

# How does a BBS Work?

Argo: For Example

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# Question



How does a BBS  
Work?

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## What should a BBS do?

- ▶ response telnet requests
- ▶ response http requests
- ▶ deal with user information
- ▶ deal with board and topic

1 Intro

Telnet

Web(the old  
version)

The New Argo

# At the very beginning...



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# At the very beginning...



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## How to response telnet requests?

- ▶ `fork()`: create a child process
- ▶ Each request handled by one process

# At the very beginning...



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## How to response telnet requests?

- ▶ `fork()`: create a child process
- ▶ Each request handled by one process

## And how to communicate between processes?

- ▶ Why commuincation needed: users can get the states of others
- ▶ shm: shared memory

# At the very beginning...



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## How to response telnet requests?

- ▶ `fork()`: create a child process
- ▶ Each request handled by one process

## And how to communicate between processes?

- ▶ Why commuincation needed: users can get the states of others
- ▶ shm: shared memory

## How to store the data?

- ▶ Write C structures into file

# Now we have a telnet server like this



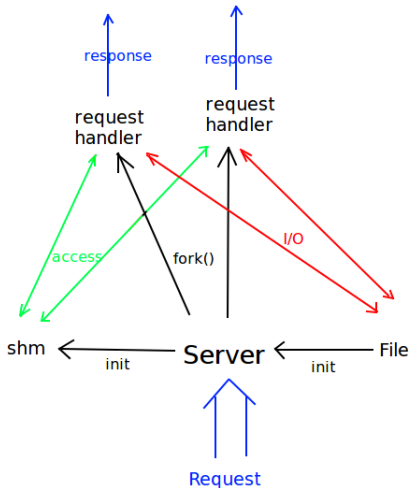
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# Then, we want a BBS on webpages



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# Then, we want a BBS on webpages



webserv works similarly as telnet, except

- ▶ handling http requests
- ▶ responding html pages

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# Then, we want a BBS on webpages



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webserv works similarly as telnet, except

- ▶ handling http requests
- ▶ responding html pages

How to handle a http request

- ▶ Routing table

# The New Argo



## Two parts

jsbbs the front-end, written by entire javascript

phpbbs the back-end, only handles AJAX requests and responses JSON

- ▶ The front-end and back-end are completely independent
- ▶ phpbbs access BBS with a php extension in C

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# The New Argo



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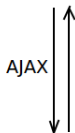
Telnet

Web(the old  
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handling, rendering template...

**jsbbs**



**phpbbbs**

argo\_ext  
(php extension in C)



**BBS**

(data file, shm)

# Working with Database



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## Using RDBMS, for

- ▶ better flexibility
- ▶ easier to migrate

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# Working with Database



## Using RDBMS, for

- ▶ better flexibility
- ▶ easier to migrate

## Compatibility with Existing Systems

- ▶ phpbbs handing the database
- ▶ telnet and websrc send singals to phpbbs

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# Working with Database



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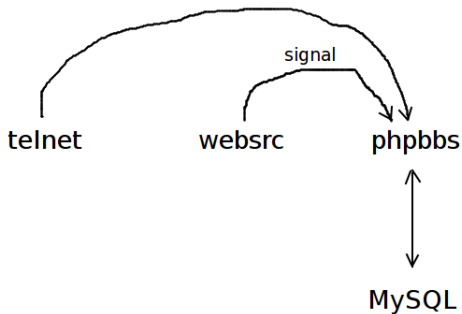
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Thanks.

