Faculty of Computers, Informatics and Microelectronics

Technical University of Moldova

WINDOWS PROGRAMMING

Laboratory work #4

Windows Timer. Animation.

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1 Purpose of the laboratory

Gain knowledge about basics of Working with timer, making animation.

2 Laboratory Work Requirements

– **Basic Level (grade 5 - 6) you should be able to:**

a) Create an animation based on Windows timer which involves at least 5 different drawn objects

– **Normal Level (grade 7 - 8) you should be able to:**

a) Realize the tasks from *Basic Level*.

b) Increase and decrease animation speed using mouse wheel/from keebord

c) Solve flicking problem describe in your readme/report the way you had implemented this

– **Advanced Level (grade 9 - 10) you should be able to:**

a) Realize the tasks from *Normal Level*.

b) Add 2 animated objects which will interact with each other. Balls that have different velocity and moving angles.

– **for Bonus Point Tasks :**

a) For the task above, add balls with mouse.

3 Laboratory work implementation

3.1 Tasks and Points

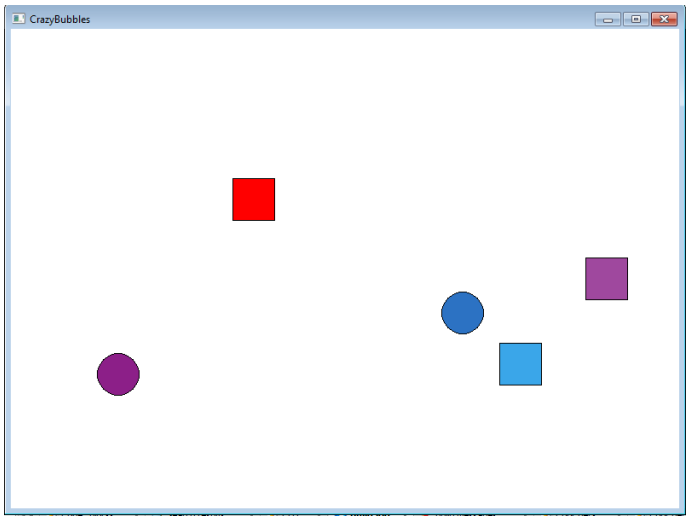
I have created a Windows application that can create an animation based on Windows timer which involves more drawn objects. You can increase and decrease animation speed using mouse wheel/from keyboard. Also, you can add objects (balls) with mouse. These balls change their color at the interaction with each other and they became squares on interaction with the right and left wall.

3.2 Laboratory work analysis

https://github.com/TUM-FAF/FAF-141-Postica-Denis . I have created a Windows application which shows the use of timer in the creation of animation.

3.3 Prove your work with screens

Figure 3.1– General view of Windows application



Conclusions

In laboratory work nr. 4 I have worked with timer and the possibility of making animations using it. It was quite interesting to work with the animation and learn how to make it more natural, meaning that objects to have more natural movements and interactions with each other and with walls. In general, I understood the topic but I might have some questions on how to set speed for object, in other words different speed for different objects. Also, it was interesting to face the problem with flicking, understanding what it is and how to solve it. I tried some techniques from different sources and I think I solved this problem in this laboratory work. Making animation with timer is not really effective when making some complex animation but it is good for simple ones.

References

1 Microsoft site, *official page*, https://msdn.microsoft.com/en-us/library/windows/