

FACULTY OF COMPUTERS, INFORMATICS AND MICROELECTRONICS

TECHNICAL UNIVERSITY OF MOLDOVA

AMSI

LABORATORY WORK #5

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**Project description.  
Modeling your project with Class Diagrams.  
SWOT analysis.**

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## **Laboratory Work #5**

### **Topic:**

Modeling your project with Class Diagrams. SWOT analysis.

### **Tasks:**

- Model of the application using Class Diagrams;
- SWOT analysis of the project.

# 1 Model of the project with Class Diagrams.

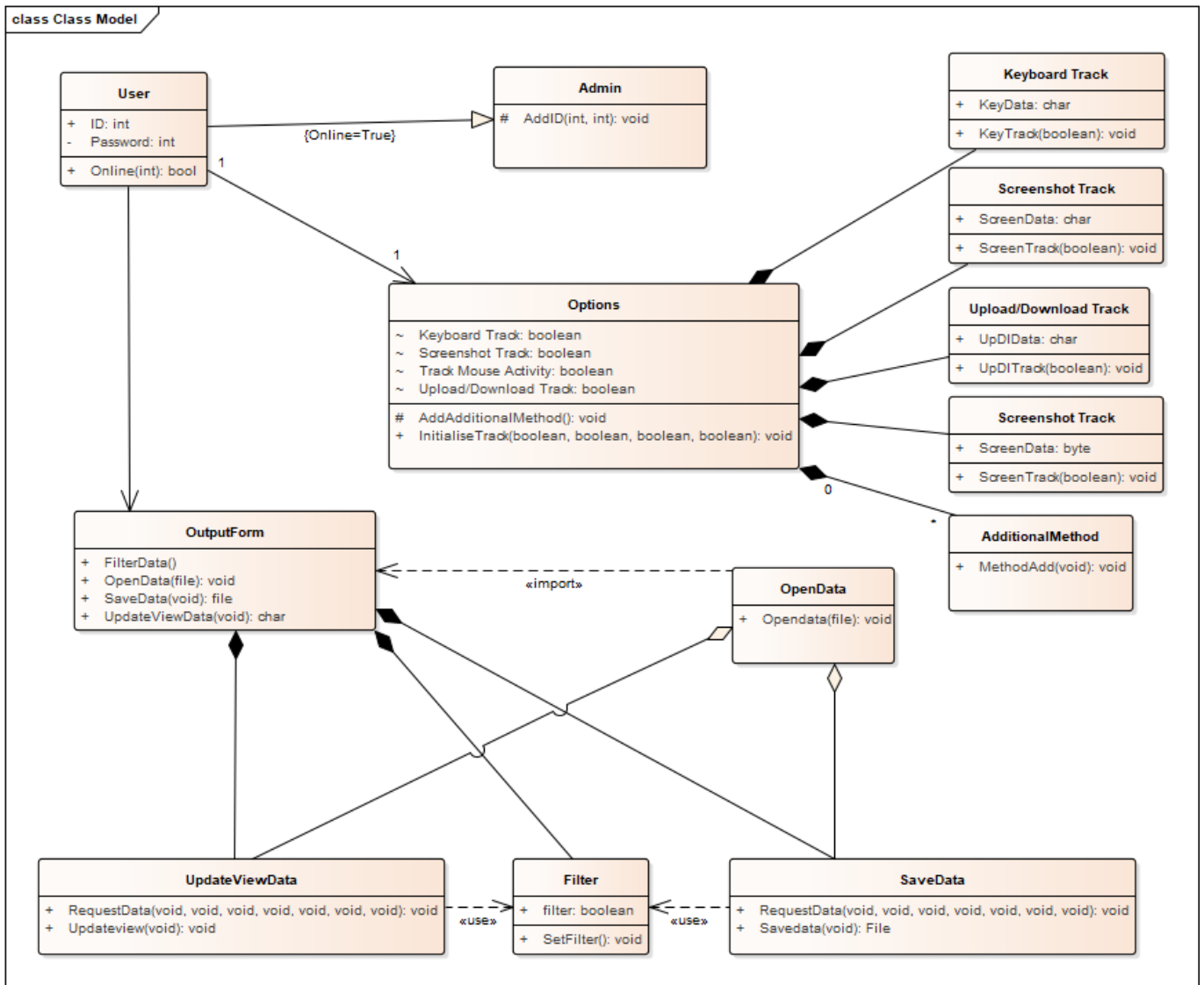


Figure 1.1– Class Diagram

The class diagram in **Figure 1.1** contains the general conceptual modeling of the application classes used.

The most important classes in this project are:

- User class. *(Class that responds for the user functionality)*
- Options class. *(Class that responds for the option selection and tracking methods instantiation)*
- OutputForm class. *(Class that responds for the tracked data operations)*

The User can be further generalized in Admin class that overwrites the User variables and has the ability to add other Users Id's to track.

Each user is associated with a option selection class and through it the user selects the tracking methods and then after the selection track methods are initialized; if the user choose an additional method then .

The OutputForm is the class that deals with data manipulation and its representation.

- Open data responds for opening the files that contain tracked data and use the other other functions of generalized class OutputForm.
- UpdateViewsData outputs on interface on screen that is processed and requested from the track methods and filter.
- Filter filters the data according to the user input.
- Save data saves the data that is processed and requested from the track methods and filter.

## 2 SWOT analysis of the project.

The SWOT analysis of the project is explained below in the Figure 2.1 .

<p><u>Strengths</u></p> <ol style="list-style-type: none"> <li>1.Good to track a forgotten pattern.</li> <li>2.Can be used to monitor the workers activity of a company.</li> <li>3.Track unauthorised accivity to the OS.</li> <li>4.Functionality can be expanded.</li> <li>5.Basic use of the program doesn't need a lot of programming knowledge.</li> </ol>	<p><u>Weaknesess</u></p> <ol style="list-style-type: none"> <li>1.Can be used to steal data.</li> <li>2.Functionality of the program differs on the OS it is used from.</li> <li>3.Needs a lot of security support.</li> </ol>
<p><u>Opportunities</u></p> <ol style="list-style-type: none"> <li>1.Further extensions can be created to make use of the data from other programs/services.</li> <li>2.Cooperations with other programs can be made.</li> </ol>	<p><u>Threats</u></p> <ol style="list-style-type: none"> <li>1.There might be something better on internet.</li> <li>2.Other monitoring companies might be against an aplication that combines all the monitoring methods.</li> </ol>

Figure 2.1 – SWOT

## **Conclusions**

In this laboratory work i learned how to model the project with class Diagrams and how to make the SWOT of my application. Which help in understanding how should my product interact with the user and developers.

## References

- 1 Learn Unified Model Language, <https://www.tutorialspoint.com/uml/>
- 2 Wikipedia, [https://en.wikipedia.org/wiki/Unified\\_Modeling\\_Language](https://en.wikipedia.org/wiki/Unified_Modeling_Language)
- 3 Wikipedia ,Class Diagrams, [https://en.wikipedia.org/wiki/Class\\_diagram](https://en.wikipedia.org/wiki/Class_diagram)
- 4 Notes on UML course given by professor and laboratory assistant.
- 5 UML - Class Diagrams, [https://www.tutorialspoint.com/uml/uml\\_class\\_diagram.htm](https://www.tutorialspoint.com/uml/uml_class_diagram.htm)