

# Designing Environments for Brainstorming

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# Brainstorming

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- Collaborative process for “generating, collecting and filtering ideas”

**–Why synchronous?**

# Early Phase Design

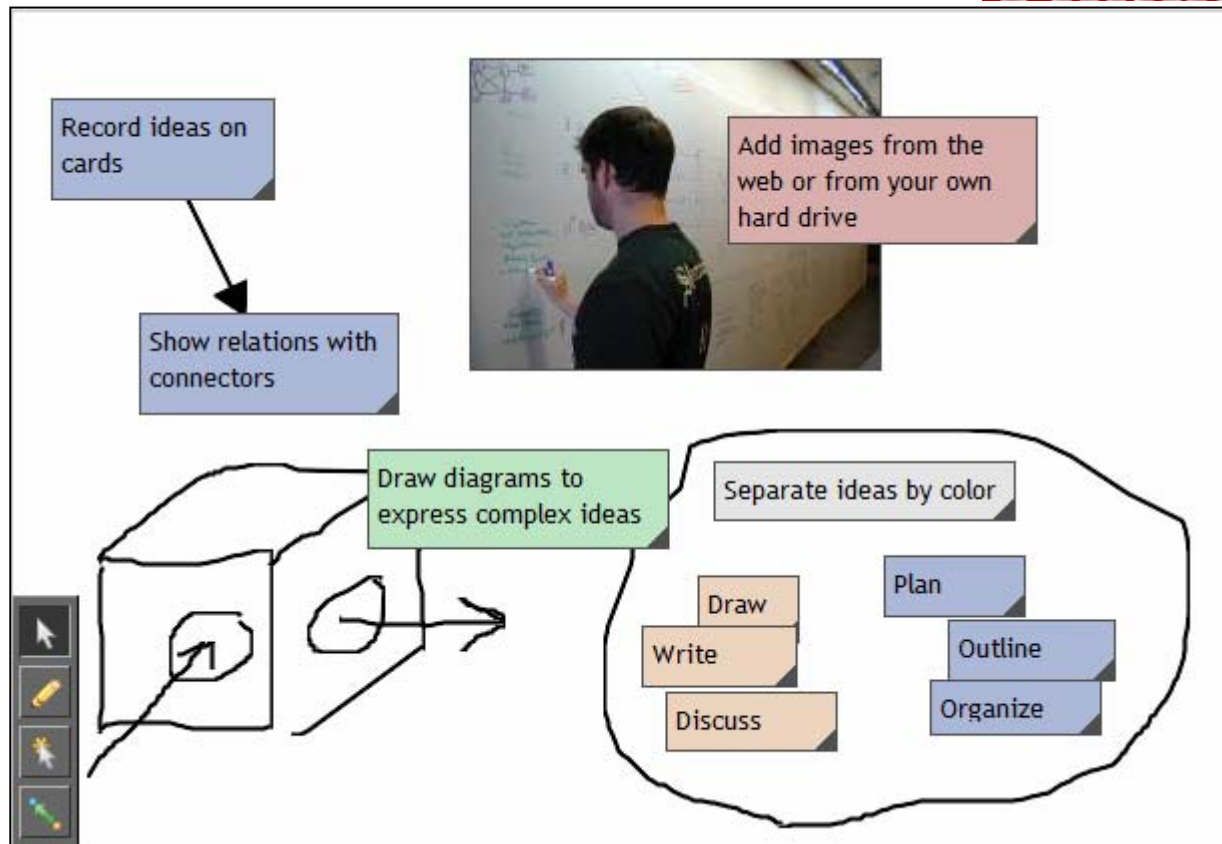
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- Early phase design challenges
  - Goals/Problem not clearly defined
  - Lots of ideas are generated
  - Bias problem/Difficult for one mediator to process

What we need is to somehow collect thought externalization and share with others even with oneself

# Virtual Environments

## Thinkature



- Single online workspace.
- Text chat, voice chat, uploads, sketches.
- Associations (aka. relations).

# Virtual Environments



**Page Navigation** Zoom

**Insert Controls** **Undo & Paste** **Insert & Delete Pages**

**Shared Workspace & Viewing Area**

**Intermix and work with:**

- ✓ Microsoft Office and Adobe PDF files
- ✓ Photos
- ✓ Screen Captures & Desktop Shares
- ✓ Plug-ins: text docs, diagrams, maps, etc.

**Drawing & Commenting Tools**

- ✓ Draw
- ✓ Highlight
- ✓ Annotate
- ✓ Embed comments

Shared text annotations

And drawings, too

John Doe  
Plus embedded comments

→ A shared pointer, also

**Meeting Options**

- Kick Out All Users
- End Meeting/Logout

**User Management**

- ✓ See who's logged in
- ✓ Invite people via email
- ✓ Set user permissions
- ✓ Lock & unlock the room

**Text Chat & FREE Teleconferencing**

- ✓ Get your participants on the phone together
- ✓ Chat with ALL participants or select persons only

**Synch/Un-synch Pages**

**Userlist**

- John Doe (Owner)\*
- Invite People
- Room Unlocked

**Chat**

To: All

**Public Chat with All**

Free Conference Call: 641-297-5320  
Access Code: 2961183  
(Regular long-distance charges if applicable)  
Guest 1: Hello, check out this built-in chat tool!  
Guest 1: And FREE phone teleconferencing!

Phone Conference To: All

- Conferences, streaming.
- Documents for review.
- Multiple sessions.
- Versioning.

# Virtual Environments

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- Feature rich applications
- No formal process to identify and share/discuss information
- Information generated during a synchronous session is somehow locked away in bad XML.

