Panel 1

Last time:

OSI model ✓
Interface and protocol /
Layers we discussed:

What do they do:

Panel 2

Summary

Application ?

? Presentation

Session ?

Transport

Network  { logical addressing, routing

source to dest. delivery

Data Link

Physical  { deliver bits, transports

bit streams

frames, flow, error control, phy. addresses
node to node delivery

deliver messages, sequence, port address
flow, error control
Panel 3

The Session Layer

- Establishes, maintains, and synchronizes interactions
- Dialog control (full, half-duplex, simplex)
- Synchronization: adds checkpoints every 1 KB during data transfer of large files

Panel 4

The Presentation Layer

- Translation: encode/decode data types into bit patterns
- Encryption: encrypt/decrypt data streams
- Compression: important for video & audio data
**Panel 5**

The Application Layer

- Provides user interface support for services such as email, FTP, HTTP

Ex. http - hyper text transport protocol
(different from HTML)

GET FILE VERSION

eq. GET / HTTP/1.0

**Panel 6**

Summary

- Application
- Presentation
- Session
- Transport
- Network
- Data Link
- Physical
Panel 7

Homework: Write a program that

- grabs data from a web server.
- downloads web site
- link checker

Java classes:

- java.io.*
- java.net.* Socket

Panel 8

```java
import java.io.*;
import java.net.*;

public class WebSampler {
    public static void main(String args[]) {
        String host = "";
        int port = 80;
        if (args.length == 2) {
            host = args[0];
            port = Integer.parseInt(args[1]);
        } else {
            System.err.println("Wrong usage");
            System.exit(0);
        }
        try {
            Socket sock = new Socket(host, port);
            System.out.println("Connected to: " + host);
            System.out.println("On port " + port);
            sock.close();
        } catch (Exception ex) {
            System.err.println("Error: " + ex.getMessage());
        }
    }
}
```