

KES PROTOCOL

Overview

The KES is an application-level protocol created to be used in a specific client-server application that functions as a virtual library. It is stateful, simple and intuitive. KES allows data exchange between a server and multiple clients, embracing all necessary commands to the application functions properly.

After a connection is established between server and client, the last must send a line-command request according to KES rules — followed by its parameters if necessary — and the first will answer with a code informing the status of the response and other parameters if needed.

Request Methods

No login required

REGISTER [username] [password]

Register a new user.

LOGIN [username] [password]

Login to be able to perform other requests.

BOOKLIST

List all books.

QUIT

Quit the connection.

Login required

CHECK [book ISBN]

Check if a book is available for loan.

LOAN [book ISBN]

Loan a book.

INFO [loan ID]

Check a loan's information.

LIST

List a user's current loans.

RENEW [loan ID]

Renew a loan.

RETURN [loan ID]

Return a loan.

Response Codes

Success

+OK 20 [username] : user registered successfully

+OK 21 [username] : user logged in successfully

+OK 22 [list of books] : book list accessed successfully

+OK 23 [book title] : book available for loan

+OK 24 [loan ID] [book title] : loan made successfully

+OK 25 [loan's info] : loan info accessed successfully

+OK 26 [list of loans] : loan list accessed successfully

+OK 27 [loan ID] : loan renewed successfully

+OK 28 [loan ID] : loan returned successfully

+OK 29: client disconnect request received successfully

Error

-ERR 40 [command] : invalid command

-ERR 41 : session already initialized

-ERR 42 : user already logged in

-ERR 43 : user already registered

-ERR 44 : the username or the password are incorrect

-ERR 45 : book not registered on the bookshelf

-ERR 46 : book unavailable for loan

-ERR 47 : nonexistent loan for this user

-ERR 48 : loan already late

-ERR 49: login required