilarni ishlatishdan qoching. Masalan, ? % # / : ; , . Shuningdek, xalqaro belgilarni ishlatishdan ham qoching, masalan, å ü va h.k.;
- Fayl nomlari belgilar registriga sezuvchan bo'lishi mumkin (operatsion tizimga bog'liq). Shuning uchun fayl nomlarida kichik registrli harflarni ishlatish maqsadga muvofiq;
- Fayl nomlari qisqa bo'lishi maqsadga muvofiq;
- Fayllarni nomlashni oldindan kelishiv olish, masalan, doim kichik harflar va tireni ishlatish va h.k.

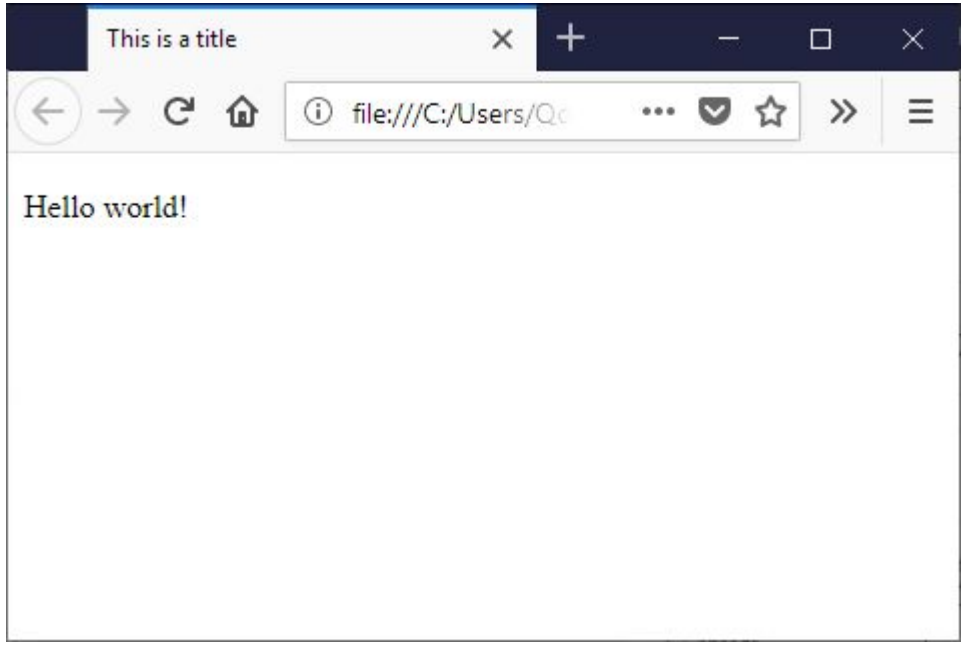
HTML tilida soda web sahifa

```
<!DOCTYPE html>
<html>

<head>
    <meta charset="utf-8">
    <title>This is a title</title>
</head>

<body>
    <div>
        <p>Hello world!</p>
    </div>
</body>

</html>
```



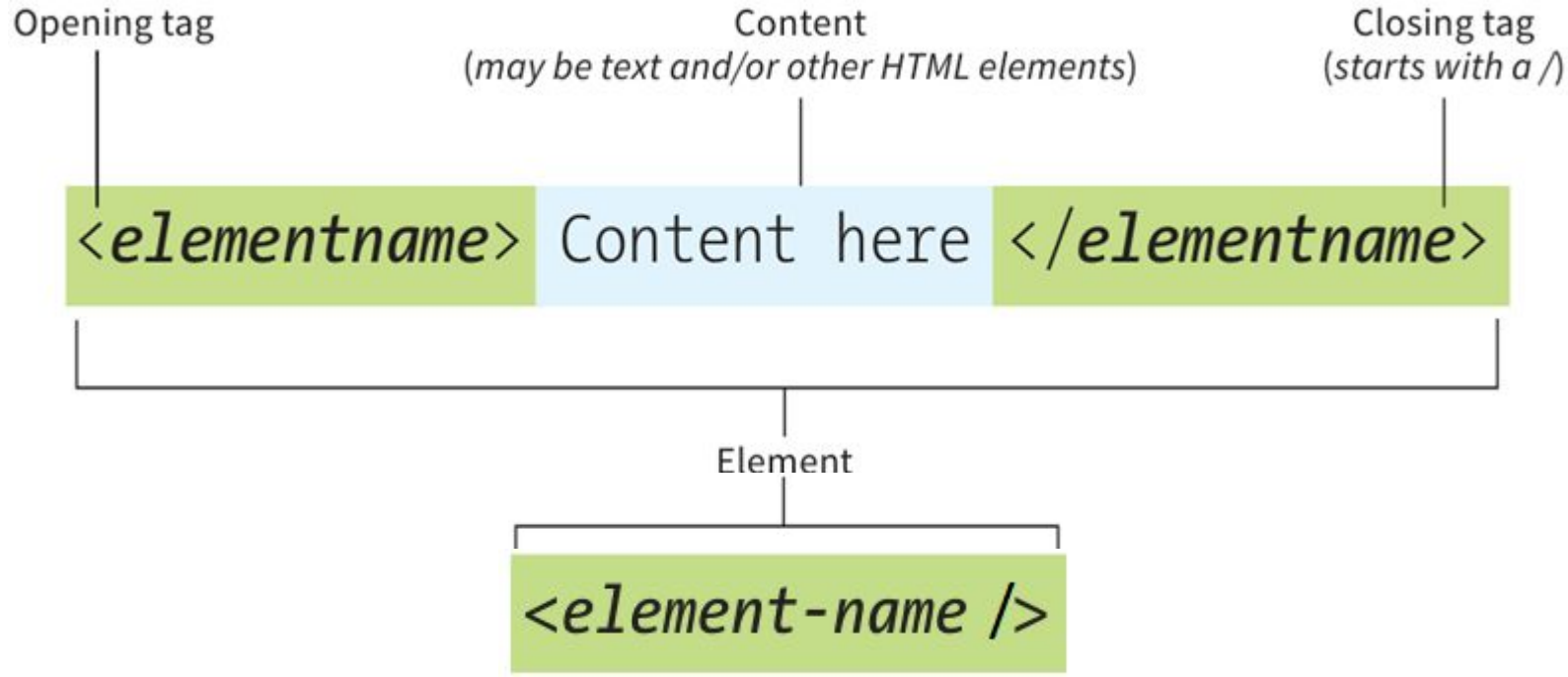
Brauzer e'tibor bermaydi:

