

World Wide Web

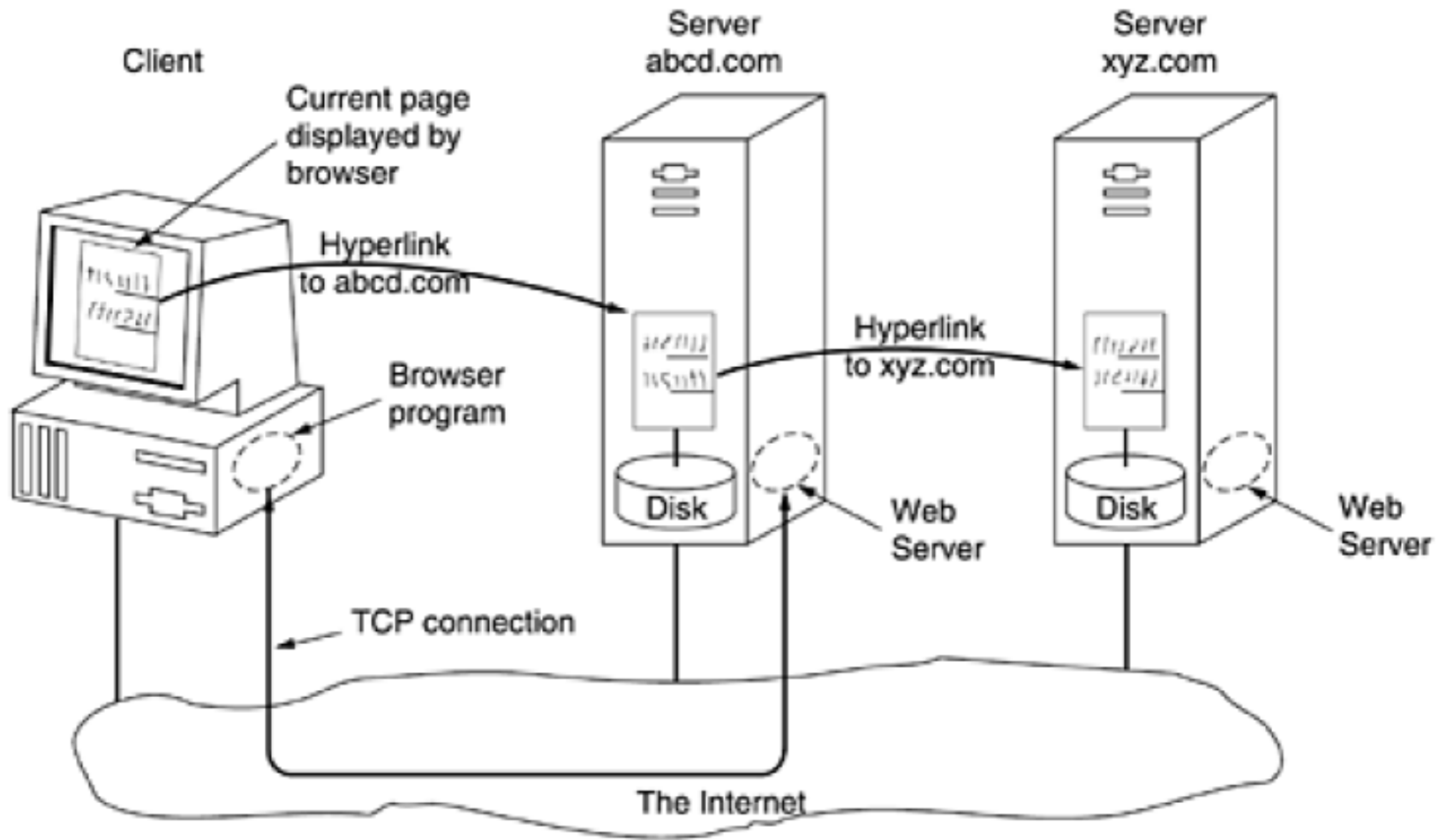
World Wide Web

- The World Wide Web is an architectural framework for accessing linked documents spread out over millions of machines all over the Internet.
- The Web (also known as WWW) began in 1989 at CERN, the European center for nuclear research.

Architectural Overview

- the Web consists of a vast, worldwide collection of documents or web pages.
- Users can follow a link by clicking on it
- The idea of having one page point to another is called hypertext

