
Lab 2: Scribble pad

The provided Java application provides a *pad* that can be used to *scribble* (i.e. draw) using given shapes and colors. It can be extended by providing more shapes as external libraries.

- to launch the application with the default shapes:

```
java -jar scribblePad.jar
```

or

```
java -cp scribblePad.jar fr.ubs.scribble.ScribbleFrame
```

- to launch the application with more shapes provided in the `triangles.jar` library:

```
java -cp scribblePad.jar:triangles.jar fr.ubs.scribble.ScribbleFrame
```

We want to distribute this application in order to provide a shared scribble pad, i.e. a pad where several distant users can draw together.

The server stores the figures drawn by the clients.

The client application provides the scribble pad user interface, used by a user. This application:

- notifies the server when modifications occur in its local figures,
- is notified by the server when modifications occur in figures of the other users

Write the application in 3 steps:

1. the clients notify the server when modifications occur in their local figures, and the server displays the modifications on its console, but doesn't notify the clients. Consequently, the clients can display only their own figures.
2. the server notifies the clients. Thus, the clients can also display the figures created by the other users, and modify those figures as well as their own figures.
3. one of the clients uses the shapes provided in the `triangles.jar` library, and makes them available to the server and the other clients by setting its *codebase* property.

Remote class loading: Only the client that provides the triangle shapes should set its *java.rmi.server.codebase* system property. The programs that have to load classes dynamically must have a security manager by setting the *java.security.manager* system property (with no value), provide a security policy file, and set the *java.rmi.server.useCodebaseOnly* system property to *false*.

The `triangles.jar` library is available at: <http://people.irisa.fr/Pascale.Launay/pub/triangles.jar>