

CS348 + CS378: Overview & Course Logistics

Bhaskaran Raman

Department of CSE, IIT Bombay

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Child's Play

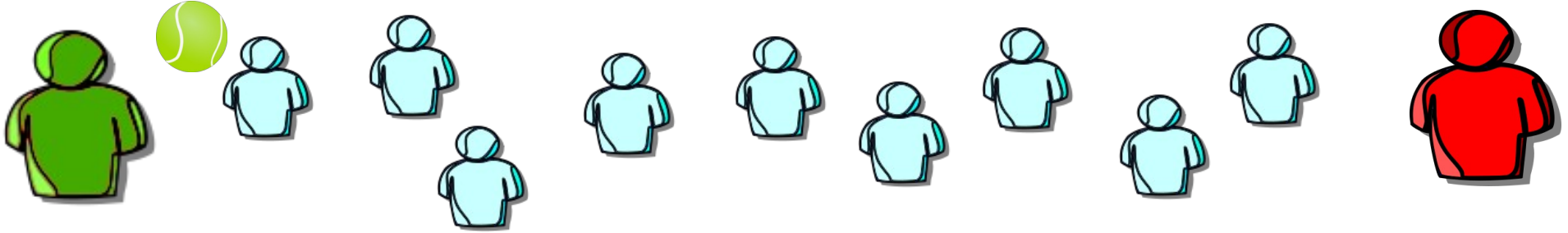


Convey 3 alphabets ? ? ?



- Rules:
 - Cannot use mouth to talk
 - Cannot write
 - Cannot leave physical spot
 - Cannot use mobile phone/laptop
 - Cannot take another person's help

Pass the Ball



- Rules:
 - No throwing, pass by hand
 - Odd roll number to even, even to odd

To flip or not to flip?

Teaching Model: Half Flipped, Half Traditional

Week start	Week end	Topic	Mode	Week start	Week end	Topic	Mode
28/07/25	01/08/25	Intro	Lecture	22/09/25	26/09/25	Network	Flipped
04/08/25	08/08/25	Phy	Flipped	29/09/25	03/10/25	Network	Flipped
11/08/25	15/08/25	Link	Flipped	06/10/25	10/10/25	Transport	Flipped
18/08/25	22/08/25	Link	Lecture	13/10/25	17/10/25	Transport	Lecture
25/08/25	29/08/25	Link	Lecture	20/10/25	24/10/25	Transport	Lecture
01/09/25	05/09/25	Link	Lecture	27/10/25	31/10/25	Application	Lecture
08/09/25	12/09/25	Network	Flipped	03/11/25	07/11/25	Application	Lecture
15/09/25	19/09/25	MidSem		10/11/25	14/11/25	EndSem	

For Traditional Lecture Weeks

- Mandatory attendance
- Video viewing: optional
- Practice problems: highly recommended
- SAFE quiz at beginning of each class
 - Install SAFE-Beta (Android) / SAFE-Guava (iOS)

For Flipped Weeks

- View online lecture videos:
<https://robin.bodhi.cse.iitb.ac.in>
- Attempt in-video problems *before* corresponding tutorial: mandatory
- Deadline to view videos and attempt problems:
Sunday prior to the week
 - Viewing schedule will be available online
- Tutorial attendance is compulsory

Tutorials in Flipped Weeks

- Class divided into 3 batches
- Each batch attends one tutorial per week
- SAFE quiz at the beginning of each tutorial
- During quiz-week:
 - All 3 batches will attend quiz on same day
 - This is in addition to regular tutorials during that week

Course Contents

- Goals & metrics, the 7 network layers
- Physical layer: encoding
- Link layer: Framing and error control, Ethernet switching, MAC protocols, WiFi
- Network layer: IP addresses and formatting, routing protocols, supporting protocols
- Transport layer: UDP, TCP
- Application layer: WWW, Email, DNS

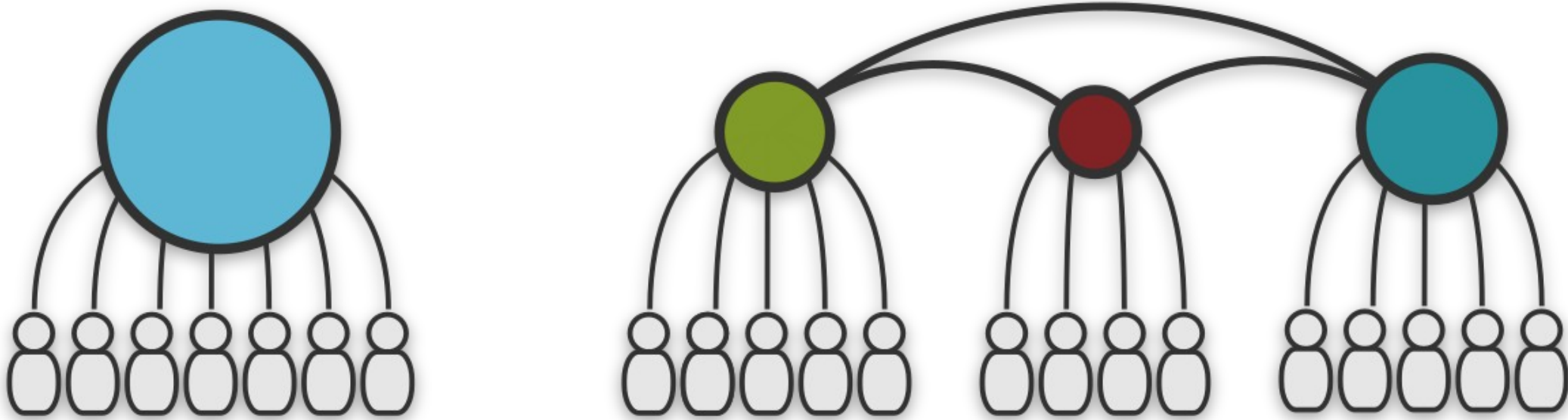
Evaluation Plan

- Quizzes to keep you on top of things
 - SAFE quizzes: every class/tutorial, 15%
 - 30-min quizzes: (best 3 of 4) $\times 5\% = 15\%$
- MidSem: 30%, EndSem: 40%
- Mandatory attendance: all 3 classes in traditional classroom weeks, your batch in flipped weeks
 - **Overall attendance $< 75\% \implies \text{DX}$**
- Integrity: most important, strict policy on dishonesty
 - **Cheating OR helping cheat $\implies \text{FR grade, DAC}$**

CS378: Companion Lab Course

- Trace analysis
- Network simulator
- Socket programming
- Linux network sysad-giri
- Lab evaluation:
 - 40% in-lab evaluation, 30% midsem, 30% endsem
 - Mandatory attendance: $< 75\% \implies \text{DX}$
 - All labs MUST be done from lab venue, not remote

Enter the World of Communication Networks



Picture of the Internet, from the Internet

But Remember...

- We are in the age of misinformation – human vulnerability to be brainwashed is exploited much more than ever
- “... humans are not wired to be constantly wired” – Cal Newport in Digital Minimalism
- *You* should control (your usage of) the network, do not let the *network* control you