

Final Project

Lecture 6



Requirements

- Team: 2-3 students (you choose)
- Must have a GUI (via **JavaFX**)
- Must *usefully* cover at least 3 topics
 1. Class definition
 - Does not include main/static methods/variables
 2. Inheritance/polymorphism
 3. Abstract classes/interfaces
 4. Generics/Iterators/Collections
 - Lists
 - Stacks
 - Queues/Priority Queues
 - Sets/Maps
 5. Recursion



Deliverables

- Project proposal (10%)
 - Due **3/16 @ 5PM**
- Group presentation (60%)
 - In class/lab: **4/6, 4/7, 4/10** (schedule later)
 - Slides due via BB **day before @ 5PM**
- Eclipse Java project (20%)
 - Submitted via BB
 - Due **4/11 @ 5PM**
- Report (10%)
 - Submitted via BB
 - Due **4/11 @ 5PM**
- Peer evaluation



Proposal

- *At most 1 page*
 - PDF via BB
 - One per team
 - Talk with me ahead of time to confirm the idea
- **Parts**
 - Problem to be solved
 - Topics to be covered
 - Set of tasks, rough schedule
 - Members of the team, work division



Group Presentation (1)

- Whole team!
- 8 minutes + 2 Q&A
- Sections
 1. Motivation (problem solved)
 2. Relevant background
 - Design: flow charts, screenshots, etc.
 3. Algorithms, tools, libraries, etc. used
 4. DEMO



Group Presentation (2)

- Evaluation (i.e. grading) factors...
 - Length, clarity, professionalism (practice!)
 - Whole team participates
 - Explanation of topic coverage
 - Demo quality (subjective)
- Awesome points available for quality questions/comments



Presentation Schedule (1)

Thursday (4/6)

- Glaeser
 - 8:00-8:10am
- VanTine
 - 8:10-8:20am
- Exam debrief
- (Group) work time

Friday (4/7)

- Bebb/Alexander
 - 9-9:10am
- Witham/Nigro/Duford
 - 9:10-9:20am
- Castle/Duncan/Wells
 - 9:20-9:30am
- Horowitz/Hurley
 - 9:30-9:40am



Presentation Schedule (2)

Monday (4/10)

- Labell/Casey/Connor
 - 9-9:10am
- Valenzuela/Gore/Medeiros
 - 9:10-9:20am
- Burch/Romero/Thomas
 - 9:20-9:30am
- D'Onfro
 - 9:30-9:40am



Eclipse Java Project

- All code/libraries
 - Should import directly into Eclipse
- Submit via Blackboard
 - 1 per team
 - Single ZIP
 - Try to download + import into Eclipse on another machine to test how it will work for me



Project Report

- Submit via Blackboard
 - 1 per team
 - Single PDF
 - At most 5 pages
- Sections
 - Problem description
 - Design: algorithms, classes, flow
 - How topics built up to the solution
 - Implementation: tools/resources used
 - Instructions: how to run
 - Screenshots!



Peer Evaluation

- Each team member rates their own performance as well as that of other team members
 - Ideal: everyone contributed equally
- If there is a discrepancy, up to 50% of the final project grade could be altered
 - If you do not individually turn in the evaluation on time, I assume you didn't do any work all semester and grade you accordingly



Example Topics

- Games (2/3D)
 - Tic-tac-toe, Breakout, ...
- Puzzle solver
 - Sudoku
- Data structure/algorithm
 - Linked list, machine learning
 - <http://modelai.gettysburg.edu/2016/classification/>
- Address/phone book
- Web scraping
- Hardware
 - Lego, RPi, Arduino
- ...

