

INTRODUÇÃO À ARQUITETURA DE COMPUTADORES

LEIC

IST-TAGUSPARK

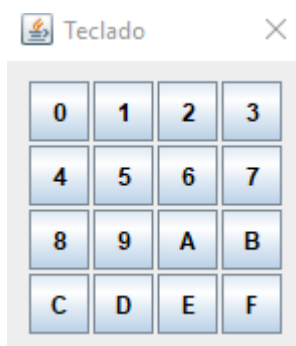
RELATÓRIO DO PROJETO

GRUPO 37

93745 – Pavle Arandjelovic

95481 – German Voronin

1. User Manual



0 - Move ship North-West

1 - Move ship North

2 - Move ship North-East

3 - Emergency energy

4 - Move ship West

5 - Toggle Shield

6 - Move ship East

7 - NO EFFECT

8 - Move ship South-West

9 - Move ship South

A - Move ship South-East

B - NO EFFECT

C - Start game

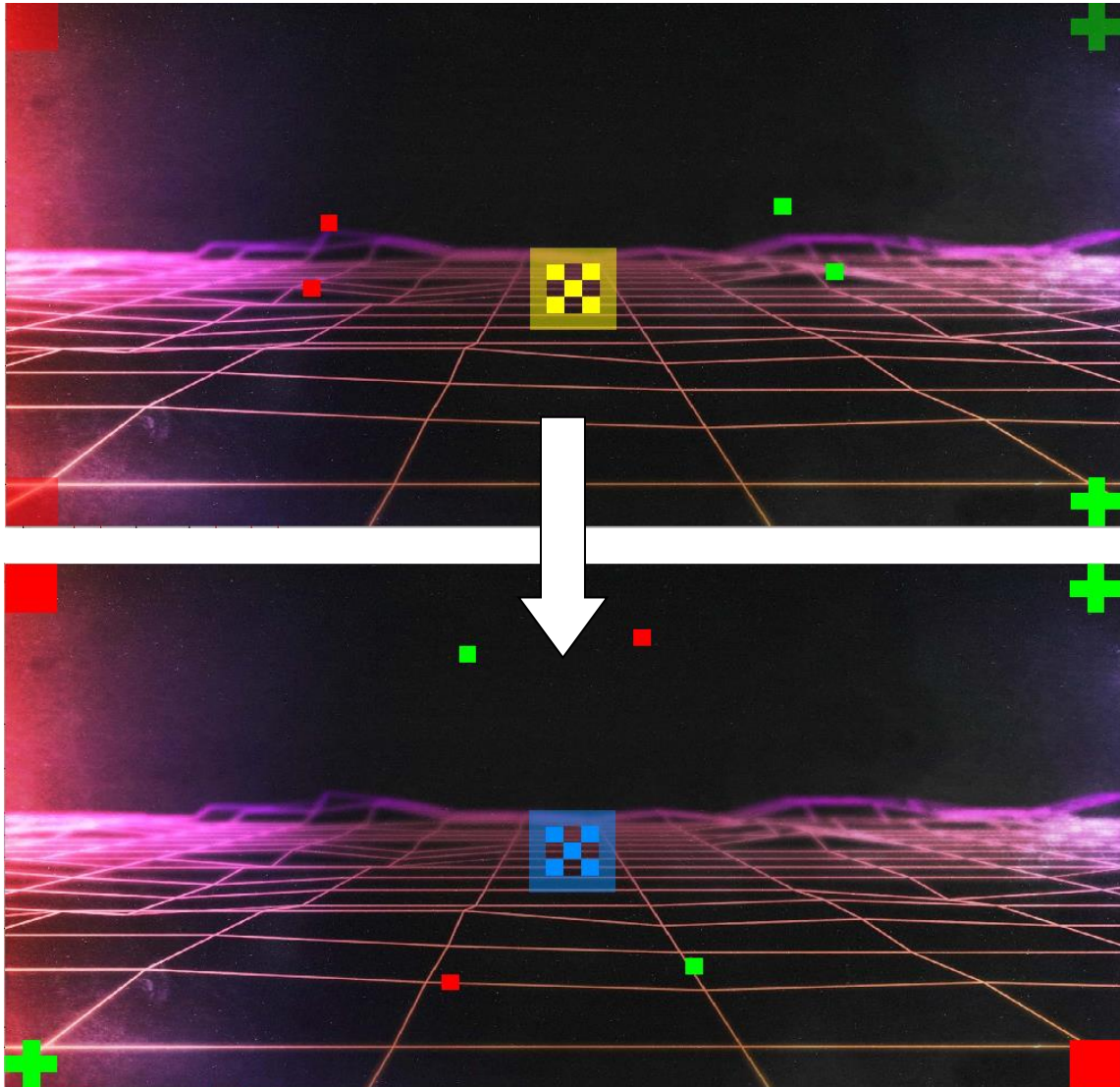
D - Pause game

E - End game

F - NO EFFECT

2. Conclusions

All required functions of the project description were fulfilled. We decided to utilize an extra button for “Emergency Energy”; emergency energy may only be used once per game. Once used, this button replenishes 50 of the ship’s energy, (to be used in an emergency situation) changes the ship’s shield and ship’s colour to a colder colour (to show that the emergency energy is not available anymore) and may not be used again until a new game commences.



To alter the state of many variables (such as pause state, shield state etc) we used many XOR operations in our code as to reduce the amount of operations required to carry out state toggles and increase code speed.

To improve our code, we could have implemented a score system in which we count how many good rays have been absorbed by the ship, once the game ends, we could display a final score screen showing the player skill level (good/bad/pro) by having certain score intervals. We could have also implemented an animation for when the ship catches good/bad rays and when the player uses the emergency energy available.