# Whiteboard conference - skype

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- Real-time interactive whiteboard for multiple users
- Voice and video
- Synchronization + offline
- Save and load work



# Wiki's

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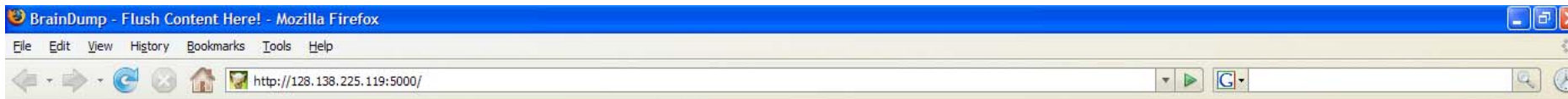
- Incubator phase – seeding
- Idea/opinion polling - evolutionary growth
- Moderation - reseeding



# Brain Dump!

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Start

My Notes



- Flush Content Here!

BrainDump is a new way to store and manage your information. Just drop your content here and we will take care of organizing it for you. No more creating messy folders to store files and trying to figure out where they are or finding search terms for them. Discover documents, images and sounds similar to yours. make short notes and tag your content, upload documents and find related concepts, identify images and music like your own. Best of all it's [free as in free beer!](#) .

BrainDump is very very Beta! it currently only supports documents and notes. It recently started as a course project but the developers ([one\\_distracted\\_grad\\_student](#)) are working on adding more functionality. Here is some information on the project architecture:

- MVC framework: Pylons
- Database: Mysql
- Templating: Mako
- Request Dispatching: Routes

## Features

- notes - tag little snippets of information and retrieve them easily.
- documents - upload documents, view them online and find related concepts from your collection.
- TODO: support images and audio.

## News from Brain Labs

Want to join this project?  
join us at  
[code.google.com/p/BrainDump](http://code.google.com/p/BrainDump)  
| [Praful mangalath](#)  
*Tue, 08 May 2007*



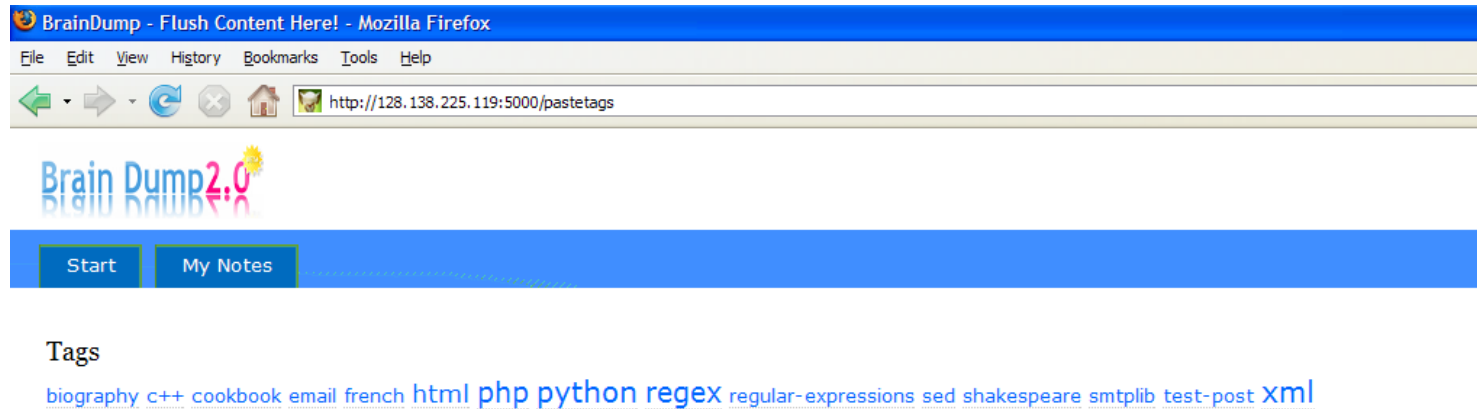
# Features

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# Concept/Tag Cloud

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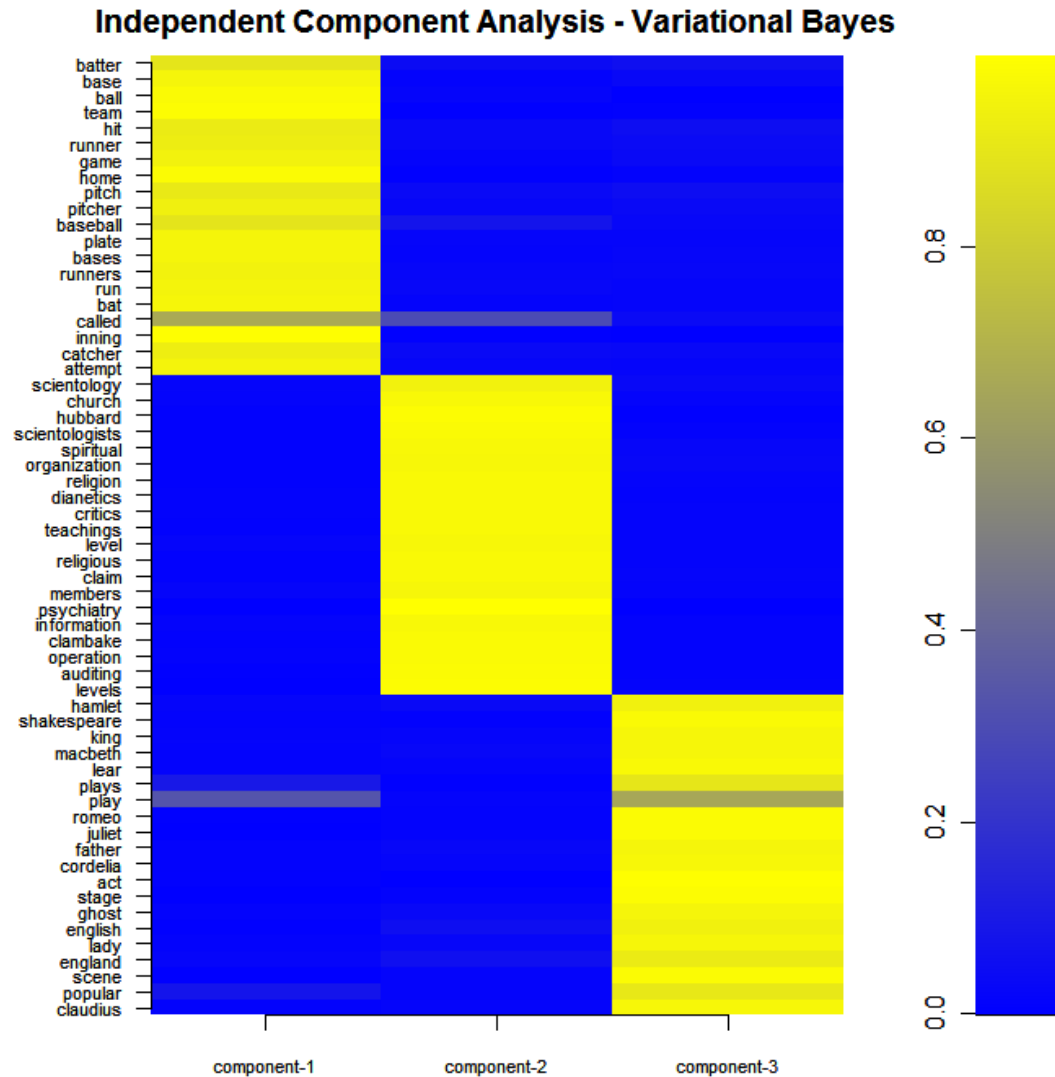


