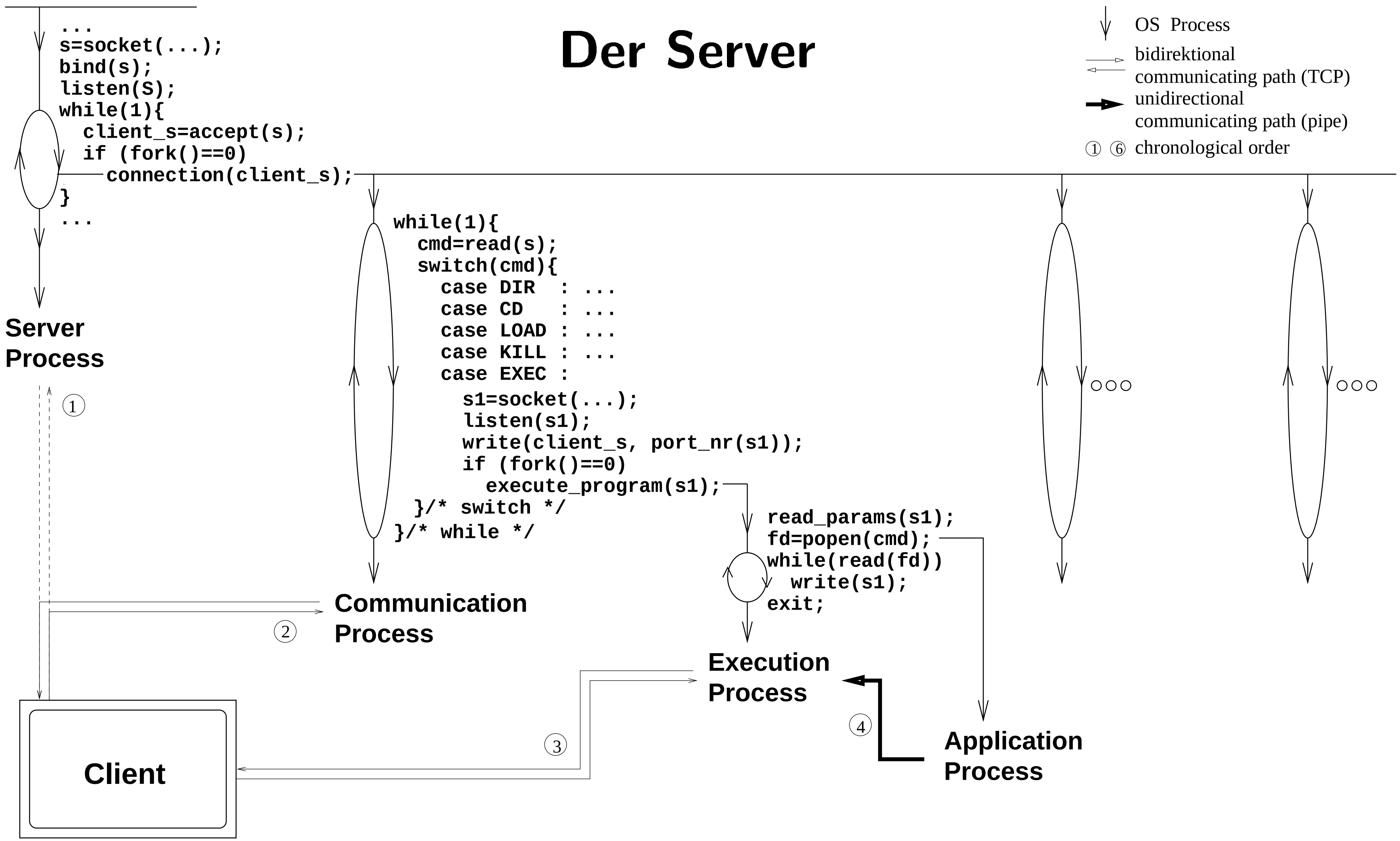
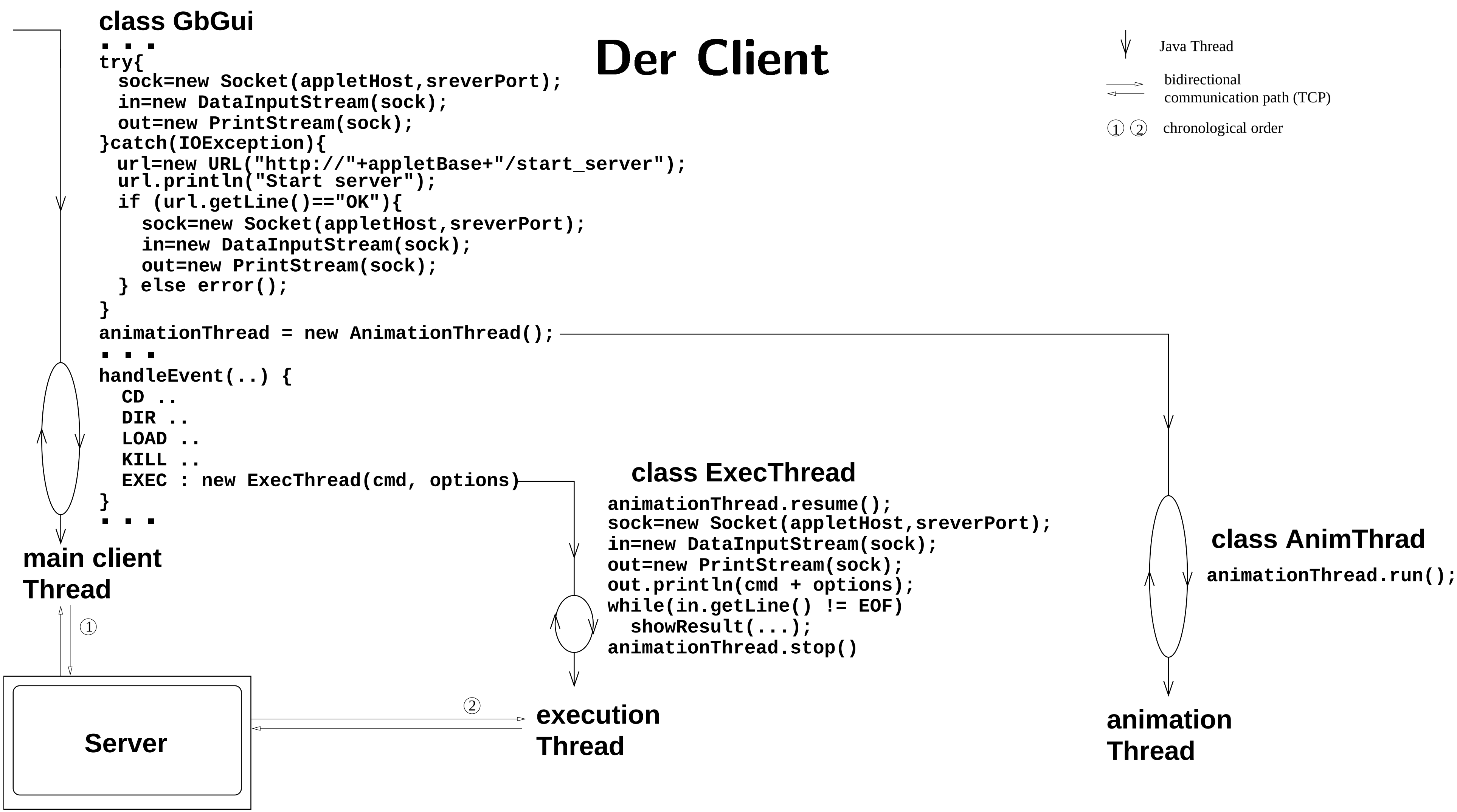
Der Server


