Exam Review Lectures

Tim Capes

November 29, 2011

Exam Breakdown

Eight total questions:

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- Number systems questions (10)

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- Short Essay (30)
- HTML Questions (16)

Exam Topic Breakdown: Number Systems

Number conversion for the following systems:

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Number conversion for the following systems:

1. Binary

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Number conversion for the following systems:

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3. Octal
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5. Hexidecimal

Exam Topic Breakdown: Multiple Choice Coding

12 marks worth of Pictures and 12 marks word of Sound. May include nested loops, singular loops, counter variables, etc. Style is similar to midterm.

Exam Topic Breakdown: Rewrite Badly Designed Code

You will be responsible for breaking apart a function into smaller pieces and standardizing information. You should know how to define functions in JES.

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2. HTTP, VoIP

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1. Know the inventors of major components of the web which were discussed in class.

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2. Know the limiting size of each major internet protocol discussed in class (or how to calculate it).

Exam Topic Breakdown: Internet Theory Part II

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1. Know the inventors of major components of the web which were discussed in class.
2. Know the limiting size of each major internet protocol discussed in class (or how to calculate it).
3. Know how addresses are related to location in the protocol for which this relation applies.

Exam Topic Breakdown: Short Essay, Proxemics

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3. What are the major proxemics?

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1. What is ubiquitous computing?
2. What is proxemic computing?
3. What are the major proxemics?
4. What are some example uses of proxemics?

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1. What is the difference between HTTP and HTTPS?
2. Which is more secure and why?
3. What are the major challenges to security on the web?
4. How do signatures work?

Exam Topic Breakdown: HTML Questions

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1. Understand structure of HTML and how tag positions should relate to content.
2. Understand how to use common tags and attributes you used on the assignment.

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- Chapter 4 questions: 4.1, 4.2, 4.3, 4.4, 4.5, 4.9, 4.13, 4.15, 4.16, 4.17;

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- Chapter 5 questions: 5.1, 5.2, 5.8.

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- Chapter 7 questions: 7.1, 7.2, 7.3, 7.11, 7.15, 7.19, 7.20

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- Chapter 8 questions: 8.3, 8.6

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- Can convert to decimal by multiplication by digit values and addition.

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- Can convert to other number systems by repeated modular division.
- For example 720 in Octal:
  - 90 Remainder 0
  - 11 Remainder 2
  - 1 Remainder 3
  - 0 Remainder 1
- So 720 is 1320 in octal.

Non-Decimal Conversions

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- Group 3 digits for octal from the least significant digit. 4 for hexadecimal.
- For example: 1010 0010 is
  - 10 100 010 or 242 in octal.
  - 1010 0010 or 92 in hexadecimal.

If all else fails

If you get stuck you can always convert to decimal and then from decimal.

Practice Problems

- Convert 11010 in binary to all other discussed systems

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- Convert 01011 and 10010 in two's complement to other discussed systems
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- Convert AB in hexadecimal to all other discussed systems

HTML: Why HTML?

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- HyperText Markup Language (HTML) is the predominant markup language for web pages.
- Building webpages is a valuable skill for publishing customized content.
- Learning the structure behind webpages enables understanding of them.

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- Each tag is written with an opening $<$ and a closing $>$ (for example $<$html$>$).
- Each tag is generally associated with a closing tag (for example $<$/html$>$).
- There are execeptions. One that will be important in A3 is the image tag $<$img$>$.

HTML: Beginning a Document

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- Without this line browsers are likely to enforce their own individual quirks.

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- It's closing tag is often the last line of your document

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- The head contains information such as the title of the page which uses <title> and </title> tags.
- Advanced: It may also contain some content that does not display related to search engine optimization.

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- begins with the tag <body>
- ends with the tag </body>
- contains a lot of different content.

HTML: Some body tags

- this is a paragraph

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- this is a paragraph
- <h1> This is a Heading 1 </h1>

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- this is a paragraph
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- this is a paragraph
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-
 This is a line break. It doesn't have a closing tag.

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- Another important attribute is alt, which indicates alternate text to display if the image won't.
- <img src ="assignment1-1.jpg" alt="A photo of grayscale by luminance">

Coding then Course Evals

This completes the list of review materials. We will now move on to some coding review in JES, leaving 15 minutes at the end of class for course evaluations.