T-110.5140 Network Application Frameworks

5/2011 Examination

The use of a calculator is ok. All other material is forbidden.

Choose 3 of the 4 topics below and write essays on them. Each topic has additional questions as hints on what kind of material you should include. Discuss other relevant issues as well. Remember to consider what is important and what is not when writing your essay.
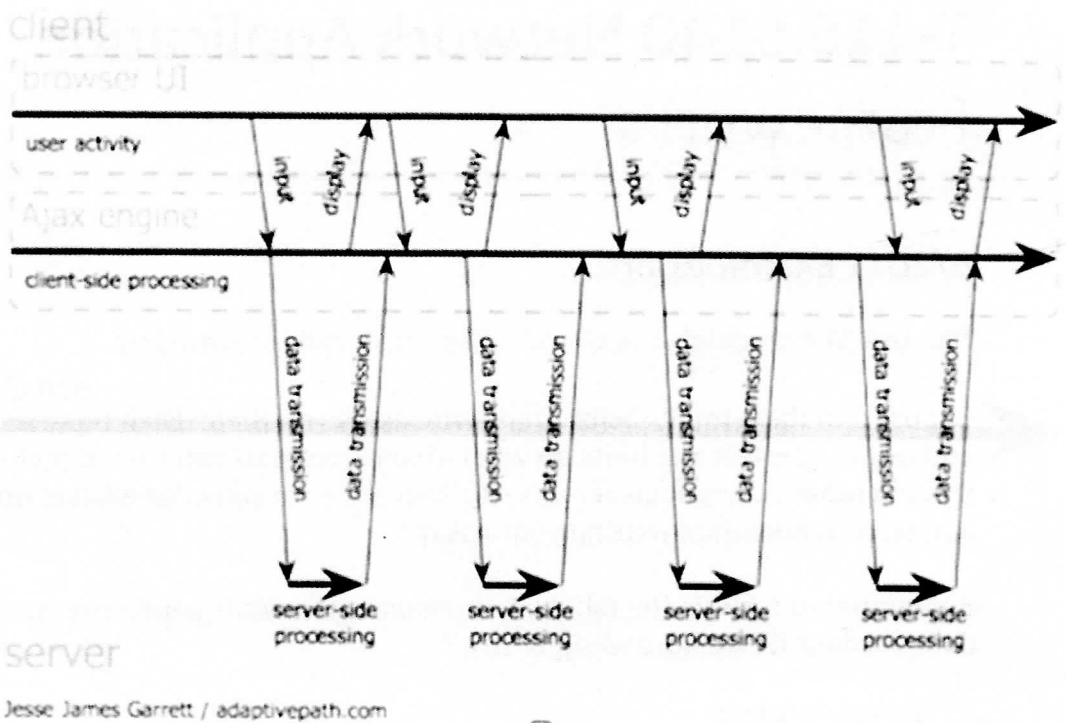
Remember to include the following information in your paper: the course name, date, student ID, name, and signature.

1. SOAP/REST

   Compare Web Services (WS_*) and REST approaches. In which cases selecting Web Services would make sense? In which cases REST might make more sense? How do you estimate the future of these two technologies? Remember to justify your views.

2. AJAX

   Explain using the attached figure how AJAX works. What are the essential differences to traditional web application? What advantages can be achieved with AJAX? What difficulties does it introduce?

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3. Robots.txt

   Attached snippets of text are from two files: robots.txt and
   http://www.dailymail.co.uk/sitemap-articles-year~2011.xml. Why has
   the system administrator added these files to the web site? How is the
   information in the file used and by whom? Explain what the Disallow
   commands in robots.txt mean? Explain what can be the influence of
   lastmod date in sitemap?

Robots.txt:

```
# Robots.txt for http://www.dailymail.co.uk/

User-agent: Meltwater
Disallow: /

User-agent: *

Disallow: /*redirect.php?

Disallow: /news/article-1328592/TUITION-FEES-PROTEST-On-roof-
students-cheered-Below-thugs-kicked-windows.html
Disallow: /news/article-1367053/Royal-Wedding-Prince-Harrys-face-
replaces-Williams-commemorative-Royal-wedding-cup-blunder.html
Disallow: /news/article-1367053/Ones-got-wrong-mug-Prince-Harrys-face-
replaces-Williams-commemorative-Royal-wedding-cup-
blunder.html?ito=feeds-newsxml

# Sitemap files
Sitemap: http://www.dailymail.co.uk/newssitemap.xml
Sitemap: http://www.dailymail.co.uk/sitemap-articles-year~2011.xml
```

http://www.dailymail.co.uk/sitemap-articles-year~2011.xml:

```xml
- <sitemapindex>
  - <sitemap>
    - <loc>
        http://www.dailymail.co.uk/sitemap-articles-day~2011-01-01.xml
      </loc>
      <lastmod>2011-01-01T00:00:00+00:00</lastmod>
    </sitemap>
  - <sitemap>
    - <loc>
        http://www.dailymail.co.uk/sitemap-articles-day~2011-01-02.xml
      </loc>
      <lastmod>2011-01-02T00:00:00+00:00</lastmod>
    </sitemap>
```

4. RDF – Resource Description Framework

   Describe what is RDF. You may use the attached figure in your explanation. What new possibilities can be achieved with the use of RDF? How would RDF be useful in smart spaces applications?

Data merged from location service and Friend-of-a-friend data source