SX

SCHRODINGER’S PETS

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# TEAM

1.1 Iliyana Michevska – Scrum Trainer: I organized the team meetings according to when my teammates had the opportunity to work. I also gave advice and ideas for performing the tasks of the participants with other roles. I wrote the fuction that checks if a block is in bounds. Also the documentation and presentation are my job.

1.2 Dimitar Vasilev – Back-End Developer: I had a responsibility to create the function that rotate every block. I helped for the menu and other commitments.

1.3 Mario Zlatev – QA Engineer: I was responisble for every bug. I helped with the game logic. Also I did the QA documentation.

1.4 Georgi Zhekov – Back-End Developer: I wrote a part of main function and I improved the code via physics formulas.

# OUR AIM

We aim to develop a game that is interesting and attractive. The main theme is physics. In this case, we have chosen TETRIS because we think it is appropriate.

# STAGES OF DEVELOPMENT

3.1 Beginning***-*** After we formed our team and assigned the roles, we registered and the leader organized when our meetings would take place. Then we discussed our ideas. And then we were ready to start work.

3. 2 Planning- We started our work using Discord as communication platform. We discussed ideas, gave many different suggestions about how each of us sees the final product, came to consensus and started work. We allocated our tasks, each performing the tasks assigned to him on time, helping each other if necessary in the process of work.

3.3 Changes- When we decided to make adjustments to a file, we necessarily kept an account of the changes that were occurring in the game. In case of a problem, we would most often return a previous version of the code or find a way to make things work properly.

1. REALIZATION***-***

The code for our game is written in Visual Studio. We used a lot of fuctions, different data types variables and pointers. This helped to better arrange and read. Thanks to external sources, we used material which was crucial, the game would not have been nice without it.

For good communication between us, teammates, we preferred to use Discord over the other options.

# DESCRIPTION OF THE GAME

This is a scheme of our game. We have a menu from where you are able to choose Start, Settings and Help. In the second option you can change the colour of our Tetris. In Help, we described every button’s role.

***Diagram

Description automatically generated***

# 

# FUNCTIONS

bool colorSelection()

void gotoxy()- coordinates of x and y

void Logo()- ouput the “SCHRODINGER”S PETS” logo

void helpLogo()- output the “HELP” logo

void settingsLogo()- output the “SETTINGS” logo

void mainMenu()- call Logo()and output the options of the menu

void helpMenu()- discribe the buttons you should use to play our tetris game

void settingsColour()- choice of five colours you are able to play with

void settingsMenu()- call settingsColour () and start the game with the selected colour

void rotate()- rotate the block – 0, 90, 180, 270 degrees

void doesPieceFit()- do a collision check and if the block is at the lower limit stops its movement

void game()- create screen buffer, create a play field buffer and borders

void changeDifficultyIfNeeded()- control the speed of the blocks

void drawScore()- output the score

void drawPiece()- create a piece

void drawField()- create limits of block’s movement

void increaseScoreIfNeeded()- if we make a line, our score increases

void checkCompletedLines()- if we make a line, it disappears

void generatePieces()- convert the piece to string

int main()- call main() which contains the concept of Tetris

# 7.CONCLUSION

In conclusion, we can say that we were able to meet our requirements for the project activity. We used the knowledge that we have learned during the hours, but also new ones, because throughout the project activity we learned new and new things. With the help of both Bulgarian and foreign sources, we gathered the necessary information to realize our goal.