

Fakulta elektrotechniky a informatiky

Problem Set 6: Curses

“Cyberpong 2077”

Znienie zadania

Pomocou knižnice *ncurses* vytvorte ľubovoľný program (hru, prezentáciu alebo iný umelecký počín), pričom výsledný projekt musí spĺňať nasledujúce podmienky:

- Projekt musí obsahovať 2D svet.
- Dohromady musí projekt zahŕňať aspoň 3 z nasledujúcich výziev:
 - Práca s farbami
 - Ovládanie cez klávesnicu (bez nutnosti potvrdenia Entrom) ○
Viac úrovní (levelov)
 - Práca s časomierou resp. práca v čase (s časom sa program mení) ○
Práca s argumentami príkazového riadku ○
Práca so súbormi
- Projekt musí byť zložitejší ako ukážkové príklady a jeho úroveň musí byť dostatočná.

How the game works

Functions:

void tip_generator() – this function creates a generator of random words that are collected into a single sentence. In the game itself, it generates a random phrase to describe the events that happened the last game. It's more of a silly thing, than an actual part of a gameplay. It adds somewhat of a fun part to the game, so it won't be so dull. **void loading()** – this function displays the fake loading screen. This is used as immersion to the Cyberpong 2077.



Picture 1

void logo_appear() – this function, through the work with files in C, displays the .txt document with ASCII-generated symbols that represent the logo of Cyberpong 2077 and additional loading, which is as fake as previously mentioned function.



Picture 2

void end() – this function, however, is not very different from the previous one, it is the game end. By pressing “L” it will stop the game and display the .txt file which says that “Simulation is over. Returning to the cyberspace now.”. Since I made this game go on forever, I also decided to make a proper exit for it.



Picture 3

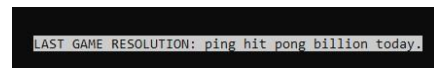
void main_scene(FILE* fp) – this function is used for the menu, instructions to appear after the logo gets off the sight. It also displays the random text generator, choosing the difficulty and the slogan of the game.



