

RSB Tutorial

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Exercise 1: Serverless Text Chat // Task

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Task

- Write a simple serverless chat-program
- Chat uses publish/subscribe communication
 - Scope for publishing text messages: `/chat/text/NICKNAME`
 - Scope for receiving text messages: `/chat/text` (automatically aggregates all text messages)
- Chat messages are strings

Example (Should look similar to)

```
$ ./rsb-chat-1
usage: ./rsb-chat-1 NICKNAME
$ ./rsb-chat-1 bob
alice: hi bob
> hi alice
alice: what's up?
>
```

Exercise 1: Serverless Text Chat // Getting started

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Module Environment

```
1 $ cat /vol/isy/current/TODO >> ~/.bashrc
2 $ . ~/.bashrc
```

Project

1. RSB Config File

Copy template from `/vol/isy/current/TODO` to `~/.config/rsb.conf`

2. Copy one of the template projects in

`/vol/isy/current/tutorial/chat-1/LANGUAGE/project`

- Languages: Java, Python, C++, Common Lisp

3. Create and configure project in your favorite IDE

- Java: add JAR-files in `/vol/isy/current/releases/lucid/{lib,share}`
- C++: configure CMake to use `/vol/isy/current/releases/lucid/share/{rsc,rsb,rst}`

Exercise 2: Avatar Images // Task

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Task

- Extend server to allow for
 - Download of avatar image by other users
 - Retrieval of avatar images from other users
- Avatar image download uses RPC communication
 - Scope for RPC servers `/chat/avatar/NICKNAME`
 - Method name `get`

Example (Example)

```
$ ./rsb-chat-2
usage: ./rsb-chat-2 NICKNAME
$ ./rsb-chat-2 bob
> hi alice
-- Image width is: 32 and height: 32
alice: hi bob
>
```