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1. Team members

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1. Topic

The topic of the project was to create educational software connected with Chemistry or Biology. So we create a C++-based software to help students with different chemical equations and problems. We had a month to deal with the task – form a team, discuss the topic, and come up with an idea. You can read more about the process in the next section.

1. Our game

* **The idea**
  + Our idea was to create a chemical puzzle that consists of three levels of difficulty. When they are passed there will be information about the final products.
* **The game**
  + When everything is set and the program is executed the first thing we see is our menu. When we press Enter our first level is started. What we see after are one 3 containers and a flask. When the flask is moved into the first container there is illustrated a chemical decomposition. Then we can see that in the other containers, the elements involved in the chemical process and a little information about what the given product can be used for in practice.
  + The following steps – showing containers and flask, giving the elements and the final information, are repeated in the other levels.
  + Our idea was to create a chemical puzzle that consists of three levels of difficulty. When they are passed there will be visualized information about the final products.
  + When all the levels are passed the program is closed and that’s how our game and learning are over.
* **Used technologies**
  + Microsoft Teams - the program that we used to communicate. We decided to use it because it was easy to use and gave us the best sound quality and connection.
  + Word - to create our documentation for the project. In it, we’ve described the process of making the project, every program that was used for the project, and every role in the team.
  + Excel - to create our QA documentation. In the QA documentation, our QA Engineer made a description of any test that he has made on the game. After that, he wrote down if the test passed.
  + C++ - the programming language in which the code for our game is written.
  + PowerPoint – to make our presentation. In the presentation, we introduce ourselves and everyone’s role, and the programs and technologies that we used for the project.
  + GitHub - the place where we share and store our code. It was easy to use for every member of the team.
  + Raylib - the library that we used for the creation of our game.
  + Clip Studio Paint – to create the design of the application and our logo.

1. Summary

* **Stages of realization**
  + The easiest way to show you our stages is with a scheme
  + The first and hardest thing we had to deal with is coming up with an idea. Then we had to choose who is doing what and start working. After every function was made and the issues were closed we had to do some tests and put things together to present the final product.
* **Future updates**
  + Future updates won’t be a problem for our project. There can be added more levels, and tasks which are going to teach the users a lot more information than now. Of course, for even bigger improvement we can make this kind of puzzle quiz with other subjects Biology for example.
* **Conclusion**
  + This project as the others before was an opportunity for us to work as a team, learn new things, and improve our skills.

1. Block scheme

Menu.cpp

elementsClass.cpp

levelOne.cpp

levelThree.cpp

levelTwo.cpp

levelFunctions.cpp