Technical Assignment

Design and implement in (java) a service monitoring class. This monitor will be used to monitor the status of multiple services. A service is defined as a host/port combination. To check if a service is up, the monitor will establish a TCP connection to the host on the specified port. If a connection is established, the service is up, if the connection is refused, the service is not up.

The monitor will allow callers to register a service with a polling frequency. The callers will be notified when the service goes up and down.

The monitor should detect multiple callers registering interest in the same service, and should not poll any service more frequently than once a second.

The code should include a set of unit tests.