# TODO Features :Semantic Search

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# Semantic Search



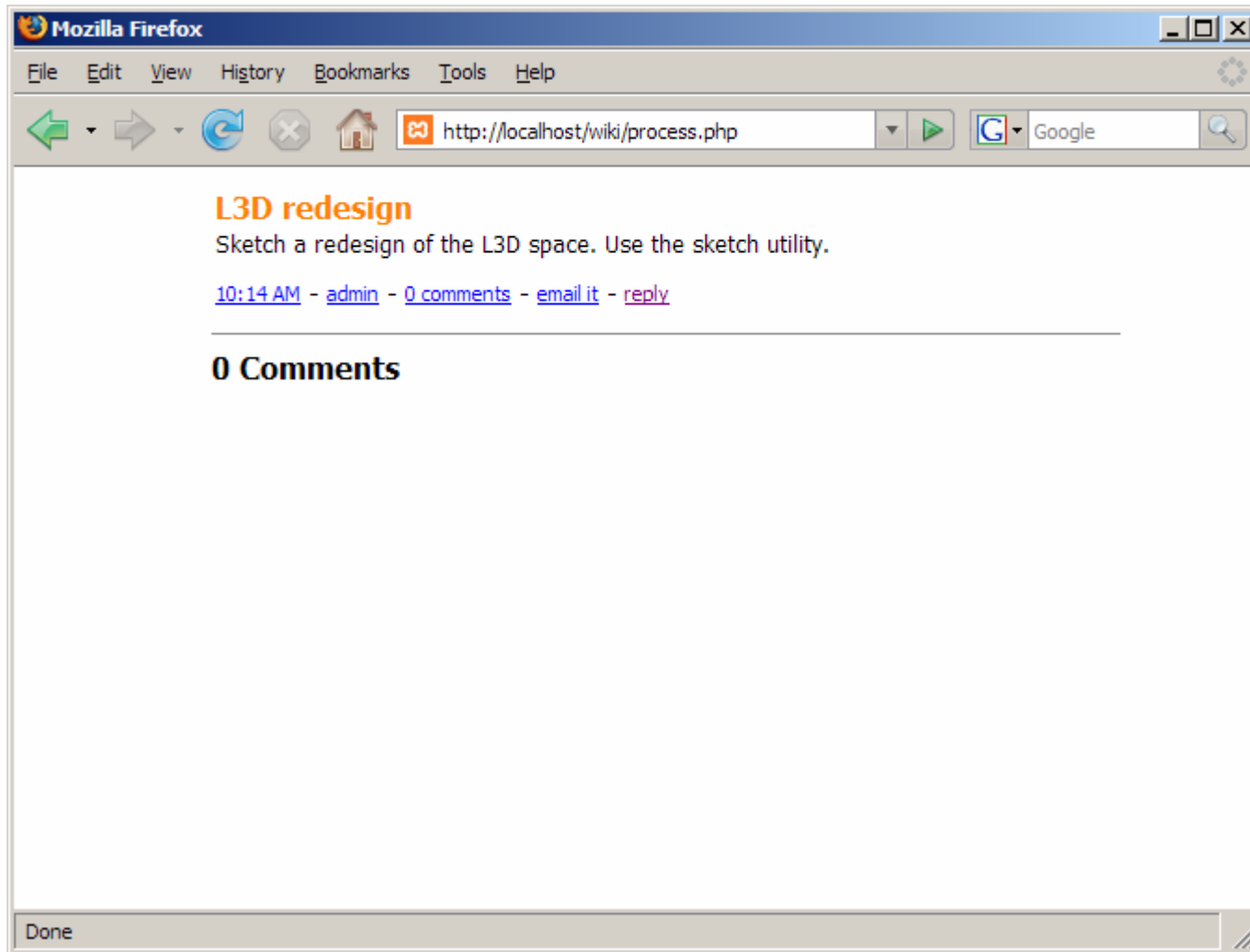
# Online Brainstorming via Rapid Drafting

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## Look for:

