MP09

UF02

SOCKETS AND SERVICES
PROPOSED EXERCISES

01. Create a program that, through the modules module urllib and http.server, get meteorological information (temperature, humidity, wind speed, sunrise time and sunset time) of five cities of Catalonia and generate a web server that displays that information (it should update it every minute).

02. The game of coin-tail consists of several people tossing a coin at the same time, those who get tails are eliminated and those who get heads toss again, the game ends when only one person remains or none. Create two programs that simulate that game, server will be in charge of managing the game, the clients will be in charge of throwing the coins. It should be taken into account that the time to toss a coin is variable, it will not always be the same.

03. Taking as reference the example "SOME CLIENTS AND A SERVER" from the sockets documentation, create some programs for manage the online sale with bargaining (is a type of negotiation in which the buyer and seller of a good debate the price).

It should be taken into account that:

- The sale will not start until the seller puts a product on sale.
- Each program will run on a different machine.
- All the information that a program needs will be indicated as arguments for its execution.
- Once a program is executed, it will not require user intervention.
- The programs will indicate the final result.
- Communications between the programs involved will be encrypted.

04. Modify the example "TWO CLIENTS CHATTING THROUGH A SERVER" from the sockets documentation to include graphical improvements and to allow exchanging files.

It should be taken into account that:

- Each program will run on a different machine.
- All graphical aspects must be implemented through the curses module.
- In the client program, in conversations each user can be identified visually because they will have a color associated with them.
- All the information that a program needs to establish communication will be indicated as arguments for its execution.
- Clients will have a command to end the communication and correctly terminate the client program.
- Communications between the programs involved will be encrypted.

05. Create a program that makes backup copies of directories, to do this it will package them in a file (ZIP format) and upload the file to another machine using the FTP protocol.