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stream.
**/ public class Server { /** * A main() method for running
the server as a standalone program. The * command-line arguments
to the program should be pairs of servicenames * and port numbers.
For each pair, the program will dynamically load the * named Service
class, instantiate it, and tell the server to provide * that Service on the
specified port. The special -control argument * should be followed
by a password and port, and will start special * server control service
running on the specified port, protected by the * specified password.
**/ public static void main(String[] args) { try { if (args.length lt.
args.length) { if (args[i].equals("-control")) { // Handle the -control
arg i . String password = args[i ]. int port = Integer.parseInt(args[i ]).
// add control service s.addService(new Control(s, password), port).
} else { // Otherwise start a named service on the specified port. //
Dynamically load and instantiate a Service class String serviceName
= args[i ]. Class serviceClass = Class.forName(serviceName). Service
service = (Service)serviceClass.newInstance(). int port =
Integer.parseInt(args[i ]). s.addService(service, port). } } } catch
(Exception e) { // Display a message if anything goes wrong
System.err.println("Server: " e). System.err.println("Usage: java
Server " "[-control gt. gt.] " "[gt. gt. ... ]"). System.exit(1). } } // This is
the state for the server Map services. // Hashtable mapping ports to
Listeners Set connections. // The set of current connections int
maxConnections. // The concurrent connection limit ThreadGroup
threadGroup. // The threadgroup for all our threads PrintWriter
logStream. // Where we send our logging output to /** * This is the
Server() constructor. It must be passed a stream * to send log output

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to (may be null), and the limit on the number of * concurrent
connections. */ public Server(OutputStream logStream, int
maxConnections) { setLogStream(logStream). log("Starting server").
threadGroup = new ThreadGroup(Server.class.getName()).
this.maxConnections = maxConnections. services = new
HashMap(). connections = new HashSet(maxConnections). } /** *
A public method to set the current logging stream. Pass null * to turn
logging off */ public synchronized void
setLogStream(OutputStream out) { if (out != null) logStream = new
PrintWriter(out). else logStream = null. } /** Write the specified
string to the log */ protected synchronized void log(String s) { if
(logStream != null) { logStream.println("[ " new Date() " ] " s).
logStream.flush(). } } /** Write the specified object to the log */
protected void log(Object o) { log(o.toString()). } /** * This method
makes the server start providing a new service. * It runs the specified
Service object on the specified port. */ public synchronized void
addService(Service service, int port) throws IOException { Integer
key = new Integer(port). // the hashtable key // Check whether a
service is already on that port if (services.get(key) != null) throw new
IllegalArgumentException("Port " port " already in use."). // Create a
Listener object to listen for connections on the port Listener listener
= new Listener(threadGroup, port, service). // Store it in the
hashtable services.put(key, listener). // Log it log("Starting service "
service.getClass().getName() " on port " port). // Start the listener
running. listener.start(). } /** * This method makes the server stop
providing a service on a port. * It does not terminate any pending
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connections to that service, merely * causes the server to stop
accepting new connections */
public synchronized void
removeService(int port) { Integer key = new Integer(port). //
hashtable key // Look up the Listener object for the port in the
hashtable final Listener listener = (Listener) services.get(key). if
(listener == null) return. // Ask the listener to stop
listener.pleaseStop(). // Remove it from the hashtable
services.remove(key). // And log it. log("Stopping service "
listener.service.getClass().getName() " on port " port). } /** * This
nested Thread subclass is a "listener". It listens for * connections on a
specified port (using a ServerSocket) and when it gets * a connection
request, it calls the servers addConnection() method to * accept (or
reject) the connection. There is one Listener for each * Service being
provided by the Server. */
public class Listener extends Thread {
ServerSocket listen_socket. // The socket to listen for connections int
port. // The port were listening on Service service. // The service to
provide on that port volatile boolean stop = false. // Whether weve
been asked to stop /** * The Listener constructor creates a thread for
itself in the * threadgroup. It creates a ServerSocket to listen for
connections * on the specified port. It arranges for the ServerSocket
to be * interruptible, so that services can be removed from the server.
*/
public Listener(ThreadGroup group, int port, Service service)
throws IOException { super(group, "Listener:" port). listen_socket =
new ServerSocket(port). // give it a non-zero timeout so accept() can
be interrupted listen_socket.setSoTimeout(600000). this.port = port.
this.service = service. } /** * This is the polite way to get a Listener to
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stop accepting * connections ***/ 100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com