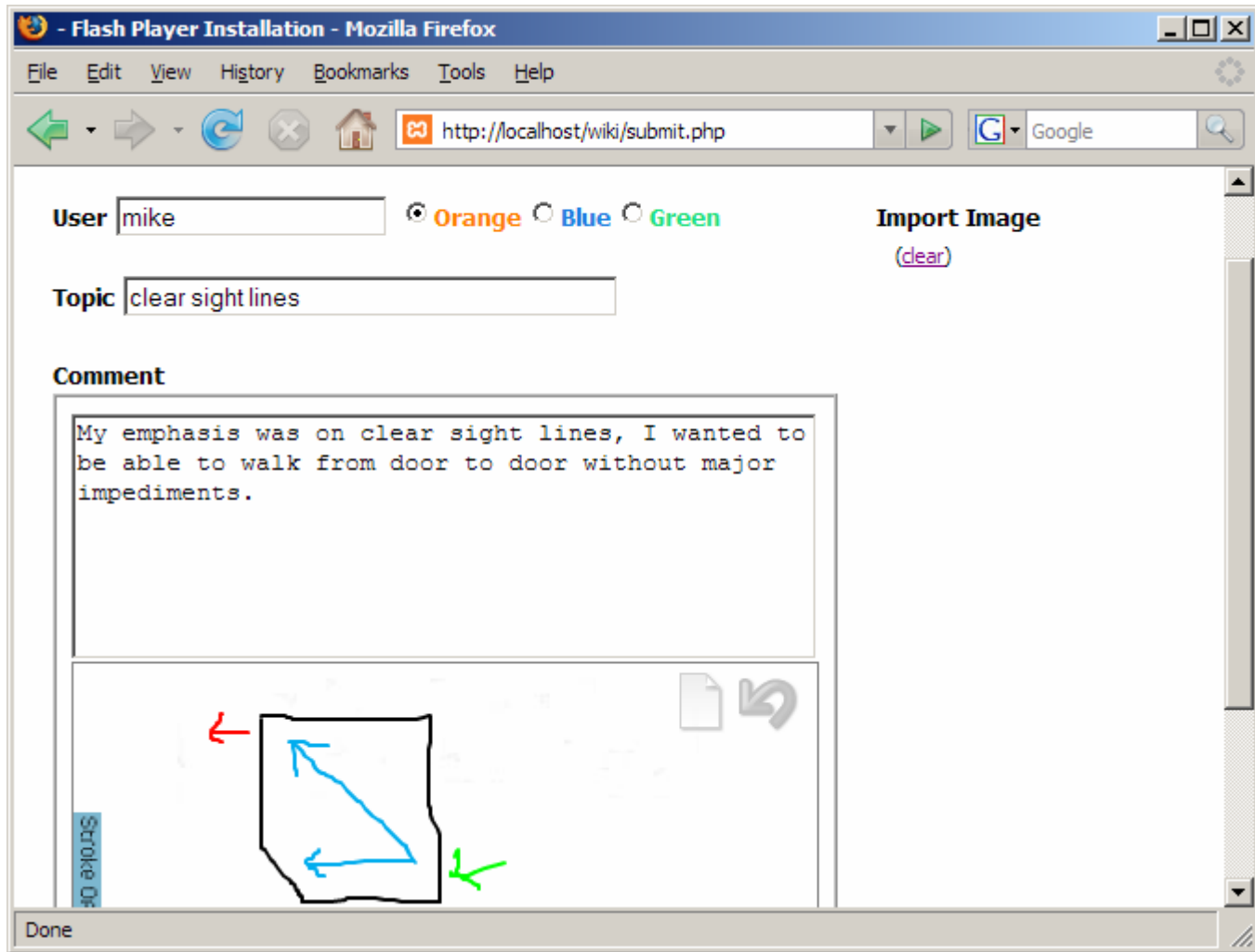
- Idea Generation and Reduction
- Threads of Posts (“streams of conversation”)
- Shared Resources (“observation”)
- Rapid Drafting (“sketches”)
- Annotating Sketches (“annotation”)
- Use of Color (“track contribution”)
- Quick Feedback
- Presence of a Moderator (“admin”)

# First Case Study



- Brainstorm 1 (**generation**): users **sketch** on an idea.





- Interface allows user to sketch and write text **rapidly**.

Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost/wiki/process.php

## L3D redesign

Sketch a redesign of the L3D space. Use the sketch utility.


[10:14 AM](#) - [admin](#) - [1 comments](#) - [email it](#) - [reply](#)

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### 1 Comments

**clear sight lines**

My emphasis was on clear sight lines, I wanted to be able to walk from door to door without major impediments.

