CS 50 Walkthrough 7
Problem Set 7: C$50 Finance

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Problem Set 7: C$50 Finance

- Topics:
  - Web programming
  - PHP
  - MySQL
- You implement:
  - A stock buying/selling/portfolio viewing/history viewing website

Permissions on the web

- **Static content** (.html, .png, .jpg, .css, .js, etc.): readable by "others", read-write by "owner"

- **Directories** (including your home directory, public_html, and any directories within): executable by "others", read-write-execute by "owner"

- **PHP scripts** (.php): read-write by "owner"

Permissions

Read: r = 100 (4)
Write: w = 010 (2)
Execute: x = 001 (1)
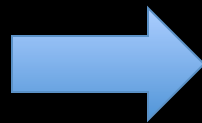
rwx (4 + 2 + 1 = 7)
rw_ (4 + 2 + 0 = 6)
r_x (4 + 0 + 1 = 5)
r__ (4 + 0 + 0 = 4)
_wx (0 + 2 + 1 = 3)
_w_ (0 + 2 + 0 = 2)
__x (0 + 0 + 1 = 1)

Owner/Group/Others
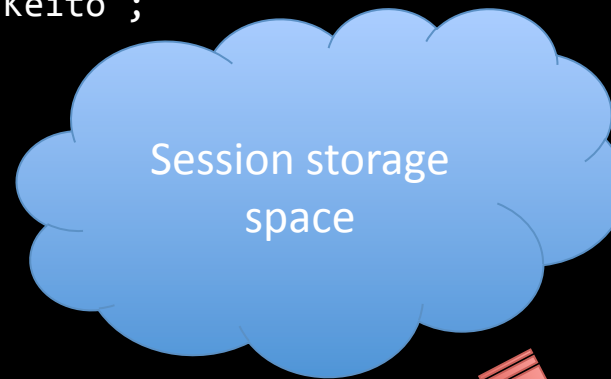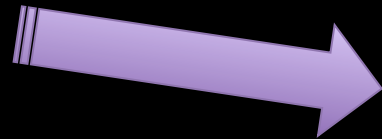rwx rwx rwx = 777
r_x r_x x__ = 551
rw_ ___ rw_ = 606

Distribution code

- index.php
- common.php
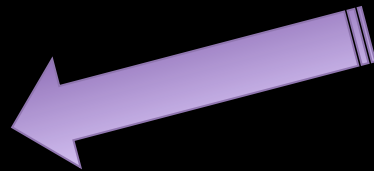- stock.php
- login.php
- login2.php
- helpers.php

PHP Sessions

Features you need to implement

- User registration
- Get quotes
- Maintaining a Portfolio
  - backend (database)
  - frontend
- Selling
- Buying
- History

Let's implement quotes!

Designing the Portfolio

- Database design:
  - What columns do we want?
    - uid (user ID of owner)
    - symbol
    - shares (number of shares)
- What about the frontend?
  - The SQL queries we need
  - How do we use 'em in PHP?

How to debug

- Use the dump() function
- Not sure if $_GET and $_POST are correct?
- Testing SQL queries

- RTFM :-) http://www.php.net/

When you think you're done...

- Does your site work across browsers?
- Is your input validation sufficient (very important!)
  - Empty values
  - Negative shares
  - Fractional shares
  - etc.
- Do you check for failure of, say, mysql_query()?

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