

1.1. Administrator/Server

Purpose of the server

The administrator can access to the server, controlling the flow of protocols and the database, able to:

- Change the database, although it requires a Database browser.
- View the protocol messages in the console while the clients are interacting.
- Shutdown directly the server through a command and prefix password.

```
[Server] [OUT] Replied : {"type": "RESPONSE", "action": "LIST_APPOINTMENTS", "requestId": "list_appt_1", "responseId": "list_appt_1", "data": [{"id": 1, "name": "John Doe", "date": "2023-10-01", "time": "10:00 AM", "status": "Planned"}, {"id": 2, "name": "Jane Smith", "date": "2023-10-02", "time": "11:00 AM", "status": "Planned"}, {"id": 3, "name": "Mike Johnson", "date": "2023-10-03", "time": "12:00 PM", "status": "Planned"}, {"id": 4, "name": "Sarah Davis", "date": "2023-10-04", "time": "01:00 PM", "status": "Planned"}, {"id": 5, "name": "David Wilson", "date": "2023-10-05", "time": "02:00 PM", "status": "Planned"}], "error": null}  
[Server] [IN] Received: {"type": "REQUEST", "action": "LIST_MESSAGES", "role": "DOCTOR", "requestId": "list_message_1", "responseId": "list_message_1", "data": null, "error": null}  
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[Server] [IN] Received: {"type": "REQUEST", "action": "GET_MEASUREMENT_VALUES", "role": "DOCTOR", "requestId": "get_measurement_1", "responseId": "get_measurement_1", "data": null, "error": null}  
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```

Figure 1. Protocol messages flow in console

```
[Server] Connection closed for / [REDACTED]  
shutdown  
Enter admin password to confirm shutdown: [REDACTED]  
[Admin] Shutting down server...  
[Server] Shutting down thread pool and DB connection...  
[DB] Connection closed.  
-----  
[Server] Server stopped successfully.
```

Figure 2. Server shutdown through command and password

How to make it work?

- 1- Initialize the server by *run* in IntelliJ. Can be also done by running the jar file.
- 2- The server will function automatically, meaning it doesn't require any action from the administrator to accept new clients.
- 3- The administrator can observe through the console the protocol messages, viewing who is connecting and if the client has closed the connection.
- 4- To shut down the server must write “shutdown” command in the console and password (it is stabilised as “admin”).