Java versus C++

Seminar WS 2010 / 2011

Session 1, Wednesday October 20, 2010

(Introduction, Organization, Topic assignment)

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Topic of this seminar

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- Differences between Java and C++
  - Namely differences in PERFORMANCE
  - In particular, running time and space consumption
  - This seminar is NOT about differences in syntax, language features, ease of programming, etc.
- Concrete topics
  - Which machine code gets generated and why
  - Compiler optimization
  - Memory management
  - Relative performance for various fundamental tasks: arrays, string processing, hashing, sorting, File I/O, etc.
  - see the Wiki for the list of topics

Organization of the Seminar

- One or two presentations per week
  - We have 15 weeks
  - Today is introduction + topic assignment
  - Next week I will give a presentation (C++ machine code)
  - In the end, Björn and I will give a summary presentation
  - That leaves 12 weeks = 12 to 24 presentations for you
  - Today you will choose the topic of your presentation + we will fix who will talk when
  - Time schedule for your presentation: next slide

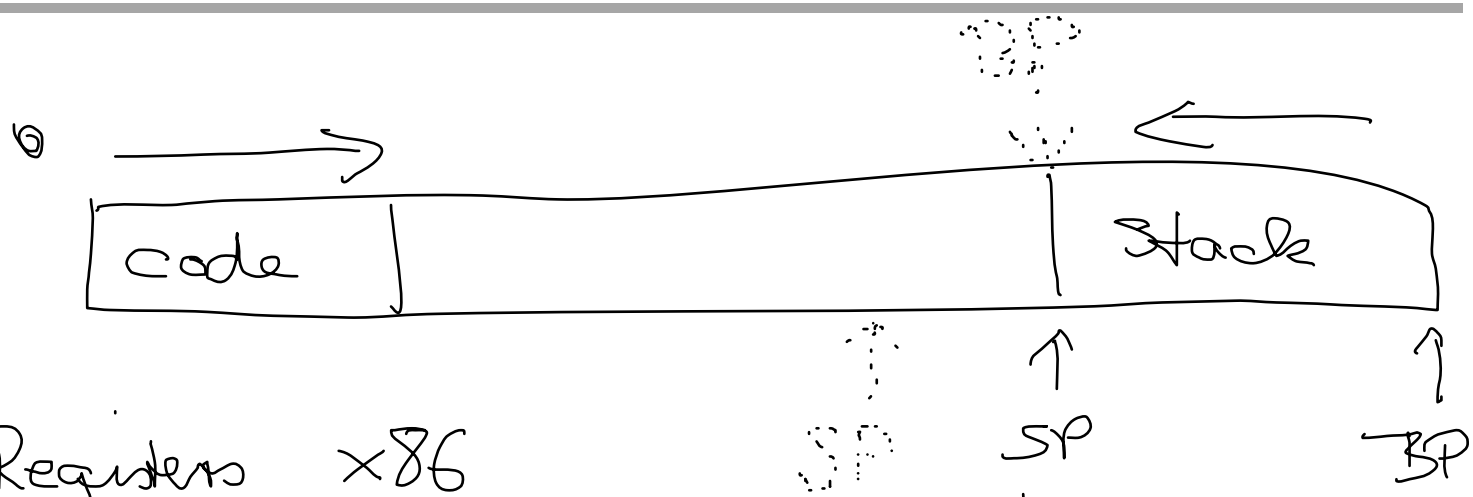
Time schedule for your presentation

- 3 weeks before your presentation
  - start collecting material and make a plan of what you want to talk about
- 2 weeks before your presentation
  - meet with us (Hannah + Björn) and present your plan; please do not waste our time by coming unprepared
  - in the week that follows, work out all the necessary details; if there is something to implement do that now
  - prepare an outline of your presentation
- 1 week before your presentation
  - meet with us again, and present your findings and the outline of your presentation
  - in the week that follows, finish your work and the presentation

Your presentation

- Framework
  - You have 30 minutes for your talk + 30 minutes discussion
  - Use slides in PPT or PDF
  - Your talk will be recorded
- Challenges
  - You have to collect interesting and relevant material yourself, we only provide the general topic
  - Make sure you understand what you are talking about
  - Present your material in an interesting manner, don't forget that you have an audience
  - In the performance comparisons, (1) try different compilers and (2) try to find the reason for the performance differences

Stack



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