

The Class Book Application

Quick introduction

- the application is a virtual class book;
- it has a console user interface;
- it holds informations about:
 - persons in a school: teacher, student, guardian, principal, admin etc.;
 - e.g.: student grades, absences;
- it performs actions such like: logging into the system, saving data, logging out, sending messages between users, etc.
- full list of actions on the next site.
- the data are saved and uploaded from a CSV file.
- the project should be set up on maven;
- the certificate is generated as PDF (iText can be used);
- The application should be ran as a .jar file in the command line;

Action name	Description	Who has access
Create new student	Create a new student and add him to the database - operation fails if the new student already exists in the database (the same first and last names)	teacher
Create new guardian and assign student	Create a new guardian and assign him/her an existing student - operation fails if the new guardian already exists in the database (the same first and last names)	teacher
Add student to class	Assign an unassigned student to a school class	teacher
Add student a grade	Gives a grade to a student from a school subject of your choice	teacher
Modify a grade of student	Modifies a an existing grade of a student of your choice	teacher
Generate student's certificate	Generates a PDF school certificate for a student of your choice	teacher
Generate certificates for all students in class	Generates PDF school certificates for all students from a school class of your choice	teacher
Generate multiple certificates	Generates PDF school certificates for multiple students of your choice (student listed and separated with commas)	teacher
Add a student to a guardian	Assign an existing student to an existing guardian	teacher
Send text message	Send a text message to a person of your choice	all
Add student an absence	Gives an absence to a student from a school subject of your choice	teacher
Display all grades	Display all grades of a student	Student, guardian
Display all my absences	Display all absences of a student	student
Display all grades of my students	List and display all grades received by students assigned to a guardian	guardian
Display absences of my student	After choosing a student assigned to a guardian, display its absences	guardian
Display if any of my students has too low grades	Display if any of the students assigned to a guardian has too low grades (average grade from a subject equals F)	guardian
Display if any of my students has too many absences	Display if any of the students assigned to a guardian has too many absences (number of absences from a subject is higher than 20% of all lessons planned from the subject)	guardian
Generate reports for students who are going to fail promotion	Generates a PDF report for every student assigned to a guardian who is going to fail promotion (either because of absences or low grades)	guardian
Send an excuse to teacher	Sends an excuse to the teacher who gave guardian's student an absence. The excuse must be put in the studentsExcuseScan folder as a PDF	guardian
Excuse (verify) students absence	Allows to choose to approve or discard an excuse sent by a guardian	teacher
Create new teacher	Create a new teacher and add him to the database - operation fails if the new teacher already exists in the database (the same first and last names)	principal
Display all persons in system	Displays a list of all persons in the database	principal
Create new school class and assign teacher	Creates a new school class and assigns an existing teacher	principal
Display all classes + students	Displays a list of existing school classes, teachers and students assigned to them	principal
Set number of lessons per year	Sets a number of lessons for a subject of your choice (important during calculating if a student is going to fail promotion because of too many absences)	principal
Display all teacher	Displays a list of teachers in the database	principal
Change password	Changes a password	all
Turn on/off checking password format during changing it	Turns on/off the checking of password format during password change (turned on: password must have at least 6 characters, 1 upper case, 1 lower case and 1 special character, turned off: no restriction)	admin
Log out	Log out and save the database to SQL	all

Example of the console user interface (cmd).

```
+-----+
LIST OF ALL PERSONS
Emily Bork | login: 8 | Student
Michael Bork | login: 10 | Student
Suzanne Bork | login: 9 | Guardian
Ernest Brown | login: 2 | Principal
Adam Gatling | login: 1 | Admin
Christal Olsen | login: 6 | Guardian
James Olsen | login: 5 | Student
Jose Olsen | login: 7 | Student
Chris Williams | login: 4 | Teacher
Phyllis Woodfin | login: 3 | Teacher
+-----+

=====
Please give:
  LOGIN      >push Enter (login: first two letters of name and surname + id, e.g. PhWo3)
  PASSWORD   >push Enter (default password: 123)
ChWi4
123
*****
***LOGED AS | Chris Williams | login: ChWi4 | Teacher
Choose action ID >push Enter
(X) Log out

(1) Create new student
(7) Create new guardian and assign student

(4) Add student to class
(5) Add student a grade
(14) Modify a grade of student
(13) Add student an absence
(27) Add a student to a guardian

(11) Generate student's certificate
(12) Generate cetificates for all students in class
(23) Generate multiple certificates

(20) Excuse (verify) students absence
(18) Send text message
(24) Change password
```