

Automated Tester for the Hand-ins

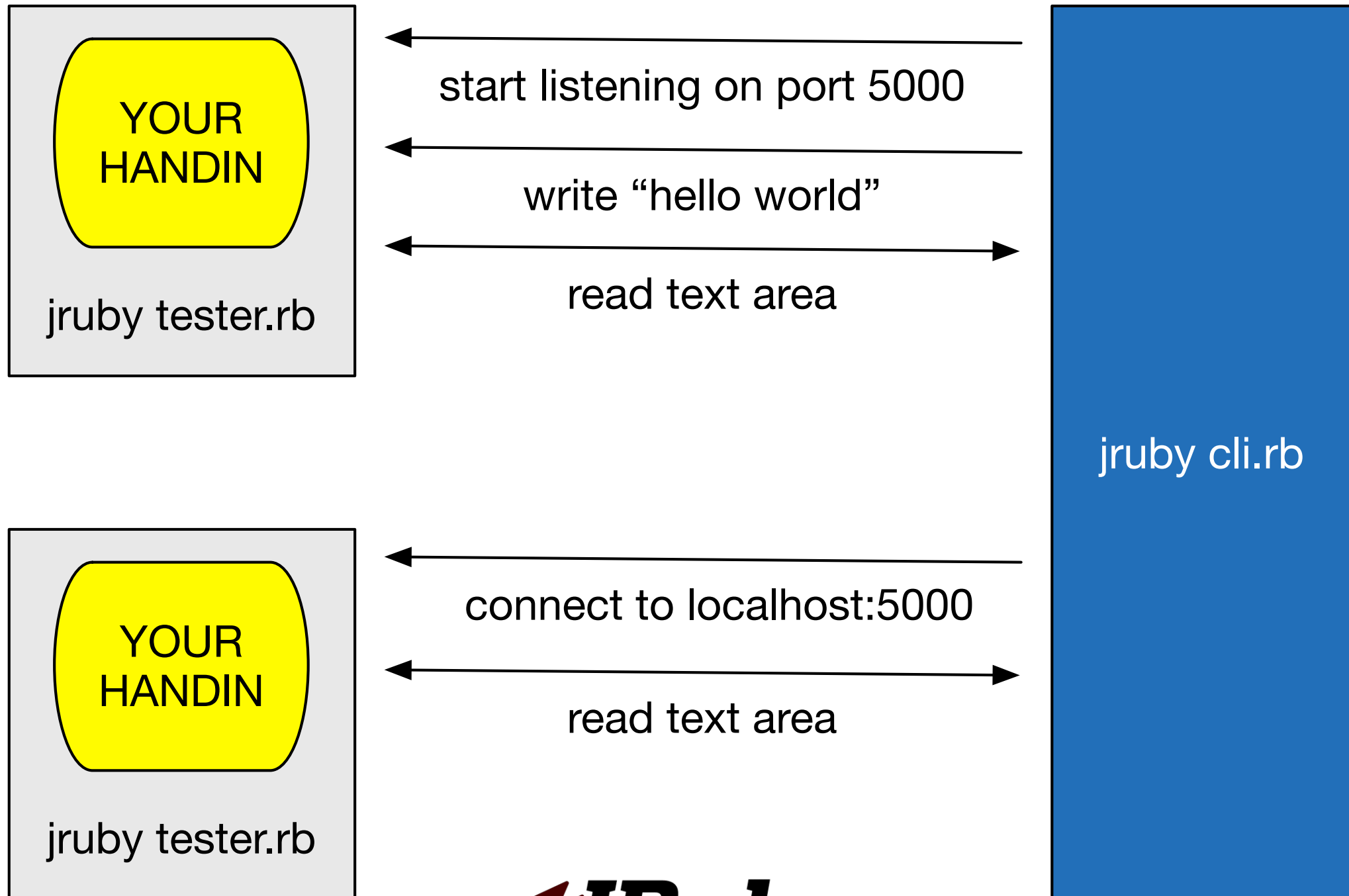
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What is it?

- A script that runs your hand-ins and tests them
- Originally made to help me (TA) evaluate hand-ins
- Might help you test more easily and thoroughly
- github.com/matus-tomlein/ddist_assignment_tester

How does it work?



How to install?

- `git clone` or download zip from Github
- Copy your Java code to a folder called `handin`
- Run `bin/jruby-1.7.19/bin/jruby cli.rb`

How to use?

