CSE567M
Project Guidelines

Raj Jain
Washington University in Saint Louis
Saint Louis, MO 63130
Jain@cse.wustl.edu

These slides are available on-line at:
http://www.cse.wustl.edu/~jain/cse567-13/
Overview

- Project Requirements, End-Goal
- Literature Search
- Outline: Preparation Process, Mind Maps
- Writing: Organization, List of Acronyms, References
- HTML Style Guidelines
- Draft Submission
- Final Submission
Project Suggestions

Note: Do not repeat last year’s projects

- Cloud Computing
- Big Data
- Virtualization
- Multi-core processors
- Sustainability and energy
- Health applications
Sample Project Topics

- A Survey of Network Traffic Models
- A Survey of Queueing Analysis Packages
- Recent advances in queueing analysis
- A Survey of Simulation Packages
- Recent advances in simulation
- A Survey of Processor Workloads
- A Survey of modeling Tools: R, MATLAB, SPSS, Mathematica
- A survey of Network Performance/traffic monitoring Tools
- A Survey of Operating Systems/Process Monitoring Tools
- Operating Systems (Unix/Linux/Windows) Performance Tools
- Note: Do not repeat last year’s projects
Sample Project Topics (Cont)

- Time series analysis modeling techniques
- Performance Analysis of xxx (Commonly used performance metrics, Workloads, Sample/Actual Analysis, Examples of Use/Misuse of Analysis techniques and plots)
  - Performance of Communication Middleware
  - Performance of Real time systems
  - Performance of Web caching
  - ...
- Case Study: Performance Analysis of xxx
Project Schedule

Mon 2/25   Topic Selection
Mon 3/04   References Due
Mon 3/18   Outline Due
Mon 4/03   First Draft Due -> Peer reviewed
Mon 4/10   Reviews Returned
Mon 4/17   Final Report Due
Project Requirements

- Comprehensive Survey:
  Technical Papers, Industry Standards, Products
- Will be published on my website,
  Better ones may be submitted to magazines or journals
- If you are doing a case study or a survey of performance analysis of xxxx, make sure your report emphasizes the performance concepts and techniques learnt in this course.
- In surveys, if you come across misuse of statistics or mistakes, please include it in the report.
Project Requirements (Cont)

- No copyright violations:
  - You need to re-draw all figures
  - You need to summarize all ideas in your *own* words
  - Cannot copy any part of text or figure unmodified
  - Short quotes ok
  - Any unmodified figures need permissions

Any infringement will result in forfeiture of grades even after graduation.

- See papers in previous offering of this course, e.g.,
  - http://www.cse.wustl.edu/~jain/cse567-06/index.html
  - http://www.cse.wustl.edu/~jain/cse567-08/index.html
End-Goal

- Paper that can be published as a survey paper in any magazine, journal, conference
Literature Search

- Finding references: Use Google advanced search options
  - Location 802.11 +filetype:pdf +site:.com
- Library.wustl.edu -> Databases -> Multisearch -> Subject, Engineering: search 10 journal databases for the topic
- Conduct searches in two phases. In the first phase, use the title words of your project. After reading these, conduct another more comprehensive search.
- Remove articles that are not useful
- No limit to the number of references
- Follow the references in references
Google Search Modifiers

- filetype:pdf, doc, ppt, pptx
- site:wustl.com
- intitle:trend
- inurl:trend
- allintitle:Networking Trends
- Allinurl:
- “ ” ⇒ Exact Phrase
- OR
- AND
- + ⇒ Must include
- - ⇒ Not include
- ~X ⇒ X or similar
- * ⇒ Wildcard
Google Search (Cont)

- Basic search help - web search help, http://www.google.com/support/websearch/bin/answer.py?hl=en&answer=134479&rd=1
- Search results options, http://www.google.com/support/websearch/bin/answer.py?hl=en&answer=142143&topic=1221265
- Search preferences, http://www.google.com/support/websearch/bin/answer.py?hl=en&answer=35892&rd=1
HTML Style Guidelines

