**Project Report**

**Team Members:**

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The main goal of this project was creating the robust, interface-friendly for user, quick and simple program that takes into account the student’s information.   
 Our first task was making the SPMP and projection the classes and simple interface for program. For projecting the classes we use UML diagram that very well displays the relation of all components.

We used the Qt framework for building that program. This framework gives very friendly interface and very great thing such as QtDesigner. Using it you can easily design your interface only moving the widget use the mouse.

In development process, we got to know about Qt features – signals and slots. This thing can help you for developing the components separately and connect all at the last moment of development.

Our first subtask in code part was creating the data storage class that will be automatically loaded the data from file when the constructor is called and save the data from data storage to file when the destructor is called.

We used the mix of the Qt’s containers and stl’s algorithms. Also the class DataStorage gives possibility to access to data using different functions:

* remove() for removing the student’s information from database
* add() adding the new student at the end of data base
* [] indexer for quick access
* change for changing the data of student in some position in data base

Next, We started to design the interface of the main widget: create the buttons, set the table widget on the form. We had some problem with the loading data from file to the table widget, because our parsing was wrong, and we rebuilt it that took some time.

The next step was creating other helper widgets, for addition new student, changing the information of the student and also the enter widget.

We use 1 widget for addition and changing. If the user wants to add new student the program will change the name of the button in the action widget to “Add” and clear all fields. When the user click the button “Add” the program adds the new student to the table widget all this action performs using the signals/slot features.

How can we remove the student from table widget and data base?  
This is very simple need select the row with the user for removing and click button remove.

Enter widget is the simple with two button “Administrator” and “User”. If the user clicks the user’s button we show the main widget in the user form that’s why without possibility for adding, changing and removing the students from the table widget and data base. Otherwise, the administrator can do all this option that listed above.