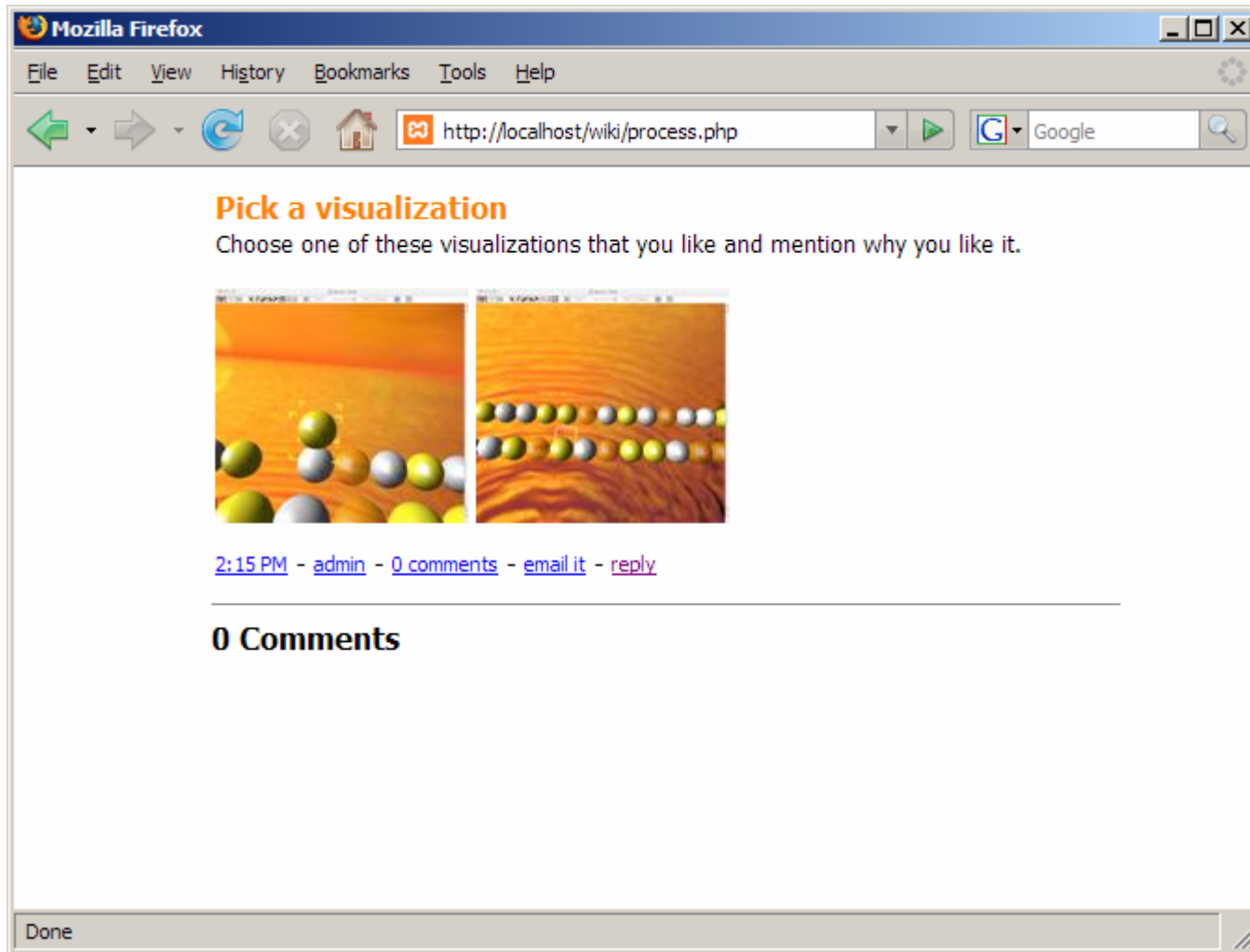


[6:50 PM](#) - [mike](#) - [reply](#)

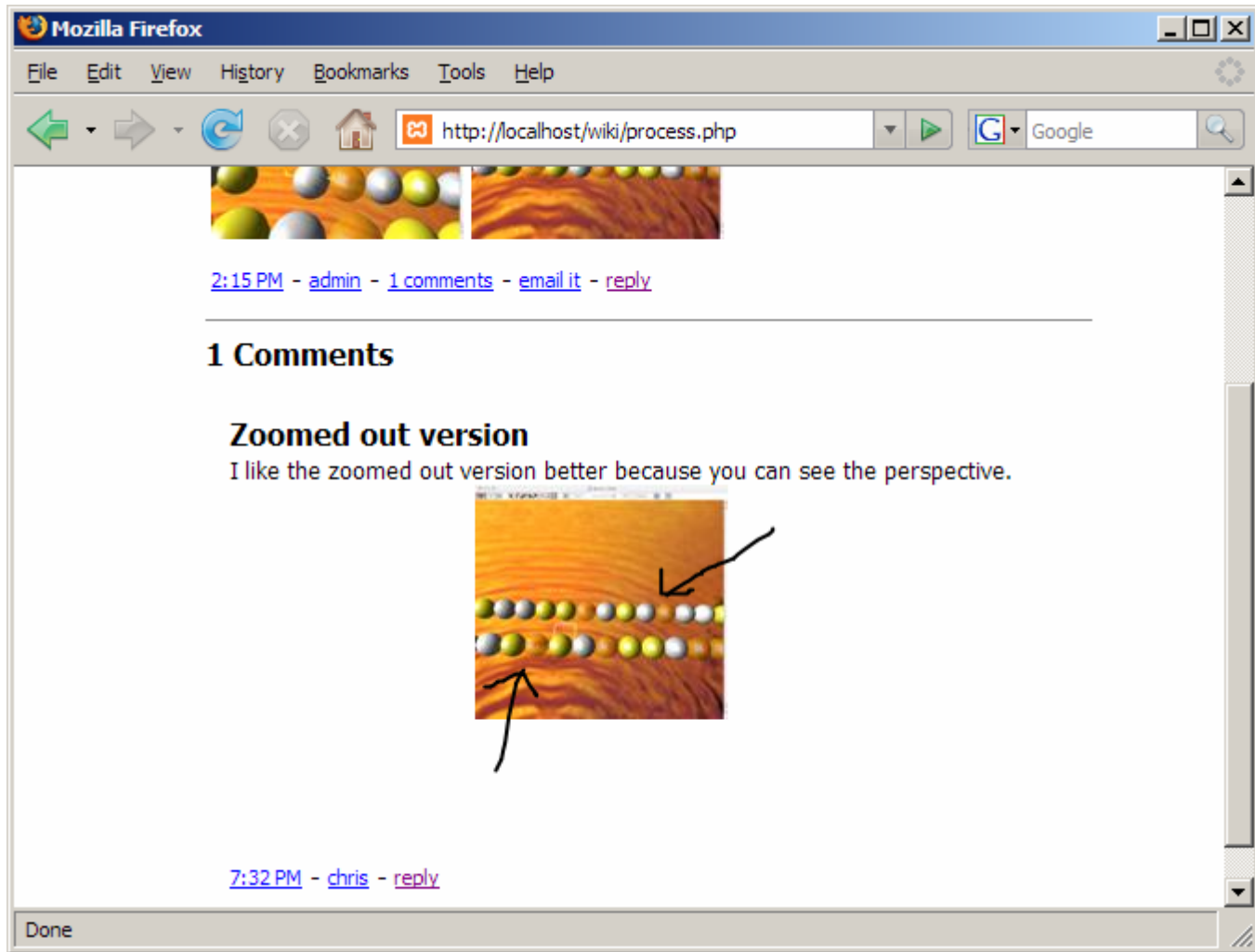
Done

- Note thread comments allow **logging** and **discussion**.