- See papers from previous classes on my website for details
- Use plain text editors with simple HTML
- No Java, flash, animation
- Do not use HTML generated by MS Word. It will not pass any HTML validation test. Save the word file as plain text and add HTML tags.
- Learn to use special characters in text and reference URLs. See http://tntluoma.com/sidebars/codes/
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="pics-label"
<meta http-equiv="content-type"
<meta name="Author"
<meta http-equiv="content-language"
<meta name="robots"
<meta name="GENERATOR"
<meta name="Keywords"
<meta name="Classification"
<meta name="Description"
title>
</head>
</html>
Body

<body>
<h1>Title</h1>
<B>Author</B>, Permanent-Email
<hr>
<h2>Abstract:</h2>
...
<hr>
See Also:
<hr>
Body (Cont)

<h2><a NAME="toc">Table of Contents:</a></h2>
<ul><li><a href="#sec2">2. 10-Gigabit Ethernet Overview</a></li><ul><li><a href="#sec2.1">2.1 Benefits of 10-Gigabit Ethernet</a></li></ul></ul><hr WIDTH="100%">

...
<h2><a NAME="intro"></a>Introduction</h2>

... 

<p>[<a href="#grow99">Grow99</a>] 

<p>... 

<br>
Project Homework 2

☐ Prepare a short webpage (written manually) using most of the tags indicated in this handout
☐ Include one image/photo in the page
☐ Validate the page using validator.w3.org
☐ Submit the html source file printout, web page printout, and the URL
☐ Remember:
   ➢ To add all meta tags specified in the handout
   ➢ Validate the page
   ➢ Load it in an ad-free area
WUSTL Engineering Student Webpages

- Web page creation in WUSTL: http://eit.engineering.wustl.edu/help/Create_webpage.asp
- There are two servers that students can use:
  - shell.cec.wustl.edu (CEC)
  - ssh.seas.wustl.edu (SEAS)
Outline Preparation Process

- Read abstract and stop if irrelevant
- Underline the key points in the paper
- Write the key summary on the first page of the paper
- Prepare a text document with the key ideas
- Keep adding to this text document document from different papers with [refs, page, paragraph]
- Import the text document in PowerPoint
- Add figures and clean up the outline
- Like getting ready to make a presentation to the class
Mind Maps
Mind Maps (cont)
Diamond Writing Style

- Each paper should start with an introduction and end with a summary.
- Each section should start with a short introduction and end with a summary with a lead in to the next section. The same applies to subsections.
- All subsections should be of comparable length.
- Add an appendix with all abbreviations
- Add a list or discussion of related products
Writing Style

- Readers want to get to the information fast. Keep the nonessential stuff at the end.
- Check thoroughly for grammar and spelling.
- Avoid excessive use of abbreviations.
- Be consistent in case and usage: MOBILE, Mobile, mobile
Organization

- Every paper should have an introduction and a summary.
- Divide paper into sections.
- Every section should have a lead-in paragraph.
- Header level should correspond to the level in table of contents.
Organization (Cont)

- Title
- Author
- Abstract
- See Also:, References to Other Reports
- Table of Contents
- Introduction
- Other Sections
- Summary
- References
- List of Acronyms
- Date Last Modified:
- Note: This paper is available on-line at http://www.cse.wustl.edu/~jain/cse567-06/ftp/%directory%/index.html
Organization (Cont)

- Table of Contents
  - Sections and subsections
  - Numbering n.n
  - 3-7 subsections per section
  - 3-7 sections per paper
  - Include one first and 2nd level headers n. and n.n
  - Do not include 3rd and higher levels, e.g., n.n.n
Title/Keywords/Abstract

- Title
  - Based on Table of contents
  - Searchable
- Key Search words
  - Based on Table of contents
  - Acronyms and full names
- Abstract
  - Based on Table of Contents
  - 3-7 sentences
- Description:
  - One line based on ToC and Abstract
Organization (Cont)

- Introduction
  - Explain what the topic is about.
Other Sections

- Each section less than 3 pages.
- Each section needs at least one introductory paragraph. Do not start with a subsection.
- Each subsection at least 1 paragraph.
- All sections/subsections should be numbered n. n.n
- If you borrowed several sentences from some source, italicize the text and indicate the source.
Summary

- One or more sentences about each issue.
- Based on Table of Contents
- Key lessons
References

