Information Architecture

Server-Side Web Languages

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Outline

The future of SSWL jobs in Western Europe

Very little commercial use for pure server-side development skills in Western Europe and USA

In the future:

- Small companies:
  buy cheap pre-packaged e-commerce solutions (eg. database, shopping carts, search engine) that require customisation - but not development
- Large companies:
  move their development activities (eg. web services) to cheaper countries

Skills that are still locally required:

- local system deployment and maintenance
- occasional small ad-hoc development tasks, ie. tasks that require < 1 day to implement
- security and integrity of local systems
- management and analytic skills
- soft skills relating to the customisation of systems: communication and information architecture

How these skills are covered in CO32037:

- local system deployment and maintenance:
  knowledge of a variety of SSWL applications and tools
- occasional small ad-hoc development tasks:
  Perl is good for this!
- security and integrity of local systems:
  security, environment variables, sessions, cookies, http protocol
- analytic skills:
  abstract programming skills: structuring, flow control, pattern matching
- soft skills relating to the customisation of systems:
  information architecture, writing documentation for the coursework

What is Information Architecture

> *Information architecture is the art and science of structuring and organising information environments to help people achieve their goals*

(see the paper by S. Bidigare, Argus (2000) on the website)

Information architecture attempts to balance the technical requirements with user requirements and information system requirements.

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- Example: While it may be technically sensible to store the content of a large website in a database, it may not be best for users if the whole website has the look and feel of a database interface.
- Example: Search engines must overcome the differences between the logical Boolean operators (AND, OR, NOT) and the common sense, natural language uses of operators in searches.

Example: Information Architecture of the Shopping Cart

(see the paper by S. Bidigare, Argus (2000) on the website)

Design Guidelines

- Make the shopping cart easy to find.
- Provide clear ordering options.
- Provide rich functionality.
- Make related items available.
- Provide option to save items for later buying.
- Give advance notice of what the checkout process involves.
- Keep order forms simple.
- Ensure secure transactions.

Metaphors

- “shopping cart”, “add items to cart”, “check out”
- “home page”, “chat room”
- “guest book”

Labels, terminology

- use of common labels: “site search”, “about”, “contact us”, “home”, “main”, “help”
- consistent terminology across a website
- metadata, data dictionary
- use of icons?

Classification

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What determines a classification: internal structures or user requirements?

Navigation

- How many links per webpage?
- Is the navigational hierarchy deep or shallow?
- Are there many paths to a single page or is there only one path?
- Navigational elements on a single page: “home”, “back”, “up”
- Use of a sitemap

Tools

- project management tools
- logfiles, web statistics
- tools for verification of HTML, links, accessibility
- components: search engine, guestbook, wiki, e-commerce solutions

Testing and Quality Assurance

- software testing
- usability testing (eg. www.openusability.org)
- security testing