...
s=socket(...);
bind(s);
listen(S);
while(1){
client_s=accept(s);
if (fork()==0)
connection(client_s);
}
...
Server Process
1
2
Communication Process
while(1){
cmd=read(s);
switch(cmd){
case DIR : ...
case CD : ...
case LOAD : ...
case KILL : ...
case EXEC :
s1=socket(...);
listen(s1);
write(client_s, port_nr(s1));
if (fork()==0)
execute_program(s1);
}/* switch */
}/* while */
read_params(s1);
fd=popen(cmd);
while(read(fd))
write(s1);
exit;
Execution Process
3
4
Application Process
Client
OS Process
bidirektional communicating path (TCP)
unidirectional communicating path (pipe)
1 6 chronological order

Der Client


Java Thread
bidirectional communication path (TCP)
① ② chronological order
class GbGui
. . .
try{
sock=new Socket(appletHost,sreverPort);
in=new DataInputStream(sock);
out=new PrintStream(sock);
}catch(IOException){
url=new URL("http://"+appletBase+"/start_server");
url.println("Start server");
if (url.getLine()=="OK"){
sock=new Socket(appletHost,sreverPort);
in=new DataInputStream(sock);
out=new PrintStream(sock);
} else error();
}
animationThread = new AnimationThread();
. . .
handleEvent(..) {
CD ..
DIR ..
LOAD ..
KILL ..
EXEC : new ExecThread(cmd, options)
}
. . .
main client Thread
①
Server
②
class ExecThread
animationThread.resume();
sock=new Socket(appletHost,sreverPort);
in=new DataInputStream(sock);
out=new PrintStream(sock);
out.println(cmd + options);
while(in.getLine() != EOF)
showResult(...);
animationThread.stop()
execution Thread
class AnimThrad
animationThread.run();
animation Thread