

# 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  $\pm$  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

Content	<ul style="list-style-type: none"><li>• Is an engineering decision or series of decisions explored?</li><li>• Is the problem context including design constraints provided?</li><li>• Are the design choice(s) justified by comparing viable alternatives or by demonstrating that the design constraints are met?</li><li>• Is the conclusion technically rigorous and is its impact discussed?</li></ul>
Presentation	<ul style="list-style-type: none"><li>• Is the text well-written and is it free of spelling mistakes?</li><li>• Is the organization clear and logical?</li><li>• Are references relevant and authoritative?</li><li>• Are there 2500 <math>\pm</math> 20% words and a header block?</li></ul>

# Evaluation

- Markers choose a grade out of

Outstanding	95
Excellent	89
Very Good	75
Satisfactory	65
Resubmit	38
Unsatisfactory	38

# 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

- <https://uwaterloo.ca/software-engineering/sites/ca.software-engineering/files/uploads/files/wkrptcommsemi.pdf>

- Contact info

- <https://uwaterloo.ca/software-engineering/about/people>