- Bir nechta probellar
- Yangi qatorlar
- Tablar
- Aniqlanmagan belgilar (teglar)
- Izohlardagi matn

Izohlar maxsus "`<!--`" va "`-->`" teglar orasida yoziladi.

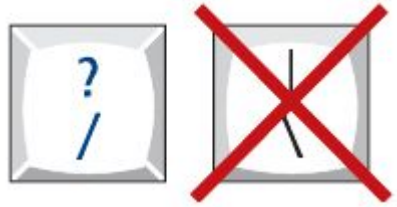
Teg

Teg – HTML tili asosi. Teglar sahifadagi elementlarni aniqlashda ishlatiladi



Example: `<h1>Black Goose Bistro</h1>`

`<br />`



Atribut

Atribut – elementning turli xossalariga qiymat yuklash uchun ishlatiladi. Sintaksisi quyidagicha:

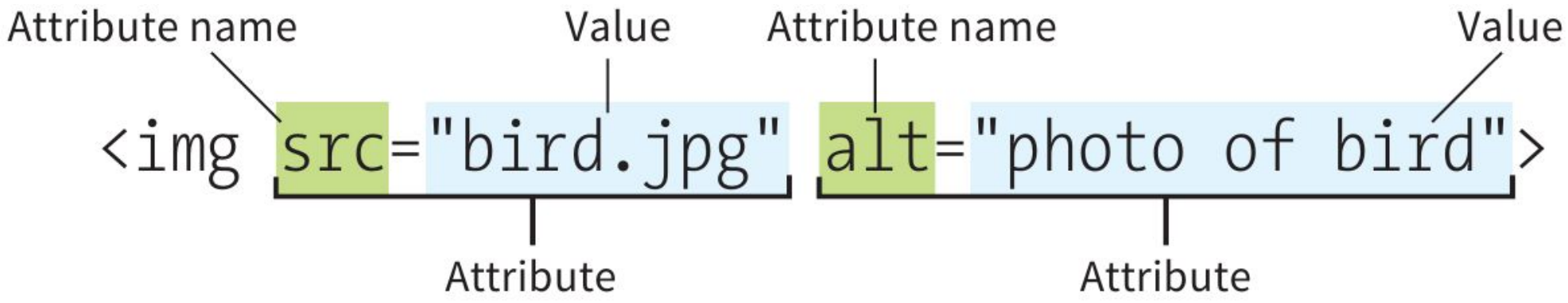
```
attributename="value"      attributename
```

Elementlarning ochiluvchi teglarida probel bilan ajratilgan holda ishlatiladi:

```
<element attributename="value" />
<element attributename="value">Content</element>
```

Element bir nechta atributga ega bo'lishi mumkin:

```
<element attribute1="value" attribute2="value" attribute />
```



Meta teg

<meta> tegi orqali HTML hujjatning metama'lumotlari (metadata) aniqlanadi. Metadata – sahifa haqida brauzer va qidiruv tizimlari uchun ma'lumot.

Atributlari:

charset – hujjat kodirovkasini aniqlaydi;

name – metateg nomi, shuningdek uning maqsadini belgilaydi

http-equiv – metategni HTTP sarlavhaga aylantirish uchun ishlatiladi

content – name yoki http-equiv yordamida aniqlangan atribut qiymatini o'rnatadi

```
<meta charset="utf-8">
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
```

Meta teg

name atributi qiymatlari:

application-name – sahifa taqdim etayotgan web-ilova nomi

author – hujjat muallifi

description – joriy hujjat ta'rifi

generator – sahifani yaratgan dasturiy ta'minot

keywords – joriy hujjat uchun kalit so'zlar

viewport – foydalanuvchining ko'rish sohasini aniqlaydi

```
<meta name="author" content="John Doe">
<meta name="description" content="Free web tutorials">
<meta name="generator" content="FrontPage 4.0">
<meta name="keywords" content="HTML, meta tag, tag reference">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

Meta teg – name=viewport

viewport siz

viewport bilan

Savollar?