More programming and a final project
No Final Exam
Additional depth and related material
Grade based on 2 Prelim exams (20% each)
and homework including a final project
(\( \sim 30\% + \sim 30\% \))
Opportunity for additional individualized
project if desired - such as an extension of
the assigned project
Additional depth and related/expanded material

- Relationship to concepts and approaches in other programming languages
- Alternative ways of thinking about key concepts and implementing selected algorithms
- Self-description in of Java
- Discussion of web and database applications.
- Some opportunity for individualized mini-projects IF desired
Project - possibilities

- Likely to include following aspects:
  - Data manipulation: file store or (use of) database
  - GUI development
  - Applets for dynamic client side interactions
  - Client-server architecture
    - possibly servelets: Java on server side

- Possible projects:
  - Warehouse/inventory control
  - Language compiler or interpreter
  - Interactive Game
  - Graph algorithms
Likely Topics

- Self-description: ‘reflection’, ‘introspection’
  - enhanced dynamic operations
  - conceptual relationship to ‘schema tables’ and data dictionary in databases
- Multiple inheritance and other ‘flavors’
- Decision trees, game trees, search space and planning ‘trees’
- Model - View - Controller paradigm for event-driven programming and GUIs
- Note: emphasis on concepts
Possible Topics - 2

- Strongly-typed verses loosely-typed languages: flexibility versus efficiency
- Related sorting algorithms
  - heap for heapsort (as well as for priority queue)
  - topological sort and directed graphs
  - divide and conquer - e.g. quicksort
- Serialization of complex objects
- B-trees and database-style indexing (concepts) - if time permits.
- JDBC for databases (concepts)
First Priorities

- Fully understand all material from lectures.
- Be proficient with Java constructs we cover.
- Good program structure and description.
- Testing and validating the software you produce.
- May occasionally run ‘extra’ Accel/Proj recitations for review.
- Web: http://www.cs.cornell.edu/courses/cs211