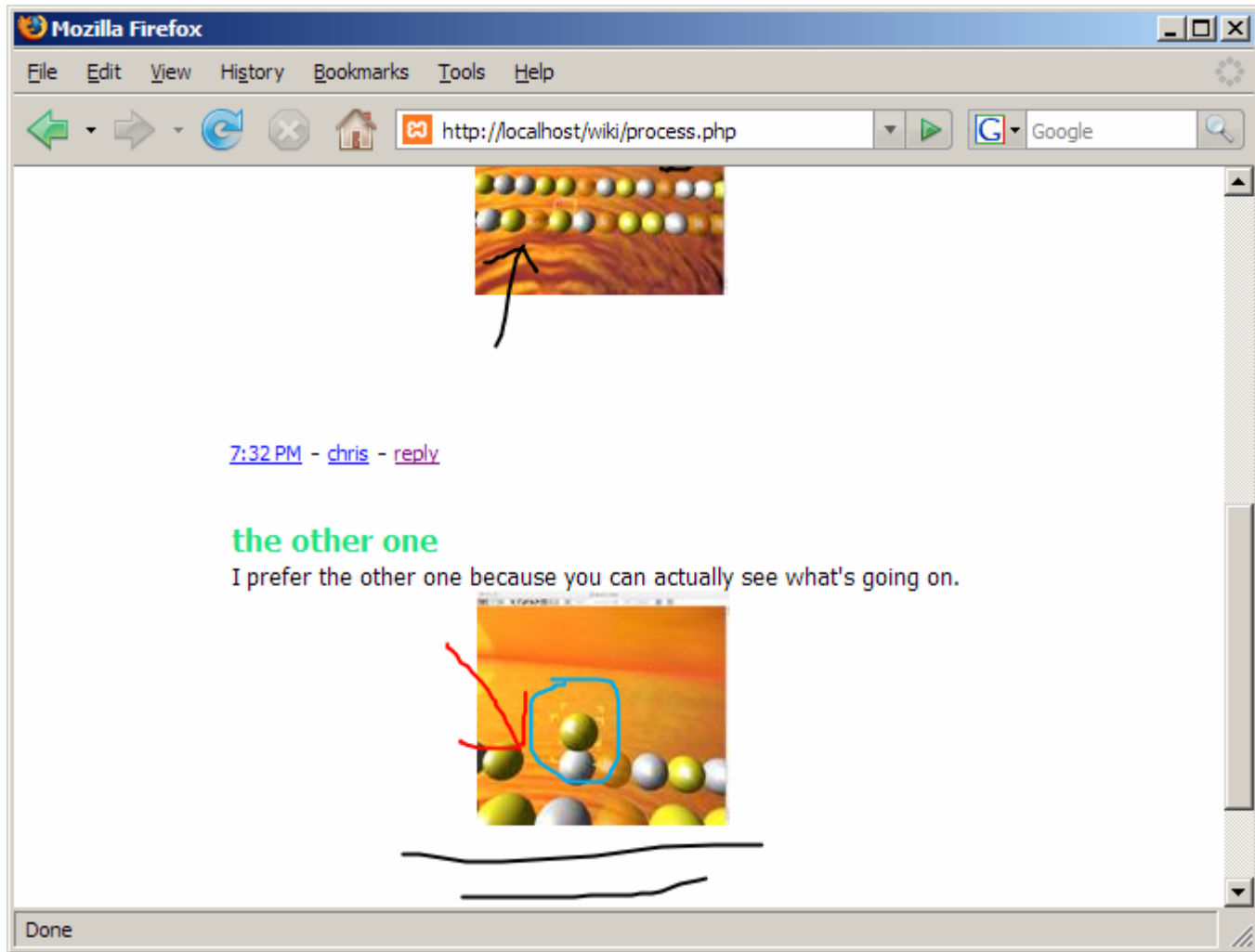
# Another Case Study



- Brainstorm 2 (reduction): admin shares two ideas with users.



- User “chris” chose one of the images and **annotated** it.



- Like Post Its, there is **color tracking** (title color).

