

CS3L:

Introduction to Symbolic Programming

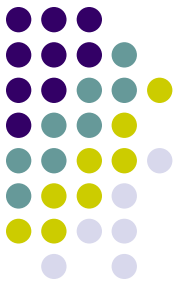
Bonus Lecture:
Web Programming

Summer 2008

Gilbert Chou

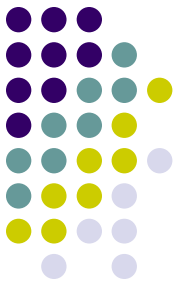
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Web Languages/Tools



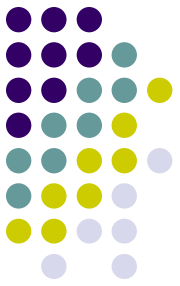
- HTML
- Javascript
- CSS
- PHP
- Apache, Lighttpd
- MySQL, PostgreSQL, SQLite
- Java, ASP.NET, Ruby on Rails, Django

HTML Basics



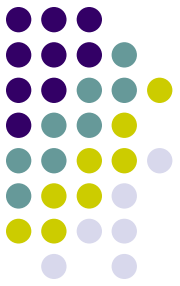
- Tags
 - `<html> ... </html>`
- Forms
 - `<form method="GET"> </form>`
 - `<form method="POST"> </form>`
- Attributes
 - `<div class="test" id="blah" name="blah"></div>`

HTML Tags



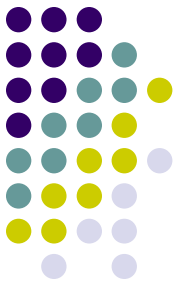
- Structure
 - html, head, body
 - div, span
 - table, th, tr, td
- Text
 - p, h1-6
- Links - ` ... `
- Include
 - script, style, link

HTML Forms



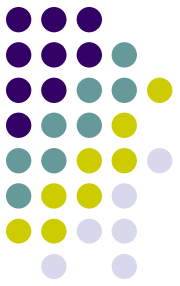
- Method
 - POST versus GET
- Action
- Input
 - checkbox
 - radio
 - button
 - password
 - submit

PHP



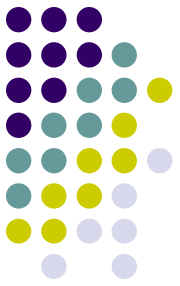
- Using POST and GET information
 - `$_GET`, `$_POST`, `$_REQUEST`
 - Ex. `echo $_GET['name'];`
- Syntax
 - `$` is used at the start of variables
 - Control structures: `if`, `for`, `while`
 - End each line with a semicolon
 - Use braces for control structures

HTML Attributes



- Identifiers
 - id, class, name
- Additional Information
 - value, selected, checked
- Style
 - Ex. `style="display: none;"`
- Javascript
 - onclick, onchange

CSS

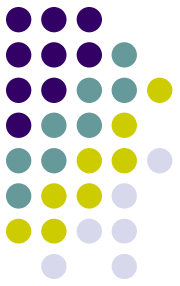


- Defines how the html is displayed
- Syntax:

```
div#test_block p.text {  
    color: blue;  
    font-size: large;  
}
```

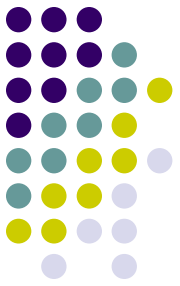
```
p:hover { background-color: yellow; }
```

CSS Options



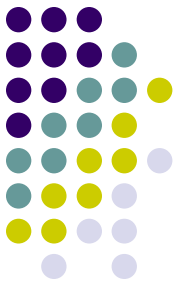
- Color: color
- Text-align: (left or right)
- Font-family: font (arial, sans-serif)
- Font-size: size (large, small)
- Border: width, style, color
- Margin: top, right, bottom, left
- Background-color: color

Javascript



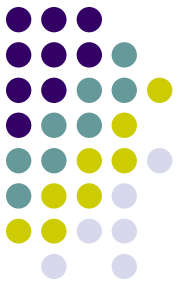
- Improve functionality and interface
- AJAX
- Javascript libraries
 - JQuery

JQuery



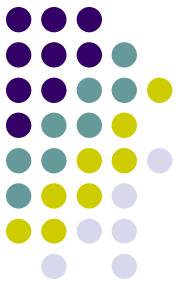
- Events
 - click, change, hover, toggle
- Manipulation
 - html, before, after, append, appendTo, remove
- Effects
 - slideToggle, fadeIn, show, hide
- Attributes
 - attr, removeAttr, css

SCHEME WEBSERVER!



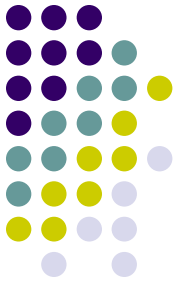
- Server side scripting
- Generated HTML content
- Special syntax:
 - Quasiquote ```
 - Unquote `,`
 - Splice `@`
- `(define (start initial-request) ...)`

Helper Procedures



- extract-binding/single
- request-bindings
- send/suspend
- format

PLT Scheme



Try it out

<http://download.plt-scheme.org/drscheme/>