- Style of References
  - Author(s), “Title,” Source, date, pages, url
  - The URL should show up as well as have a link.
  - All references should be annotated and have links.
- Order in the most important first and indicate so
- In the text point to the end
- In the end point to actual URL. Provide URL.
- Find URL for published papers
- Remove references that are useless.
- [Authoryy] notation.
- Exception: Standards, company documents, RFCs.
List of Acronyms

- Search the text
- Define on first use
- Avoid multiple uses if used less than 5 times.
- Exception: Commonly used acronyms, e.g., CPU, I/O, IP, …
Figures/Tables

- All figures should be numbered 1, 2, ...
- All tables should be numbered 1, 2, ...
- All figures should have a title below the figure
- All tables should have a title above the table
- All figures/tables should be referenced in the text and explained.
- Should be placed close to their references.
- To prepare figures use blank slides in PowerPoint and save them as gif/jpg/png files. Use Microsoft image editor to crop the figures for correct white space around them.
Draft Submission

- Submit 4 hardcopies
- In the draft:
  - For the review purposes, the author's name and email should be removed. Substitute last 3 digits of your student ID.
  - Add keywords after abstract
- Spell check
- Grammar Check
Editorial

- Check all acronyms. All acronyms should be defined on first use.
- Check capitalization. No unnecessary capitalization. Headers are usually capitalized.
- Spell Check entire document.
- K=1024, k=1000. Disk storage is measured in KB, network link speeds are measured in kb. kbps not Kbps.
- Leave a space between numbers and units, e.g., 15 km not 15km.
Editorial (Cont)

- Look for special characters
- **American English: Signaling, Synchronization**
- Check for continuity
- Break long paragraphs.
- Single space between paragraphs.
- The paper should be 10-15 pages long
- If you copy any figures, give reference and credit
- Use the template supplied
Common Mistakes

- No Figures
- Figure/equations fonts too large
- Figures with no title or number or reference
- Figures/tables overflowing the margins
- References with no annotation
- References not cited
- Key pieces of information w/o references
- Tables w/o references
- Papers too short
Common Mistakes (Cont)

- No comparison of different alternatives
- No Acronyms
- No summary
- Incorrect reference style
- No keywords
HTML Guidelines (Cont)

- File name: index.html, fig1.gif, fig2.gif, ..., fig.ppt
- Keep PowerPoint figure source files in the same directory although these may not be referenced in the paper
- Keep all references relative.
  Absolute: http://www.cse.wustl.edu/~jain/papers/x.ps
  Relative: papers/x.ps
- Keep the whole paper in one file “index.html” with figures in fign.gif in the same directory. No Subdirectories.
- All files names should have eight characters or less for name and 3 characters or less for extension (MS/DOS compatible). The only exception is index.html
HTML Guidelines (Cont)

- All filenames and extensions should be lowercase and contain no spaces.
- Ensure there is a link attached to
  - author@cse.wustl.edu
  - Every line in Table of contents
  - Back from the end of every section
- Spread references throughout the document. Use mnemonic references with link attached to them, e.g., [Cisco99]
- Keep all internal anchor names and ids lowercase without spaces or special characters, e.g., cisco99.
- Use only id or name not both:
  <A name="xx"> <A id="xx">
- All img should have alt.
- Do not resize images in html. Resize them before using. Prepare figures so that there is no rescaling required. Use 12 point fonts in PowerPoint.
- Center all figures, tables, and equations
- Serially number all figures as 1, 2, … not 1.1 2.1 etc.
- Serially number all tables as 1, 2, …
- No font tags
Final Submission

- Validate your page on:
  - W3C Markup Validation Service, http://validator.w3.org/

- Check URLs. Check local anchors.

- Remember to submit copies of unusual references (not available in the library or the Internet) with the final paper.
Final Submission (Cont)

- No WinWord generated HTML
- You can use WinWord for spell checking the text
- Use plain text editor to insert HTML tags.
- Submit the final HTML version as a single zip file
- No Tar/tgz files (please submit only one zip file with all files)
- Filename: 8-or-less-letters-short-project-name.zpi
  Rename zip file to .zpi for transmission through email.
- Email .zpi file to: jain@cse.wustl.edu with the subject field of “CSE567 Project Report”
Common Mistakes

- Used doc generated HTML file
- Did not validate HTML.
- Incorrect title.
- Images resized in HTML. Height and Width attribute in the images do not match those of the actual image.
Checklist

- <!doctype
- <keywords