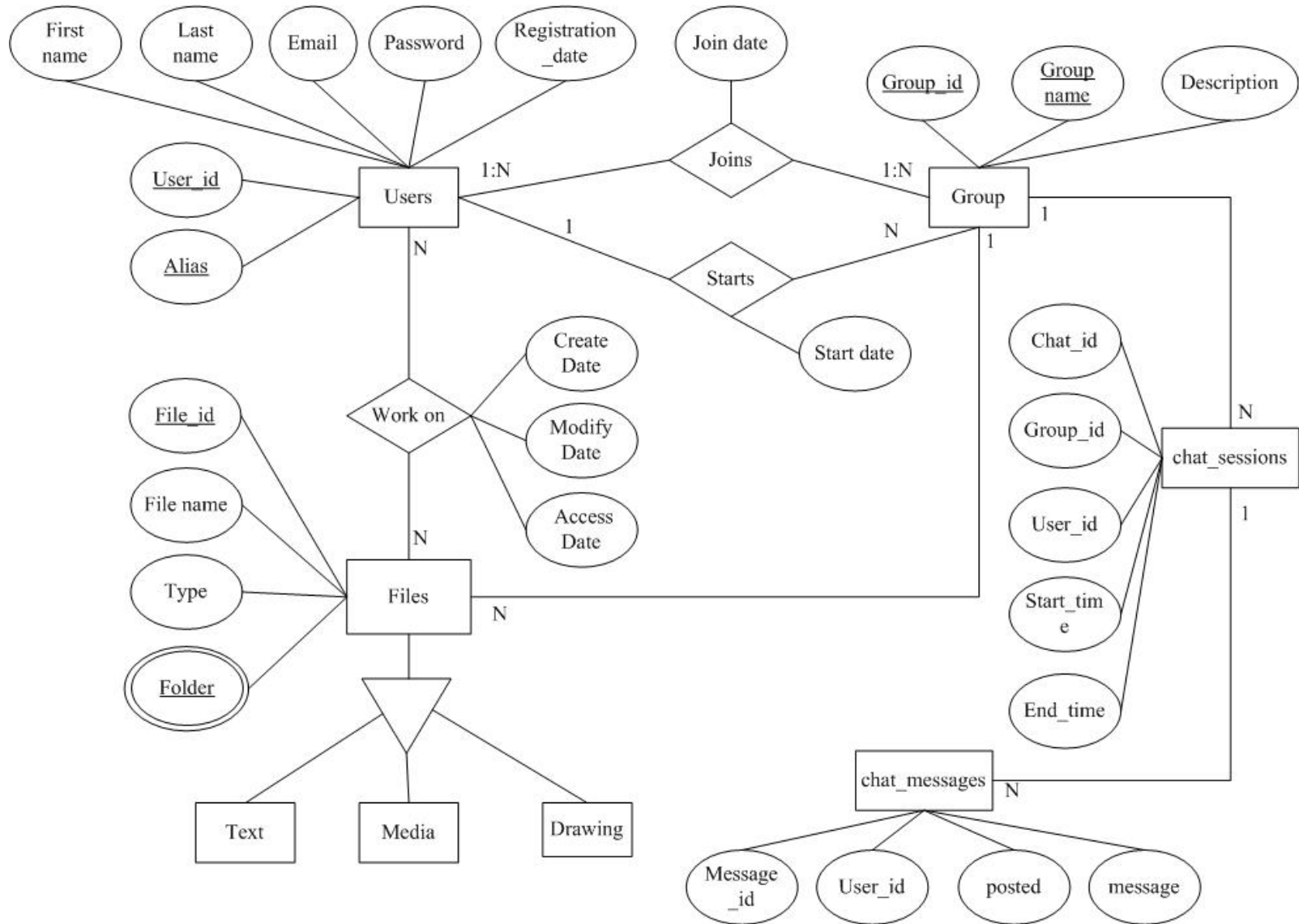
# Online Brainstorming via Rapid Drafting

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## Recap:

- Idea Generation and Reduction
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# Database Design: E-R Diagram



