Groups, students and average marks

To do:

Web application that works with students, students group, and students average marks.

Application should do:

* Display and edit list of students;
* Display list of students, that where born in some period;
* Display and edit list of groups;
* Change current student group;
* Count average marks of students in the group.

1. Students
   1. Display list of students

This mode displays the list of all students.

Main scenarios:

* User selects item “Students”;
* Application displays list of students.



Pic. 1.1 Display students list

Next columns are displaying in list:

* Name and surname of student;
* Date of birth;
* Average mark;
* Group.

Filtration

To show records of students that where born in some period user can use filtration fields to enter date interval.

Restrictions:

* Start date of the period should be less then end date of the period;
* If both date fields are blank filtration will not be applied;
* If start date is blank, then application display all records with date of birth not greater then entered date;
* If end date is blank, then application display all records with date of birth not less then entered date;
* Refreshing of displaying records is producing by clicking the “Update” button.
  1. Add new student record

Main scenario:

* User is in display mode of students list and press “Add” button;
* Application displays form to enter student data;
* User enters student data;
* User press “Save” button;
* If entered data is invalid the warning message is displaying and user should enter valid data in fields where warning message is displaying;
* If entered data is valid, then record is adding to database;
* If error occurs, then error message is displaying;
* If new student record is successfully added, then list of students with added records is displaying.

Cancel operation scenario:

* User is in display mode of students list and press “Add” button;
* Application displays form to enter student data;
* User enters data and press “Back” button;
* Data don’t save in data base, then list of students records is displaying to user.



Pic. 1.2 Add student form

The following data is entered when new student record is adding to database:

* name – students name and surname;
* date – students date of birth;
* avg. marks – students average marks;
* group – students group.
  1. Edit student record

Main scenario:

* User is in display mode of students list and press “Edit” button;
* Application displays form to enter student data filled with current student data;
* User enters student data;
* User press “Save” button;
* If entered data is invalid the warning message is displaying and user should enter valid data in fields where warning message is displaying;
* If entered data is valid, then edited data is added to database;
* If error occurs, then error message is displaying;
* If student record is successfully edited, then list of students with edited record is displaying.

Cancel operation scenario:

* User is in display mode of students list and press “Edit” button;
* Application displays form to enter student data;
* User enters data and press “Buck” button;
* Data don’t save in data base, then list of students records are displaying to user.



Pic. 1.3 Edit student form

The following data is entered when student record is editing:

* name – students name and surname;
* date – students date of birth;
* avg. marks – students average marks;
* group – students group.

Constraints for data validation:

* name – must be not blank, maximum length 50 symbols;
* date – must be not blank;
* avg. marks – must be not blank, numeric value, value between 1 and 10 ;
* group – is selecting in dropdown list.
  1. Delete student record

Main scenario:

* User is in display mode of students list and press “Delete” button;
* Application displays confirmation dialog “Delete student record?”;
* User press “Yes” button;
* Record is deleted from database;
* If error occurs, then error message displays;
* If student record is successfully deleted, then list of students without deleted record is displaying.

Cancel operation scenario:

* User is in display mode of students list and press “Delete” button;
* Application displays confirmation dialog “Delete student record?”;
* User press “Cancel” button;
* List of students without changes is displaying.



Pic. 1.4 Delete student dialog

1. Groups

This mode displays the list of all groups.

Main scenarios:

* User selects item “Groups”;
* Application displays list of groups.



Pic. 2.1 Display group list

Next columns are displaying in list:

* Short name of the group;
* Full name of the group;
* Average mark of all students in the group;
  1. Add new group record

Main scenario:

* User is in display mode of groups list and press “Add” button;
* Application displays form to enter group data;
* User enters group data;
* User press “Save” button;
* If entered data is invalid the warning message is displaying and user should enter valid data in fields where warning message is displaying;
* If entered data is valid, then record is adding to database;
* If error occurs, then error message is displaying;
* If new group record is successfully added, then list of groups with added records is displaying.

Cancel operation scenario:

* User is in display mode of groups list and press “Add” button;
* Application displays form to enter group data;
* User enters data and press “Back” button;
* Data don’t save in data base, then list of groups records are displaying to user.



Pic. 2.2 Add group form

The following data is entered when new group record is adding to database:

* short name – group short name;
* full name – group full name;
* description – group description.
  1. Edit group record

Main scenario:

* User is in display mode of groups list and press “Edit” button;
* Application displays form to enter group data filled with current group data;
* User enters student data;
* User press “Save” button;
* If entered data is invalid the warning message is displaying and user should enter valid data in fields where warning message is displaying;
* If entered data is valid, then edited data is added to database;
* If error occurs, then error message is displaying;
* If student group is successfully edited, then list of groups with edited record is displaying.

Cancel operation scenario:

* User is in display mode of groups list and press “Edit” button;
* Application displays form to enter group data;
* User enters data and press “Buck” button;
* Data don’t save in data base, then list of groups records are displaying to user.



Pic. 1.3 Edit group form

The following data is entered when group record is editing:

* short name – group short name;
* full name – group full name;
* description – group description.

Constraints for data validation:

* short name – must be not blank, maximum length 50 symbols;
* full name – must be not blank, maximum length 50 symbols;
* description – must be not blank, maximum length 255 symbols;
  1. Delete group record

Main scenario:

* User is in display mode of groups list and press “Delete” button;
* Application displays confirmation dialog “Delete group record?”;
* User press “Yes” button;
* Record is deleted from database;
* If error occurs, then error message displays;
* If student record is successfully deleted, then list of groups without deleted record is displaying.

Cancel operation scenario:

* User is in display mode of groups list and press “Delete” button;
* Application displays confirmation dialog “Delete student record?”;
* User press “Cancel” button;
* List of groups without changes is displaying.



Pic. 1.4 Delete group dialog