Final Exam

lesson #final

James L. Parry
B.C. Institute of Technology

Agenda

The final exam from last term was previously posted in the "content" area on D2L, as an example for you.

1. Final Exam Essentials
2. Material Review

FINAL EXAM ESSENTIALS

- Date? Weds Apr 20
- When? 15:30 - 17:30
- Where? NE1-239/242
- How Long? Two hours
- How long minimum? 60 minutes
- Aids: None

Stress Points

- You do not have to pass the final exam to pass the course.
- You do not have to pass the aggregate of the midterm and the final exam to pass the course.
- There are no makeup provisions should you have a bad or failing grade in the course.

What Will the Exam Cover?

- MVC frameworks ... 10%
- CodeIgniter ... 10%
- Workflow process ... 15%
- XML-RPC ... 10%
- REST & JSON ... 5%
- XML ... 10%
- DTDs ... 10%
- SimpleXML ... 20%
- RBAC ... 10%

What Format Will the Exam Have?

Last term's breakdown shown in square brackets

- Multiple choice @1 ... 40-60 [45]
- Completion @2 ... 10-15 [11]
- Short answer @ 3 ... 10-15 [11]
- 100 marks in total

MATERIAL REVIEW

This exam review uses the same format as that for the midterm: a mental organizer for the important material.

For any given topic, the organizer consists of a practical explanation/definition of the topic, followed by the key concepts and then the key techniques relevant to that topic.

The final exam is comprehensive, i..e addressing all of the material covered in the course. In the case of topics addressed on the midterm, the areas that will be emphasized on the final exam are shown italicized.

MVC Frameworks

Structured webapps

Concepts:

- MVC separation
- Design patterns
- *Loading classes*
- *Routing requests*

Techniques:

- Classes
- Helpers
- Htaccess, virtual hosting
- *Cross-platform!*
- *Github*

CodeIgniter Framework

One PHP MVC framework

Concepts:

- Lightweight
- *Controllers, models, views*
- *Data resource encapsulation*
- *Libraries, helpers*
- Core, hooks, routes

Techniques:

- Naming discipline
- Base controller
- *Sessions, Authentication*
- View templates

Workflow Process

Software development collaboration

Concepts:

- Agile development
- gitflow workflow
- github repositories

Techniques:

- Forking, branching
- Commit, push
- Pull requests, merging
- Synching, merge conflicts

XML-RPC

Remote procedure call foundation

Concepts:

- Application glue
- Translation
- Messaging

Techniques:

- Marshalling, unmarshalling
- xmlrpc library, both sides
- xmlrpcs library, server-side

REST & JSON

Representational State Transfer

Concepts:

- Philosophy, not a standard
- HTTP verbs
- content negotiation

Techniques:

- XML data
- JSON data
- success vs error response

XML

Rich data structure/model

Concepts:

- Value, attributes & child elements
- Structured as a tree
- Marked up text
- Cross platform

Techniques:

- Syntax
- Checking & validation
- Design: elements vs attributes
- State representation

DTDs

XML document constraints

Concepts:

- XML structure
- XML element & attribute constraints
- Templates

Techniques:

- DTD files
- Binding XML to one
- Validation

SimpleXML

XML DOM Processing

Concepts:

- Elements vs nodes
- Traversal
- Terminology
- W3C DOM

Techniques:

- DOM processing
- SimpleXML resource wrapper
- PHPDOM
- Treating as an object
- Treating as an array
- Iterable

RBAC

Role-based access control

Concepts:

- Authentication
- Authorization
- Trust & syndicate

Techniques:

- Programmatic vs declarative
- Users, roles - stored in session
- Base controller vs hook
- 3rd party – Oauth, OpenID

Congratulations!

You have completed lesson #final: Final Exam

If you would take a minute to provide some feedback, we would appreciate it!

The next activity in sequence is: future Crystal Ball

You can use your browser's back button to return to the page you were on before starting this activity, or you can jump directly to the course homepage, organizer, or reference page.