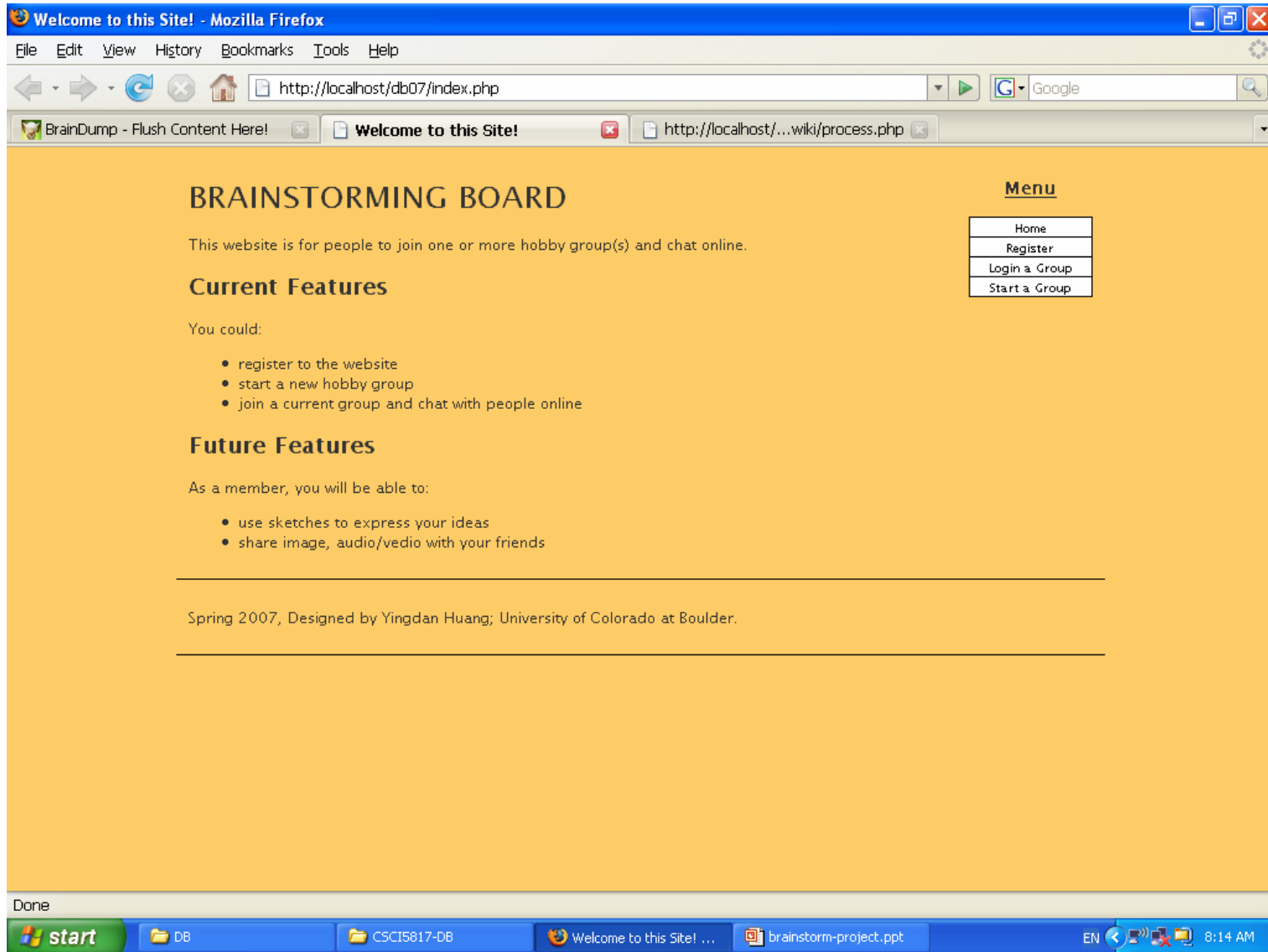
# Database Design: Logical View

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Users						
<b>user id</b>	alias	first name	last name	email	password	registration date
Groups						
<b>group id</b>	group name	description	start date			
joins						
<b>user id</b>	<b>group id</b>	join date				
chat sessions						
<b>chat id</b>	group id	user id	start time	end time		
chat messages						
<b>message id</b>	user id	posted	message			
Files						
<b>file id</b>	file name	type				
Workon						
<b>user id</b>	<b>file id</b>	create date	modify date	access date		
Text						
Media						
Drawing						



# Database Design: Physical Design (1)



# Database Design: Physical Design (2)

View the Current Users - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost/db07/view\_users.php

BrainDump - Flush Content Here! View the Current Users http://localhost/...wiki/process.php

## Registered Users

There are currently 10 registered users.

Edit	Delete	Last Name	First Name	Date Registered
<a href="#">Edit</a>	<a href="#">Delete</a>	Huang	Yingdan	April 18, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Holmes	Sherlock	April 19, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Huang	Lucky	April 21, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Srivastava	Viraj	April 22, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Wu	Darwin	April 22, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Fu	Johnathan	April 22, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Gross	Mark	April 29, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Shao	Peng	April 29, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Finger	Susan	April 29, 2007
<a href="#">Edit</a>	<a href="#">Delete</a>	Huang	Kaiming	April 29, 2007

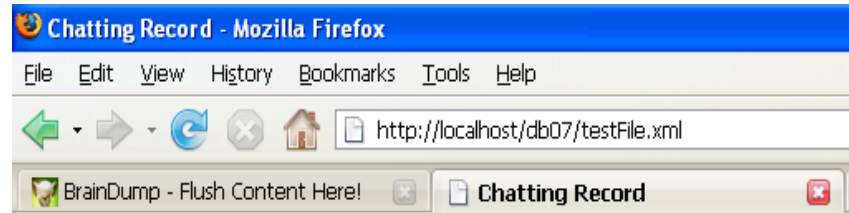
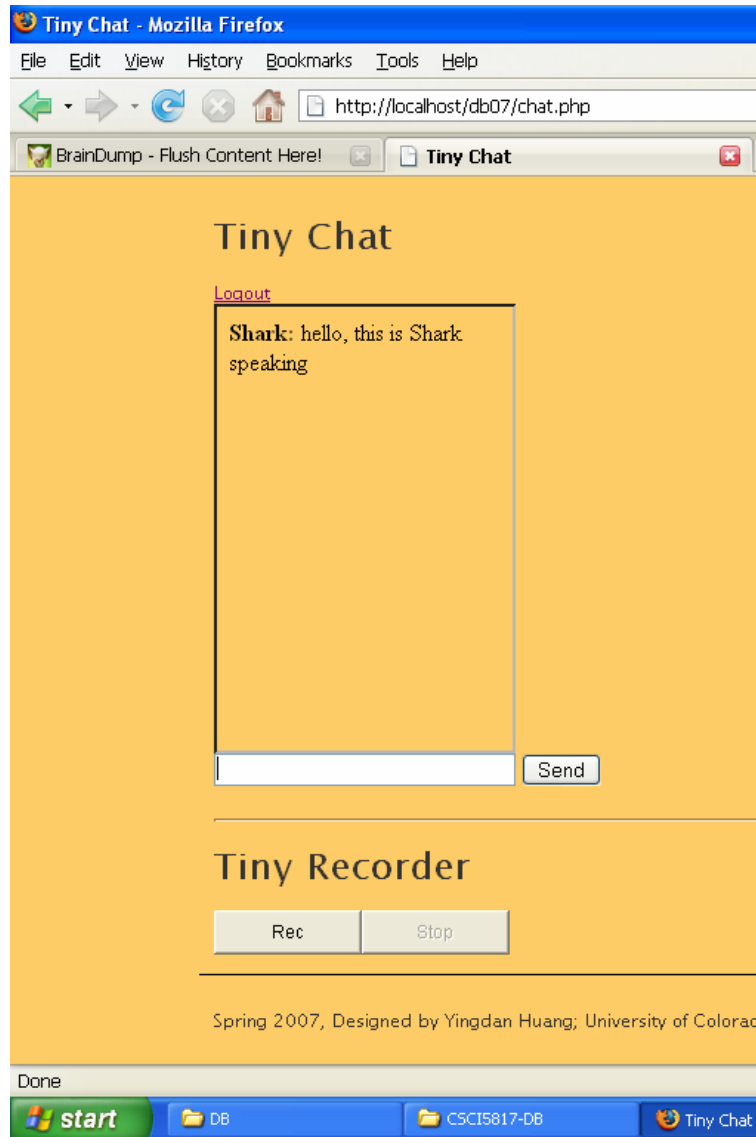
1 2 [Next](#)

Spring 2007, Designed by Yingdan Huang; University of Colorado at Boulder.

Done

start DB CSCI5817-DB View the Current Use... brainstorm-project.ppt EN 8:16 AM

# Tiny Chat & Tiny Recorder



## Chatting Records

2007-05-09 08:19:09 - How is everything going? ( Shark )  
2007-05-09 08:18:05 - hello, this is Shark speaking ( Shark )

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# Demo Time