Array

• How to create an array?
  
  e.g. bipush 10
  
  newarray int
  
  astore_1

• How to assign values for array elements?
  
  e.g. aload_1
  
  bipush 10
  
  iload_2
  
  iastore

• How to access some elements from array?
  
  e.g. aload_1
  
  iload_2
  
  iaload
Converting Javap to Jasmin

• Given the Javap output, can you convert to Jasmin input(program)?
  – ldc #
  – Invokevirtual #
  – getstatic #
  – Iinc 2,1
Class file

• Given a part of class file (hex code), can you find out the assembly program?

0000240: 5700 0400 0500 0000 2f14 0002 480e 4a27  W......./...H.J'
0000250: 1400 046b 1400 0663 8e10 646c 874a b200  ...k...c..dl.J..
Class file

• Concept for constant pool

• You may also need to know how to use index in Constant Pool.

See question 1 in Sample Final.
Class file

• If only provided with class file and part of Java program, how to modify class file to make program work or generate different output?
8086 Microprocessor

• Memory size.
• How many bits contained in an address?
• How many bits contained in a registers?
• Understand how MOV work?
  – Check the example in slides.
• Concept for Interrupt.
• Read an assembly program for one method with parameters.

• Type conversions.
Final exam

• Multiple choices
• Read short assembly program and write output.
• Correct programs.
• Answering questions.
  – Track contents in stack and local variables
  – Call methods.
  – ........
• Bonus question.
Final exam

• Time
  Monday, Dec. 14\textsuperscript{th} 1:30 PM to 3:30 PM.

• Closed book.

• But you can bring one page of cheat sheet. (A4 size, two sided)
GOOD LUCK!