

Esc101

Fundamentals of Computing

Spring 2005

Lecture 01
29 Dec 2004, Wednesday

Bhaskaran Raman
Department of CSE
Indian Institute of Technology, Kanpur

<http://www.iitk.ac.in/esc101/>

What is this course about?

- Really about “**computing**”
- But learnt through a “programming language”



- After the course, you should be able to:
 - Write Java “programs”
 - Pickup other languages as necessary

Course Organization

- Lectures (at L1): Mon, Wed, Fri 8-9am
- Tutorial (in TB): Tue 11am-12noon
- Lab (in CC): 2-5pm
 - Mon: A5, A6
 - Tue: A7, A8
 - Wed: A1, A2
 - Thu: A3, A4
- Labs and tutorial start **next week**

Course Website

- URL: <http://www.iitk.ac.in/esc101>
 - Announcements
 - Lecture slides
 - Labs
 - Tutorials
 - Other details...

Grading

- Two mid-sems: $15\% + 20\% = 35\%$
- One end-sem: 40%
- Labs (12-13): 10%
- Quizzes (during tutorial): $5\% \times 3 = 15\%$
- Project: *extra credit*



1.50/kg
2.00/kg

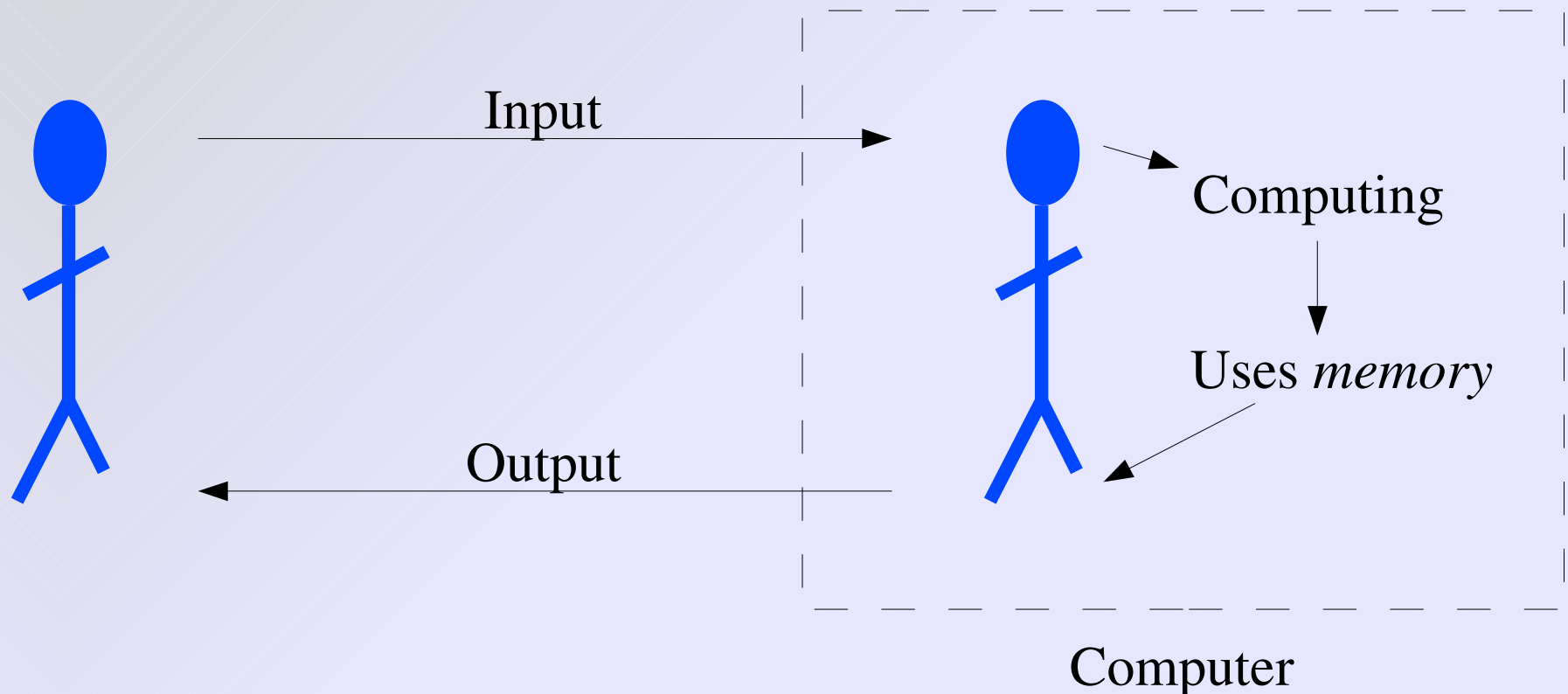