- There are a number of test scripts
 - e.g. connecting and disconnecting, simultaneous editing, latency
- 2 commands for each test:
 1. Prepare – create local instances of hand-in (e.g. **pt1**)
 2. Run test (e.g. **t1**)

Demo

[~/Desktop/tester] bin/jruby-1.7.19/bin/jruby cli.rb

ptmc

tmc

Testing connecting the nodes

Waiting for 2 seconds

OK, 0.00367 s

Testing writing on the server

OK, 0.002357 s

Testing writing on a client

OK, 0.002448 s

SUMMARY

Failures: 0

Time: 0.008475 s



[~/Desktop/tester] bin/jruby-1.7.19/bin/jruby cli.rb

ptmc

tmc

Testing connecting the nodes

Waiting for 2 seconds

OK, 0.0036190000000000003 s

Testing writing on the server

Error: A deliberate error!

Testing writing on a client

Error: A deliberate error!

SUMMARY

Failures: 2

Time: 0.0036190000000000003 s

Making your hand-in compatible

- If you haven't refactored the code from the example in exercise 3 much, it might be compatible
- You might have to add a class to the root of hand-in (see README):

```
public class Simulated {  
    public void init() {}  
    public JTextArea getLowerTextArea() {}  
    public JTextArea getUpperTextArea() {}  
    public void startListening(int port) {}  
    public void connect(String ipAddress, int port) {}  
    public void disconnect() {}  
}
```

Tests

Test 1

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
pt1  
t1
```

- Test for the first hand-in
 - Exchanging messages
 - Disconnect, connecting to a different server
 - Disconnecting and connecting to the same server

Test 2

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
pt2  
t2
```

- Test for the first hand-in
 - Writing on the client and server at the same time
 - Two text areas

Test 3

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
pt3  
t3
```

- Crashes the client
- Reconnects to the server with a different client

Test simultaneous editing

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
pts  
ts
```

- Test for the second hand-in
 - Writing on the client and server at the same time
 - in the same text area
 - Tests writing far apart and very close together

Test for latency

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
pt1  
t1
```

- Measures the delay after a character is written on node 1 and shown on node 2
- Not very reliable

Test for multiple clients

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
ptmc  
tmc
```

- Test for the third hand-in
 - Exchanging messages with multiple clients and a server

Test for multiple simultaneous editings

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
ptms
```

```
tms (or tms2, tms3 or tms4)
```

- Test for the third hand-in
 - Simultaneous editing on 2, 3 and 4 nodes

Test for churn

```
> bin/jruby-1.7.19/bin/jruby cli.rb
```

```
ptc  
tc (or tc1 or tc2)
```

- Test for the third hand-in
 - Connecting/disconnecting clients (tc1)
 - Disconnecting the server (tc2)

Summary

- Might help you test your hand-ins (not mandatory)
- github.com/matus-tomlein/ddist_assignment_tester
- If you need help: matus@cs.au.dk, Blackboard or Hopper 127
- (I am collecting some anonymous data)

Testing on different machines

- Start nodes individually: `bin/jruby-1.7.19/bin/jruby tester.rb PORT`
- Add connection to the nodes (`add`) and start the test with names of the nodes (`ts`) in `cli.rb`, see below

```
2. java
[~/Desktop/tester] bin/jruby-1.7.19/bin/jruby tester.rb 5000
handin-compiled/GYPRWCUI
[2015-05-04 20:29:08] INFO WEBrick 1.3.1
[2015-05-04 20:29:08] INFO ruby 1.9.3 (2015-01-29) [java]
== Sinatra (v1.4.6) has taken the stage on 5000 for development w
up from WEBrick
[2015-05-04 20:29:08] INFO WEBrick::HTTPServer#start: pid=
0
```

```
3. java
[~/Desktop/tester] bin/jruby-1.7.19/bin/jruby tester.rb 6000
handin-compiled/SBNRRSVX
[2015-05-04 20:31:09] INFO WEBrick 1.3.1
[2015-05-04 20:31:09] INFO ruby 1.9.3 (2015-01-29) [java]
== Sinatra (v1.4.6) has taken the stage on 6000 for development w
ith backup from WEBrick
```

```
4. java
[~/Desktop/tester] bin/jruby-1.7.19/bin/jruby cli.rb
add 127.0.0.1 5000 server
add 127.0.0.1 6000 client
ts server client
```

Waiting for 3 seconds

Testing starting listening on server

OK, 0.0011790000000000001 s

Waiting for 1 seconds

```
WEBrick::HTTPServer#start: pid=84988
```