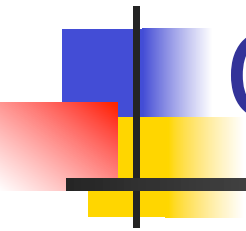
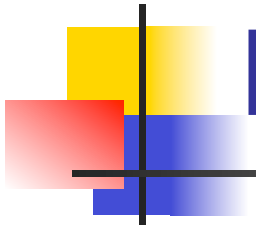
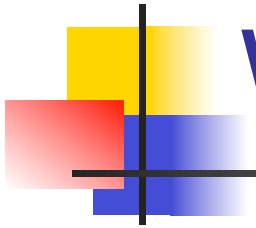


CS433/533 Assignment 4 Overview



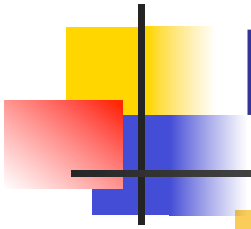
Fishnet

- Network protocol simulator & emulator
  - Read fishnet-intro.pdf
- Get started
  - Network topology (.topo) for emulator
  - Simulation script (.fish) for simulator
  - trawler.pl: emulation coordinator
  - fishnet.pl: interactive node emulation



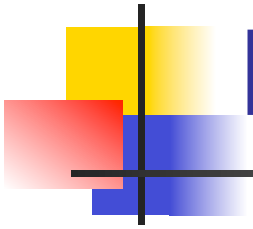
Where to put your code

- Under directory proj/
  - Related files: Node.java, TCPManager.java, TCPSock.java
- Do NOT modify files under lib/
  - E.g., the file ‘Transport.java’ only serves as definition of transport packet format, do not rewrite it



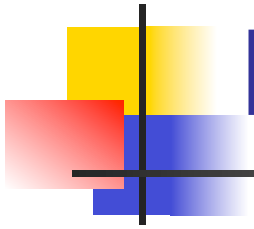
Node.java

- send(int destAddr, Packet packet)
  - Call this method to send a packet you have constructed to a node with destAddr
- How do I know the destination's address?
  - Fishnet assign the lowest unused address (0-254) to a newly started node
  - If you start two fish nodes, they will have address 0 and 1



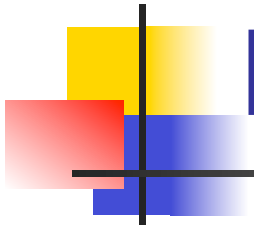
Node.java

- onCommand(String command)
  - entry point for node commands, process commands here
  - Example: 0 hello
  - Node 0’s onCommand gets invoked with command = “hello”



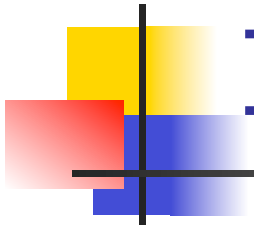
Node.java

- onReceive(Integer from, byte[] msg)
  - Entry point for receiving a packet
  - However, put your support for new protocols in receivePacket(int from, Packet packet)
- receivePacket(int from, Packet packet)
  - Call your protocol specific packet processing code from this method



Node.java

- addTimer
  - An example of how to use callbacks and timers
  - You may need to implement more sophisticated versions of it, since the current one only adds callbacks with no arguments

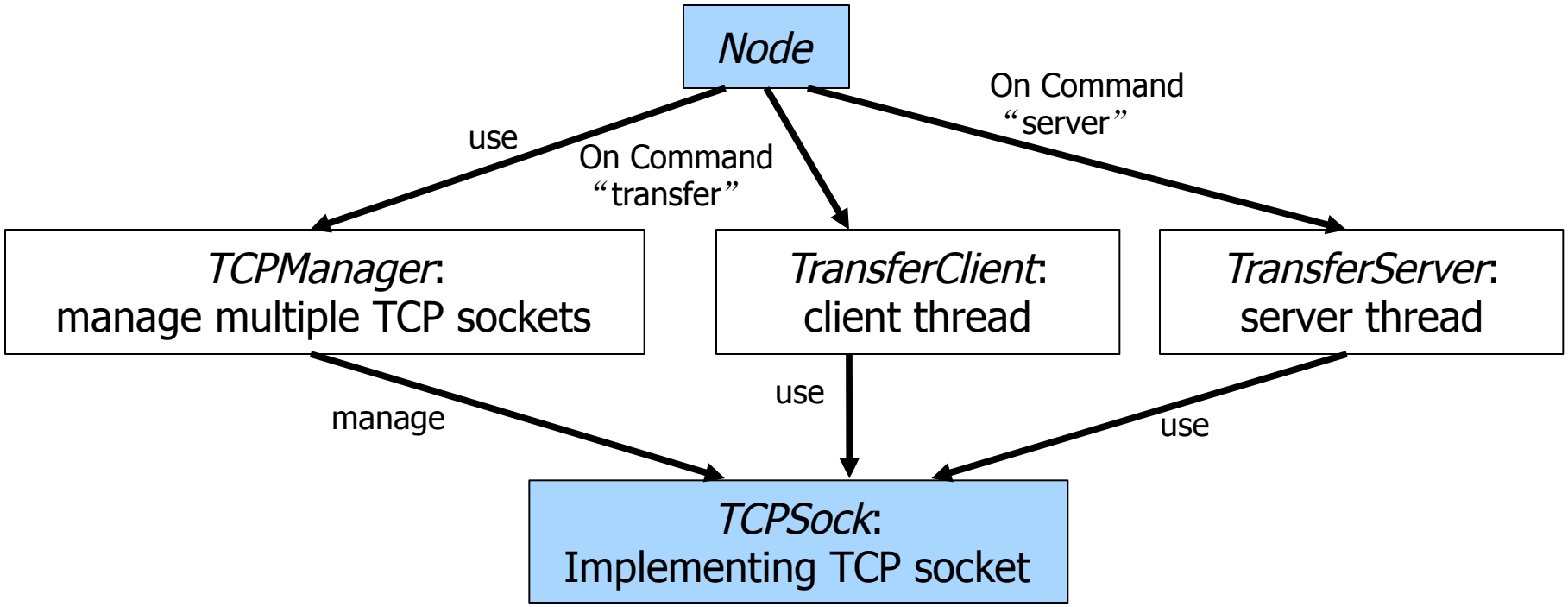


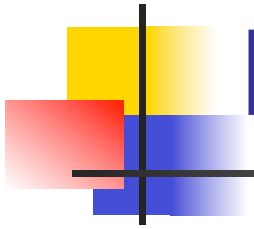
Interoperable Designs

- You should stick to the protocol and API specification on course webpage
  - Connection setup
  - Connection tear-down
- You are free to choose how you implement the specification
- You are free to build your own test case (other than the sample transfer client/server)

Interoperable Designs

- We provide an example design sketch
  - Classes view





How to test your code?

- Use the “two.topo” file on course website to setup two directly connected nodes (with addresses 0 and 1)
  - In your “server” command, specify the port to listen on, and backlog
  - In your “transfer” command, specify the destination node address and port, and the amount to transfer
- Or, use the simulator scripts “transfertest.fish” under the “scripts” directory