Build a simplified version of a website for managing online purchase of ski passes. The system must allow users to purchase multiple ski passes together, and also to purchase ski passes as presents for other users of the system, according to the rules specified below. For simplicity, the validity period of ski passes is not considered (i.e. they are considered to be always valid).

The website must have the following features:

1. On the home page of the site, anyone can view, without any registration, the list of ski passes held by each registered user of the system.

2. Each user can sign up freely on the site by providing a name, which cannot be left empty, a username, which must be a valid email address, and a password, which must be at least 3 characters long, and must include at least one uppercase letter. The data for signing up must be checked in the client (format of name, username, and password, and presence of all data), before sending the data to the server. If such data are not acceptable, the user has to be notified and signing up must be forbidden by the client. The username must be unique. If a user tries to sign up with an already registered username, signing up must be refused by the server (this check is not requested to be done also by the client).

3. Each user can view, in his or her personal page, accessible only after authentication, how many ski passes the user has already purchased for himself/herself, how many ski passes the user has already purchased as present and for whom, how many ski passes the user has received as present and from whom. Moreover, in the same personal page, the user can request the purchase of a certain number of ski passes for himself/herself or for another signed up user of the system. In the second case, the user who purchases the ski passes as present must specify the username of the user for whom the ski passes are being purchased. The total number of ski passes that a user can hold cannot exceed 10. Consequently, the system will refuse purchase requests that would exceed this limit.

4. Example:

Let us assume there are 3 users named A, B, C, with usernames a@p.it, b@p.it, c@p.it, and passwords Pa1, Pa2, Pa3 respectively. Initially nobody has purchased any ski pass (and nobody holds any ski pass).

A purchases 8 ski passes. State: A holds 8 ski passes, 8 of which purchased directly.

B purchases 3 ski passes. State: A holds 8 ski passes, 8 of which purchased directly; B holds 3 ski passes, 3 of which purchased directly.

C tries to purchase 3 ski passes as present for A. The operation is refused by the system because A would hold 11 ski passes.

C purchases 3 ski passes as present for B. State: A holds 8 ski passes, 8 of which purchased directly; B holds 6 ski passes, 3 of which purchased directly and 3 of which received as present from C. C holds no ski passes but he has purchased 3 ski passes for B.

B purchases 3 ski passes and, at the same time, A tries to purchase 2 ski passes as present for B. In this case, the state depends on which operation has been accepted first by the system. The following two cases are possible:

- Case #1: the request from B is accepted first; the request from A cannot be accepted because it would exceed the maximum number of ski passes held by B. State: A holds 8 ski passes, 8 of which purchased directly; B holds 9 ski
passes, 6 of which purchased directly and 3 of which received as present from C. C holds no ski passes but he has purchased 3 ski passes for B.

- Case #2: the request from A is accepted first; the request from B cannot be accepted because it would exceed the maximum number of ski passes held by B. State: A holds 8 ski passes, 8 of which purchased directly; B holds 8 ski passes, 6 of which purchased directly and 3 of which received as present from C. C holds no ski passes but he has purchased 3 ski passes for B.

5. In the submitted project, the users mentioned in the Example must be already present. These users must have made purchases as in the example, reaching the state of Case #2 (i.e. only the purchase requested by A as present for B is done, not the purchase requested by B).

6. Authentication through username and password remains valid if no more than two minutes have elapsed since the last page load. If a user tries to perform an operation that requires authentication after an idle time of more than 2 minutes, the operation has no effect and the user is forced to re-authenticate with username and password. The use of HTTPS must be enforced for sign up and authentication and in any part of the site that shows private information of an authenticated user (e.g. who has purchased ski passes as present and for whom).

7. The general layout of the web pages must contain: a header in the upper part, a navigation bar on the left side with links or buttons to carry out the possible operations and a central part which is used for the main operation.

8. Cookies and Javascript must be enabled, otherwise the website may not work properly (in that case, for what concerns cookies, the user must be alerted and the website navigation must be forbidden, for what concerns Javascript the user must be informed). Forms should be provided with small informational messages in order to explain the meaning of the different fields. These messages may be put within the fields themselves or may appear when the mouse pointer is over them.

9. The more uniform the views and the layouts are by varying the adopted browser, the better.

Submission instructions:
The instructions already published in the Material folder of the course web page for the installation on the cclix11.polito.it, still hold. Furthermore, you need to submit your project (the same that you installed on cclix11) in a zip file named sXXXXXX.zip (without blank spaces in the name) to the following web site:
https://pad.polito.it/enginframe/dp1/dp1.xml (from inside the Politecnico network) or https://pad.polito.it:8080/enginframe/dp1/dp1.xml (from outside).

In addition:
1. The sql script included in the zip file (submitted to pad.polito.it) to create the database must have a name with the following pattern: sXXXXXX.sql (where XXXXXX is your own student id).
2. The main page of your web site must be put in a file named index.html or index.php in your SECRET_FOLDER such that the website can be accessed at the url http://cclix11.polito.it/~sXXXXXX/SECRET_FOLDER without adding any other resource name at the end of the SECRET_FOLDER.
3. DO NOT use absolute links

WARNING: The system that accepts your projects, works in an automatic way and it will stop accepting submissions at the scheduled deadline. For this reason, we recommend you DO NOT submit your work in the very last minutes before the final deadline.

In case of any doubt and question related to the project, please first visit the forum in the course website in order to check if other students have already asked the same question. Otherwise use the forum (not the teacher email) to ask your question so that the response will be available to all students.

The forum has to be used exclusively for requests of clarification about the text of the assignment and not for requesting help about how to solve it or how to solve specific problems encountered during the execution of the assignment.