Client-Server Model of WWW

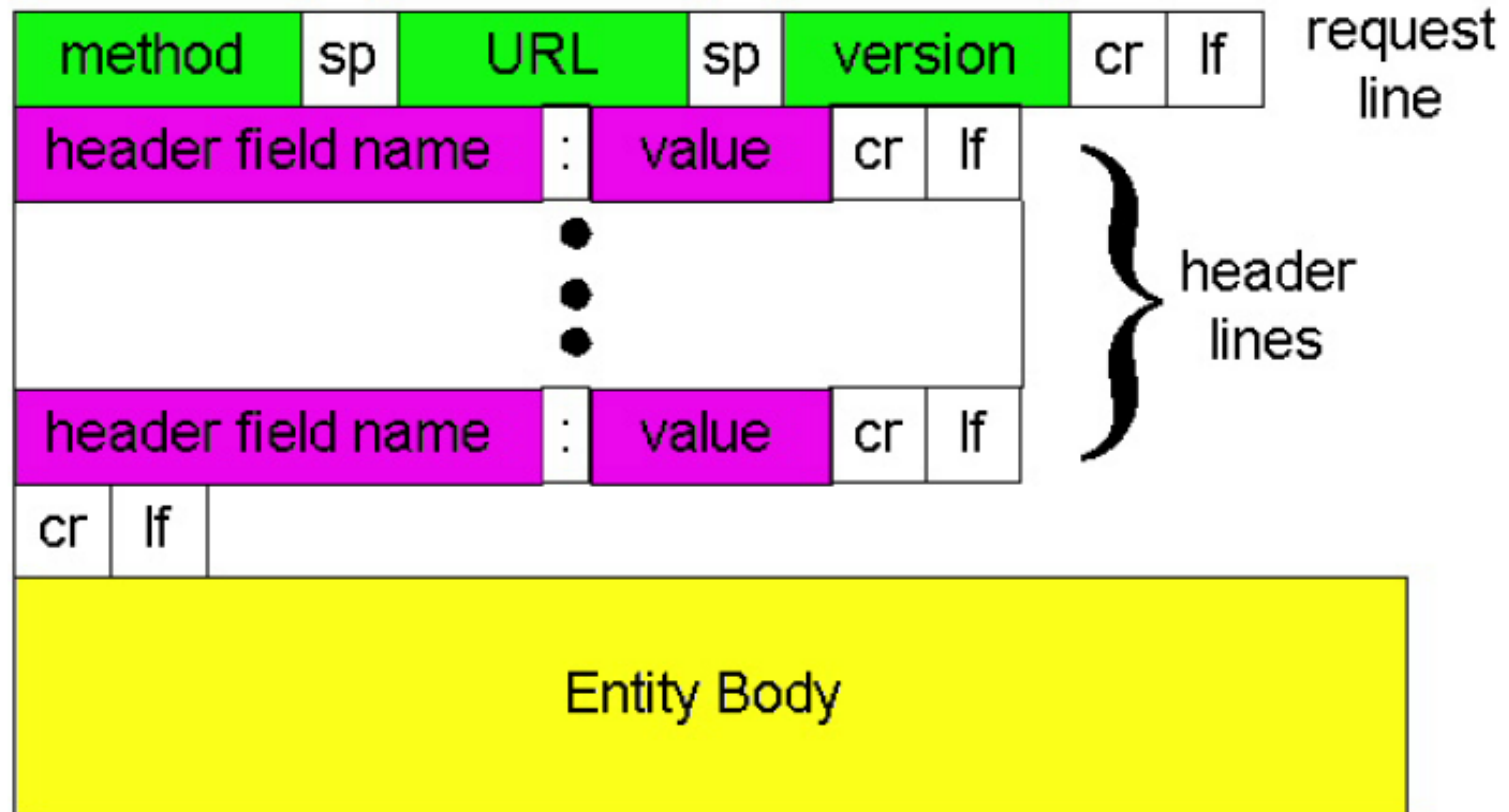


HyperText Transfer Protocol (HTTP)

- The Hypertext Transfer Protocol (HTTP) is an application protocol for distributed information systems.
- HTTP is the foundation of data communication for the World Wide Web.
- HTTP functions as a request-response protocol in the client-server computing model

HTTP Commands

- Http Request Message



Example HTTP Command

GET /somedir/page.html HTTP/1.1

Connection: close

User-agent: Mozilla/4.0

Accept: text/html, image/gif, image/jpeg

Accept-language:en

Example

- Using a connection-oriented socket (TCP Socket) connect to a http server (port 80).
- Ask the main page (index.html)
- Print the html page in text


```
#include<ctype.h>
#include<sys/types.h>
#include<sys/socket.h>
#include<netinet/in.h>
#include<stdio.h>
#define SIZE sizeof(struct sockaddr_in)
main( )
{
    int sockfd,nread;
    short int port=80;
    char buf[24000],enter,resp;
    char IP[20];
    struct sockaddr_in server={AF_INET};
    printf("\n\nEnter IP address of the Server \n" );
    scanf("%s%c",IP,&enter);
    server.sin_family=AF_INET;
    server.sin_addr.s_addr = inet_addr(IP);
    server.sin_port=htons(port);
    memset(&(server.sin_zero),0,8);
    if((sockfd = socket(AF_INET,SOCK_STREAM,0)) == -1)
```

```
{
    printf("Error creating SOCKET\n");
    return(0);
}
if( (connect(sockfd,(struct sockaddr *) &server, SIZE)) == -1)
{
    printf("Connect failed\n");
    return(0);
}
strcpy(buf,"GET / HTTP/1.1\n\n");
nread=strlen(buf);
send(sockfd,buf,nread+1,0);
nread = recv(sockfd,buf,24000,0);
buf[nread]=0;
printf("The response received is :%s",buf);
}
```