1.50/kg
2.00/kg

Books and References

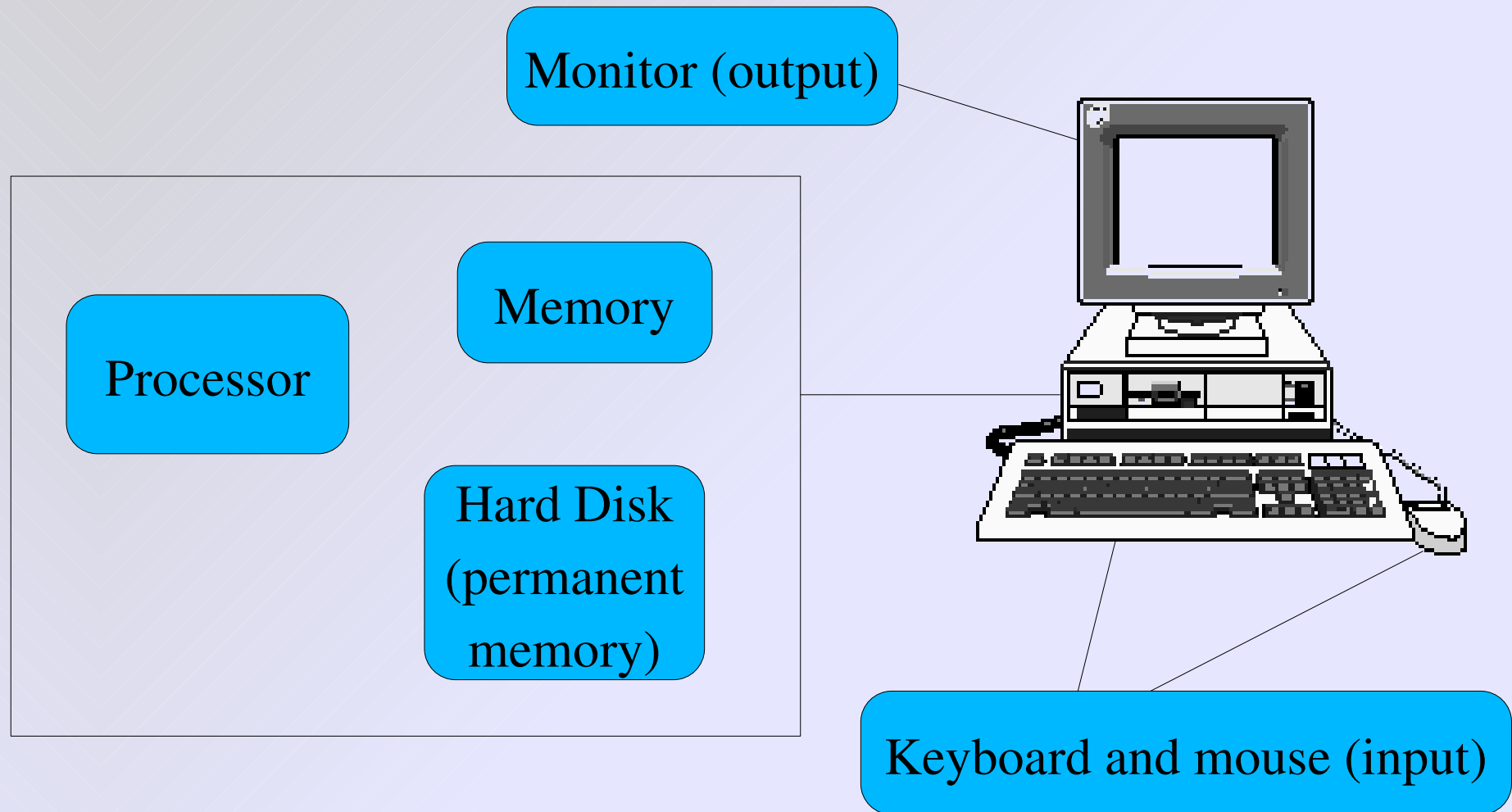
- Duane A Bailey and Duane W Bailey, “Java Elements: Principles of Programming in Java”, Tata McGraw Hill, 2001
- “The Java Tutorial”, Sun microsystems
<http://java.sun.com/docs/books/tutorial/>
- “Java API Documentation”, Sun microsystems
<http://java.sun.com/j2se/1.4.2/docs/api/>
- In addition: “BlueJ” <http://www.bluej.org/>

What is Computing?

- Example: adding 5 numbers
- A *computer* essentially does *computing*



Main Parts of a Computer



More Terminology

- What is an **algorithm**?
 - A method to perform some particular computing operation
- What is a **program**?
 - Formal specification of an algorithm, so that a computer can understand
- What is a **programming language**?
 - Language of specification of an algorithm
 - Examples: **Java**, C, C++, Pascal, Perl

Next Class...

- Objects and classes
- Object oriented programming
- Using BlueJ