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CT4I4

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Assignment 1: Java RMI

To run and test the code, I wrote a short shell script based off those provided in RMI Compute Server Example code provided on Canvas which compiles the code and launches three terminals: one running the `rmiregistry`, one running the `ApplicationServer`, and one running the `ApplicationClient`.

```bash
#!/bin/bash

src_path="/home/andrew/edu/year4/semester2/CT414/assignments/assignment1/code/src"

# compile code
javac -d . server/*.java client/*.java interfaces/*.java implementations/*.java

# start rmi registry (in a new terminal)
$TERM -e rmiregistry -J-Djava.rmi.server.codebase=file:$src_path &
sleep 1

# start server (in a new terminal)
$TERM -e java -cp $src_path -Djava.rmi.server.codebase=file:$src_path/ server.ApplicationServer &
sleep 1

# start client (in a new terminal)
$TERM -e java -cp $src_path -Djava.rmi.server.codebase=file:$src_path/ client.ApplicationClient
```
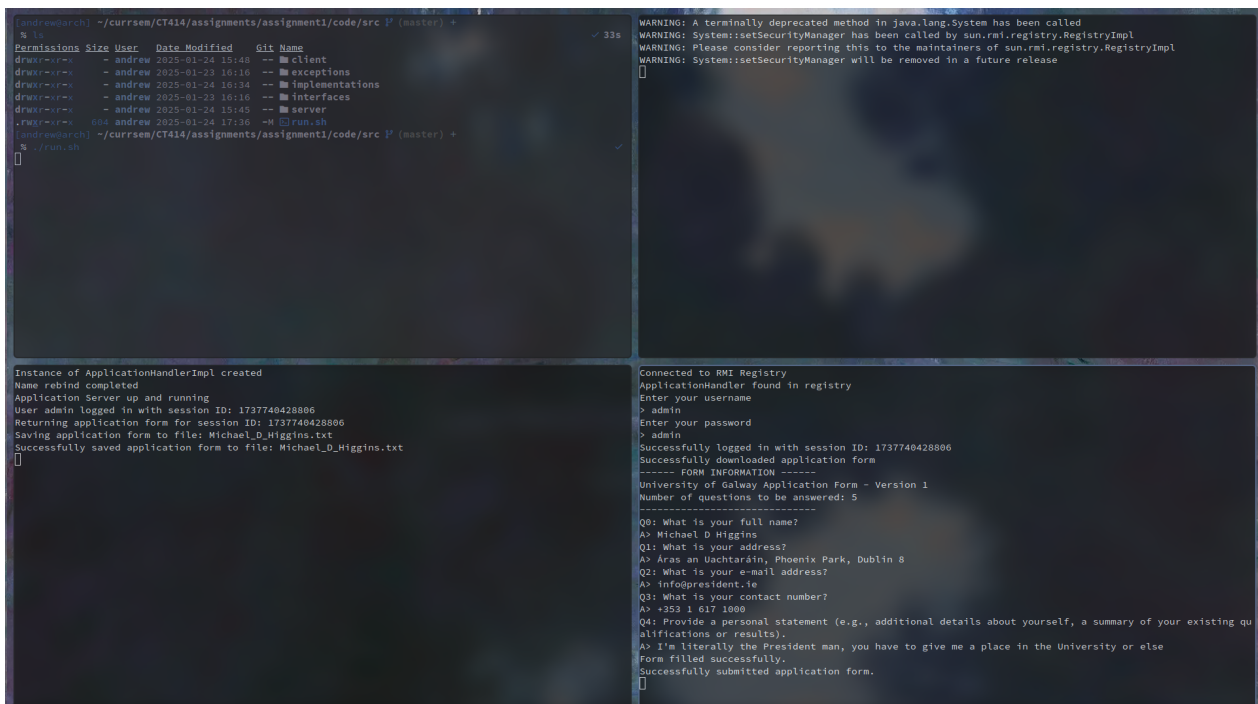
Listing 1: run.sh

Figure 1: Screenshot of all four terminal windows. From left to right, top to bottom: the window running `run.sh`, the window running the `rmiregistry`, the window running the `ApplicationServer`, & the window running the `ApplicationClient`

As can be seen in the `ApplicationClient` terminal window above, I tested the application by logging in with username & password `admin`, and filling in application details. The details entered were saved into a file called `Michael_D_Higgins.txt`, with the name of the file being the applicant's name with all whitespace replaced with underscores (to avoid any spaces-in-filename headaches).

```
[andrew@arch] ~/currsem/CT414/assignments/assignment1/code/src  (master) +
% ls
Permissions Size User    Date Modified    Git Name
drwxr-xr-x     - andrew 2025-01-24 15:48  -- ■ client
drwxr-xr-x     - andrew 2025-01-23 16:16  -- ■ exceptions
drwxr-xr-x     - andrew 2025-01-24 16:34  -- ■ implementations
drwxr-xr-x     - andrew 2025-01-23 16:16  -- ■ interfaces
drwxr-xr-x     - andrew 2025-01-24 15:45  -- ■ server
.rw-r--r--   459 andrew 2025-01-24 17:41  -N ▤ Michael_D_Higgins.txt
.rwxr-xr-x   604 andrew 2025-01-24 17:36  -M ▷ run.sh
[andrew@arch] ~/currsem/CT414/assignments/assignment1/code/src  (master) +
% bat Michael D Higgins.txt                                                    ✓ ls

       File: Michael_D_Higgins.txt

   1   Q0: What is your full name?
   2   A0: Michael D Higgins
   3
   4   Q1: What is your address?
   5   A1: Áras an Uachtaráin, Phoenix Park, Dublin 8
   6
   7   Q2: What is your e-mail address?
   8   A2: info@president.ie
   9
  10   Q3: What is your contact number?
  11   A3: +353 1 617 1000
  12
  13   Q4: Provide a personal statement (e.g., additional details about yourself, a summary of your existing qualifications or results).
  14   A4: I'm literally the President man, you have to give me a place in the University or else
  15

[andrew@arch] ~/currsem/CT414/assignments/assignment1/code/src  (master) +
%
```

Figure 2: Contents of the saved application form file

The output file contained all the questions and answers from the application form, as expected.