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The server.sh script is used for starting/stopping a specified course
server. It just removes the file indicating the watchdog script
"watchdog.sh" run by the cron that the server is not legally running and
has to be halted instead of restarted. If the server process (for
example the server for CPS100) is just killed without deleting the
file, the cron will restart it. Note, the script "server.sh" will not
work without the "watchdog.sh" script being in the same directory.
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The "watchdog.sh" is meant to be called by the cron every n minutes.
Each course server should have a watchdog script running for it. (in
this way if the course server dies, it will be started again). If the
course is "illegally" running (the file indicating that it has been
legally running has been deleted), the server is halted.
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Usage:

1. server.sh  
./server.sh start cps100 will start the course server for CPS100. The  
user can specify the redirector in the format ip:port, for example:  
127.0.0.1:4444.

./server.sh stop cps100 will halt the cps100 server, and the server  
will not be restarted by the cron (if has been set).

2. watchdog.sh

The script is to be executed by the cron. The only parameter to be  
passed the script when executed is the name of the course server, for  
example cps100. The script is checking whether the server is legally  
running. If not, all the java processes with the name of the server  
started by %USER are killed so that the server is halted. If the server  
is legally running but has been indicated as dead by the redirector,  
the server is halted (just in case a thread is still alive) and then  
restarted.

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* Bug fixes and Additions
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The course server and redirector are basically the unchanged. Several  
bugs were fixed. The new server displays properly the submission  
history, and does not cause the Eclipse client to "hang" if the user  
requests the submit history for a project she/he has not submitted.

When a course server is started, a file indicating that the course  
is legally running is written in the ".runtime" directory. The file  
has the format "course\_name.alive". The absence of the file indicates  
to the watchdog that the server has to be halted and to the redirector  
that the server is to be removed from the course map. (server.sh stop  
works by deleting this file and calling the watchdog script...).

If the redirector indicates that the server is not responding but the  
"alive" file is there, the server is not removed from the course map,  
but tagged as "DOWN". This enables the redirector to forward this  
information to the Eclipse client when a user makes a connection, so  
that a custom message is displayed (for example, "The server for  
cps100 is down. Check back in 15 minutes"). When a server is tagged as  
"DOWN", a file called "course\_name.reboot" is written into the

".runtime" directory indicating that the server is to be restarted by the watchdog.

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Note: If the redirector is halted and then restarted, the course servers for each course do not have to be restarted.