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package modules.email.action;

import java.io.*;
import java.util.*;
import java.net.*;

public class GetEmail {

    public final static String OUTPATH = "store/email/outbox/";
    public final static String INPATH = "incoming/email";

    public static void getEmail (String name, String domain, String password){
        //Get Email Messages from Server, Save to incoming folder

        Socket server = null;
        BufferedWriter out = null;
        BufferedReader in = null;

        try {
            System.out.println("Opening socket...");
            server = new Socket("localhost", 20002);
            System.out.println("Connection successful!");
            out = new BufferedWriter(new OutputStreamWriter(server.getOutputStream()));
            in = new BufferedReader(new InputStreamReader(server.getInputStream()));

            System.out.println("Sending login information to the server.");

            if(server.isConnected()) {
                out.write("<?xml version='1.0'?>");
                out.write("<verify>");
                out.write("<domain>"+domain+"</domain>");
                out.write("<name>"+name+"</name>");
                out.write("<password>"+password+"</password>");
                out.write("</verify>");
                out.newLine();
                out.flush();    // flush should write
                server.shutdownOutput();

                int count = 1;
                String response = "";
                while(!(response = in.readLine()).contains("END")) {
                    if(response != null){
                        System.out.println(response);
                        try{
                            FileWriter fstream = new FileWriter("incoming/email/msg_"+count+".xml");
                            BufferedWriter fout = new BufferedWriter(fstream);
                            fout.write(response);
                            fout.close();
                            count++;
                        } catch (Exception e){
                            System.err.println("Error: "+e.getMessage());
                        }
                    }
                }

                // end while loop
            } else {
                System.out.println("Connection with server could not be established.");
            }
            // end if-else

            //out.close();
            in.close();
            server.close();

        } catch(Exception e) {
            e.printStackTrace();
        }
    }

    try{

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        Thread.sleep(2000);
    } catch (InterruptedException e){
        e.printStackTrace();
    }

    //Parse the imported files Originally found in the shell script

    int datecnt = 1;
    File folder = new File(INPATH);
    folder.mkdirs();
    File[] listOffFiles = folder.listFiles();
    for (File f : listOffFiles){
        if(f.isFile() && !f.isHidden()){
            //Build the ACL2 script
            String unique = (new Date().toString()) + "_" + datecnt;
            unique = unique.replace(' ', '_');
            unique = unique.replace(':', '_');
            String script = "(in-package \"ACL2\")(include-book \"modules/email/action/rw-email\" +
                \" :uncertified-okp t) (readEmail \"incoming/email/\"+f.getName()+\"\\\" \\\"\"+unique+\"\\\" \"
state)";

            try{
                //Run on ACL2
                // Initialize ACL2 and dump its output to the log
                System.out.println("Executing ACL2 runtime for Email Generation...");
                ProcessBuilder processBuilder = new ProcessBuilder("acl2");
                File log = new File("logs/acl2_log.txt");
                processBuilder.redirectErrorStream(true);
                processBuilder.redirectOutput(log);

                Process process;

                process = processBuilder.start();

                PrintWriter procIn = new PrintWriter(process.getOutputStream());

                // Write the ACL2 to the process, close ACL2
                procIn.println(script);
                procIn.println("(good-bye)");
                procIn.flush();
                procIn.close();

                } catch(IOException e) {
                    e.printStackTrace();
                }
            }

            try{
                Thread.sleep(3000);
            } catch (InterruptedException e){
                e.printStackTrace();
            }

            f.delete();
            datecnt ++;
        }
    }
}

```