

RAPPORT - APPLICATION JFX

ACTIVITY :
Code a JFX UI in the context of
school administration

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DESIGN :

Similar to TP4, with some added functionalities.

LINKED DATABASE :

Realised on MySQL, with sql requests pulled from jfx where required.

FEATURES TO IMPLEMENT :

1. Retrieve and display a list of students from database in studentView. ☒
2. Display details of a student when selected. ☒
3. Edit an existing student . ☒
4. Add a new student with at least the name and gender. ☒
5. Delete a student. ☒
6. Display the average of all students grades. ☒
7. Validate data entry and display messages when errors are detected. ☒

UI DISPLAY :

Here is the window the user is presented with :

The screenshot shows the StudentManagerFX application window. It features a 'List of students' table on the left, a 'Student details' form on the right, and a 'Photo' section. The table lists students with their names and marks. The details form includes fields for Name, Gender, Email, Date of birth, Mark, and Comments. The photo section displays a student's photo. The GPA average and Students count are shown at the bottom left. Buttons for 'Add new student', 'Edit', 'Delete', 'Save', and 'Cancel' are at the bottom.

List of students	
name :	Jean , mark : 4.0
name :	Boyan, mark : 3.5
name :	Edouard, mark : 2.0
name :	Anne, mark : 4.0
name :	Sabine, mark : 0.0
name :	Mme.Thai, mark : 4.0
name :	Nemo, mark : 1.0
name :	Thimothée, mark : 2.7
name :	Gab, mark : 3.8
name :	Halll, mark : 3.35

GPA average : 3,15
Students count : 10

Student details

Name: Mme.Thai
Gender: female
Email: noemie.thai@edu.devinci.
Date of birth: 01/01/1992
Mark: 4.0
Comments:

Photo:

Buttons: Add new student, Edit, Delete, Save, Cancel

UI DESCRIPTION :

In the initial state of the application, no field can be edited. This is called the view mode, as it is used to review students details. The user can interact with the following elements :

- 1.listView: Display the list of students and their grades. On selection of a student, their informations appear in Student details.
- 2.Student details: List the informations on selected student. In the initial state of the application, no field can be edited. They appear grey to show that they are locked. In order to unlock them, the user needs to press "Edit".
- 3.Add new student: Activates new student entry mode. All student details are flushed to provide a blank slate on which the new student can be entered. "Save" and "Cancel" buttons are enabled, so that the new student can be saved, or the user can return to initial mode without saving.
- 4.Edit: Activates student edition mode. All student details are ungreyed and writable. "Save", "Delete" and "Cancel" buttons are enabled, so that the modifications can be saved, a student can be deleted or the user can return to initial mode without saving.
- 5.Delete: Remove the student selected from the database. Only enabled while in edition mode, to reduce the risk of accidental deletion.
- 6.Save: Add the new student to the database, or modify the fields of an existing student if in edition mode. Only enabled in new student entry and edition modes. If the fields "Name" and "Gender" are empty when saving, a warning is issued and the user cannot save until they fill in those fields. See below.

The screenshot displays the StudentManagerFX application window. It features a 'List of students' panel on the left with a scrollable list of student names and marks. The selected student, Anne, is highlighted. Below this list, the GPA average (3,15) and the total number of students (10) are shown. The 'Student details' panel on the right displays the information for the selected student, Anne, including her name, gender (female), email (anne.sounanthanam@prc), date of birth (01/01/1980), mark (4.0), and a photo. A 'Comments' text area contains the text 'Good Friend'. At the bottom, there are buttons for 'Add new student', 'Edit', 'Delete', 'Save', and 'Cancel'. A red warning message is displayed at the bottom: '!!! Warning : You should add at least a name and a gender to Save !!!'.

List of students	
name : Jean , mark : 4.0	
name : Boyan, mark : 3.5	
name : Edouard, mark : 2.0	
name : Anne, mark : 4.0	
name : Sabine, mark : 0.0	
name : Mme.Thai, mark : 4.0	
name : Nemo, mark : 1.0	
name : Thimothée, mark : 2.7	
name : Gab, mark : 3.8	
name : Halli, mark : 3.35	

GPA average : 3,15
Students count : 10

Student details

Name:

Gender:

Email:

Date of birth:

Mark:

Comments:

Buttons: Add new student, Edit, Delete, Save, Cancel

Warning: !!! Warning : You should add at least a name and a gender to Save !!!

UI DESCRIPTION :

Similarly, if the date is not within the allowed timeframe, namely 1980-2000, a warning is issued and the user cannot save until they correct the date. See below.

The screenshot shows the StudentManagerFX application window. It features a 'List of students' on the left and 'Student details' on the right. The list includes names and marks, with 'Thimothée' selected. The details section shows fields for Name, Gender, Email, Date of birth, Mark, and Comments. A red warning message is displayed above the Mark field: '!!! Warning : date must be between 1980 and 2000 !!!'. At the bottom, there are buttons for 'Add new student', 'Edit', 'Delete', 'Save', and 'Cancel'. GPA average and Students count are also displayed below the list.

List of students	
name : Jean , mark : 4.0	
name : Boyan, mark : 3.5	
name : Edouard, mark : 2.0	
name : Anne, mark : 4.0	
name : Sabine, mark : 0.0	
name : Mme.Thai, mark : 4.0	
name : Nemo, mark : 1.0	
name : Thimothée, mark : 2.7	
name : Gab, mark : 3.8	
name : Halll, mark : 3.35	

GPA average : 3,15
Students count : 10

Student details

Name: Thimothée

Gender: other

Email: thimothée.chalamet@yah

Photo:

Date of birth: 12/01/1978

Mark: 2.7

Comments: Room for improvement

!!! Warning : date must be between 1980 and 2000 !!!

Buttons: Add new student, Edit, Delete, Save, Cancel

8. Cancel: Aborts the ongoing action and resumes the view mode of the application. Disabled if the application is already in view mode.

Additionally, a count of all registered students and their global average GPA are presented below the list of Students. Those values are updated whenever a student is added or deleted from the database.