SE Work Term Reports

2A Presentation
Purpose

• Work reports should ideally
  • connect your co-op experiences with your academic curriculum
  • illustrate how something that you did was engineering, i.e. how it applied mathematically or scientifically determined knowledge (in the broadest sense) to solve a problem
  • discuss the impact of your work in the broader world
  • show some self-reflection about what you have done and what you have learned
Purpose

• Writing work reports should also refine your written communication skills

• Markers will give you feedback that you can learn from to write successively better reports
  • WKRPT 200 (2B)
  • WKRPT 300 (3B)
  • WKRPT 400 (4A)
Guidelines

• Posted on the SE website
  >> Current undergraduate students
    >> Policies, procedures and guidelines

• Read them
Contents

• Your work report must describe a design decision (or a series of related smaller decisions) and justify a choice
• The justification should be one of
  1. that the solution is the best one among several viable alternatives, based on sound engineering judgment
  2. that the solution indeed solves a constrained design problem
Structure

• Put the problem in context
  • Describe who wants a solution and why

• Describe the problem constraints
  • What must the solution do? Transform input X to output Y, ...
  • What must the solution not do? Use an insecure protocol, ...
  • What must the solution be? Reliable, maintainable, usable ...
  • What must the solution not be? Slow, expensive, ...

• Describe the design choice(s) and justify it/them (this is the main part)

• Reach a conclusion
  • Explain your solution’s impact
  • Summarize why the solution is good
  • What are the weaknesses?
Engineering Analysis is Required

• A work report is not a:
  • tutorial
  • user’s manual
  • marketing pamphlet
  • daily journal of activities

• From the guidelines:

  What we are looking for is your ability to recognize, document, and explain a software engineering decision
Format

• It can look like a report or like a blog post
  • If you choose the blog format you are encouraged, but not required, to publish it (some employers will do this) – be sure to respect employer confidentiality

• Main criteria:
  • readable and understandable (good writing and good structure help)
  • you decide what is an appropriate layout and font choice
  • no spelling mistakes !!!
  • use diagrams, code snippets, and tables as appropriate
  • 2500 words ± 20% (roughly 5 pages if single-spaced; doesn’t include diagrams)
  • include references as needed
Format

• Header block
  • Title
  • Name
  • List of three relevant courses in your curriculum including electives
    • You are not restricted to the courses that you have taken
  • Indicate opt-in to grading to recent SE grad
    • can ignore this but it’s in the guidelines

• PDF
  • And only PDF
  • Not Word, HTML, ...
Evaluation

• Reports are due in Learn dropbox 7 days after first day of class
• They are marked by graduate students

• From the guidelines:
  An excellent report will be clear, concise and convincing. There exist awards for top work-term reports, sponsored by the Sandford Fleming Foundation and various companies
Evaluation

- Markers answer 8 questions

<table>
<thead>
<tr>
<th>Content</th>
<th>Presentation</th>
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</thead>
<tbody>
<tr>
<td>• Is an engineering decision or series of decisions explored?</td>
<td>• Is the text well-written and is it free of spelling mistakes?</td>
</tr>
<tr>
<td>• Is the problem context including design constraints provided?</td>
<td>• Is the organization clear and logical?</td>
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<tr>
<td>• Are the design choice(s) justified by comparing viable alternatives or by demonstrating that the design constraints are met?</td>
<td>• Are references relevant and authoritative?</td>
</tr>
<tr>
<td>• Is the conclusion technically rigorous and is its impact discussed?</td>
<td>• Are there 2500 ± 20% words and a header block?</td>
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Evaluation

• Markers choose a grade out of

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Outstanding</td>
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<tr>
<td>Excellent</td>
<td>89</td>
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<tr>
<td>Very Good</td>
<td>75</td>
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<tr>
<td>Satisfactory</td>
<td>65</td>
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<tr>
<td>Resubmit</td>
<td>38</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>38</td>
</tr>
</tbody>
</table>
Evaluation

• Resubmits
  • Grades are released by end of Week 10
  • Resubmits are due in Learn dropbox 1 day before exams start
  • Resubmits get at most 65
Evaluation

• Confidential Reports
  • Try to abstract or anonymize the problem and your solution, so that your report does not include any company confidential information
  • If this just isn’t possible, email the work report coordinator to request that it be marked by the employer.
• Info needed for external markers:
  • First and last name
  • Employer
  • Title/position
  • Technical qualifications (LinkedIn profile usually suffices, otherwise list degree(s) obtained or relevant work experience)
  • Email address
Links

• Guidelines
  • https://uwaterloo.ca/software-engineering/current-undergraduate-students/policies-procedures-guidelines/work-term-report-guidelines

• Slides

• Contact info
  • https://uwaterloo.ca/software-engineering/about/people