MineZweeper

Markéta Sauerová

Revisions

Creation date: 16. 12. 2018
Document version: 01
Last updated: 16. 12. 2018

Notes:
19.2.2019 - Markéta Sauerová: Document modified
16.12.2018 – Markéta Sauerová: Document created

Product Goal

MineZweeper will be a modified implementation of the classical game MineSweeper in Pascal, which is a single-player puzzle video game, using Wingraph unit for better graphical appearance. Due to its simple rules it will be suitable for players of all ages.

Functional description

The first thing a user will encounter would be a game's main menu leading to several other scenarios such as instructions, game difficulty selection (changing the amount of mines and size of the grid), highscores and of course game start.
The main game will have an appearance as is described in user interface part.
At the successful end of the game would be user's highscore saved with the nickname given and accessible from main menu.

User interface

The game will start in graphical window. There will be a menu as is described in functional description.
The user interface during the game itself will be a specified square grid on which can be seen the mouse cursor and the user will be able to move above individual squares only with mouse movements. As well as clicking on the left mouse button will reveal an empty square, clicking on the right mouse button will flag an empty square.
Mines will be distributed randomly (with specified quantity) over the grip and it depends on the users discretion and usage of hints from the numbers displayed near mines for flaging all the empty squares with mines underneath.
The whole grid will be framed with a bolder line and above it there will be placed two counters, one for the quantity of mines, which will be decreasing with every used flag and the other for the increasing time, counted in seconds. Between them will be two buttons with

images for going to the menu or restarting the game – this one will also serve as indicator of winning or losing the game.

After the user came across the mine, the game freezes and all the other mines will be displayed. In the case of winning, the game will also freeze, but user will be able to write his nickname, which will be saved with score accessible from main menu.

Functional requirements

- The accuracy of clicking on the specific square should be high, avoiding any unwanted squares to be marked.
- When the mouse button is pressed the delay should be shortest possible.
- The counting of the time must start exactly when the user presses any mouse button.
- Reduce flickering to the minimum possible.

Data inputs

My game will work mostly with mouse inputs like right or left button pressed, released and mouse cursor position. There will be also a part where will the program read data (Highscores) from a file and display on the screen.

Deadline

Project deadline: 31. 3. 2019