Picture 4

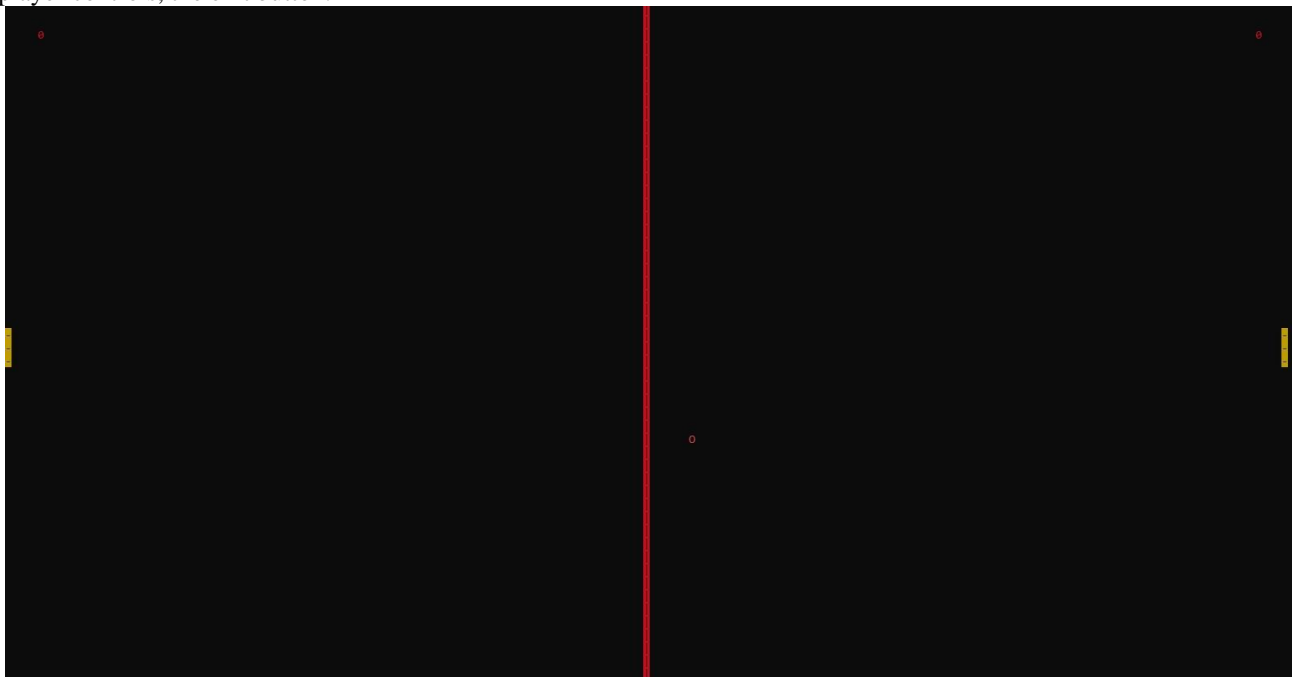


Picture 5



Picture 6

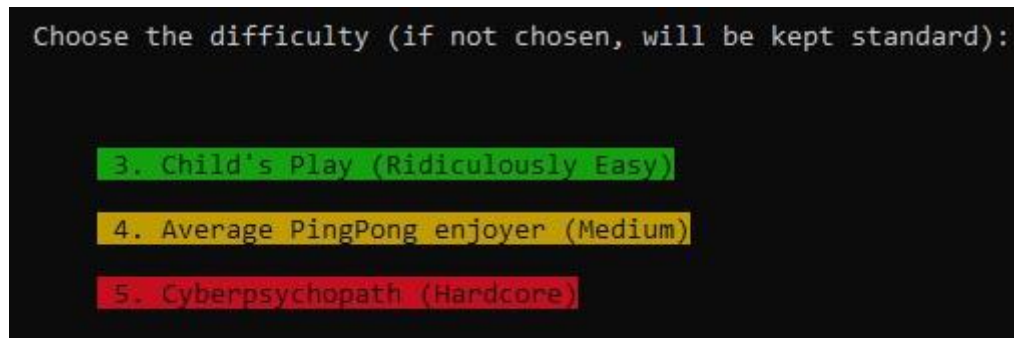
void begin_game(FILE* fp) – this function is the game itself with the field being drawn, the platforms of the players, the ball's physics here are written, the screen score of the players, colorizing the visual line on the center of the field, player controls, the exit button.



Picture 7

Gameplay Mechanics

The game starts with two loading screens, both of which are merely made pure for creativity purposes and there's nothing actually loading in. After that, the main menu appears with the random phrase generator, the difficulty chooser, the ability to start the game right off the bat or to peer into the manual to see how the game works and what controls should you use. After entering the game, the game begins and you use either arrows to control the player1 or W and S to control the player2. After you've had enough of the game, you can press "L" to leave the game, ending the simulation. The pingpong game with a few of visual tweaks, which wouldn't make it so dull and standard. It is a 2-player game with the ability to choose the difficulty of the gameplay. The difficulty changes the speed of the ball.



Picture 8

Child's Play is the level where you can play with your younger siblings or either those who are newly introduced to the pingpong game, the speed of the ball is relatively slow, that so you can adapt to the controls and mechanics yourself.

Average PingPong enjoyer is the level where the things get slightly harder than the standard gameplay, the ball goes faster, it is harder not to lose for both for you and your opponent, being quick and efficient, thinking through the physics of the ball would make you a winner. This requires practice at the standard level.

Cyberpsychopath is for those who desire a real challenge, the ball goes at extreme speeds, it is hard to catch up, it's either you try to land your platform on this ball (which I consider to be a bullet more than a ball) not to favor points in your opponent's side. It is either the power of the random or the power of those who has keen reflexes.

The speed is determined by **int timer**. The closer it is to zero, the ball's speed is faster.

The ball itself is described as "O", the platforms are "-", the line that separates the field is "|".

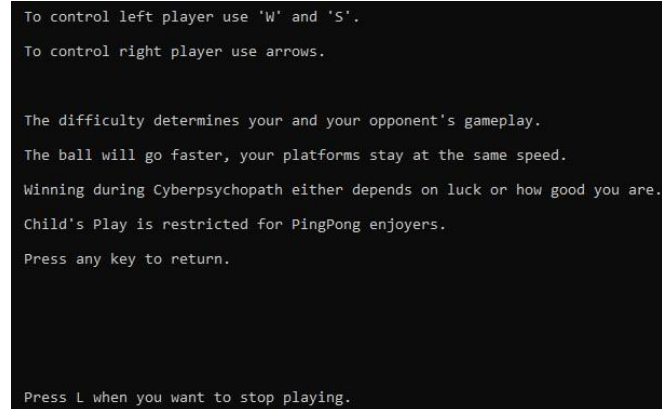


Picture 9



Picture 10

The difficulties are explained in the Simulation Manual (by pressing 2):



```
To control left player use 'W' and 'S'.  
To control right player use arrows.  
  
The difficulty determines your and your opponent's gameplay.  
The ball will go faster, your platforms stay at the same speed.  
Winning during Cyberpsychopath either depends on luck or how good you are.  
Child's Play is restricted for PingPong enjoyers.  
Press any key to return.  
  
Press L when you want to stop playing.
```

Picture 11

Finalization

However, it was important not to make a replica of the ping pong game and to create its own, a good implementation of that game, despite the fact that this game, which is made for two people could have a difficulty, which makes this game more competitive should bring more entertainment to the players. Memorizing the two numbers in scores shouldn't be a problem and "L" button is easily accessible by both players to finish the game. This documentation should provide its reader enough information, being the advanced version of Simulation Manual, which describes each function as it is and what it does, how does it connect with the each part of the game.

What could be useful and what could be added (considering what is possible to do here): competing against the bot, ability to pick the colours for the platforms, the field and the line. Even though this is not difficult to make, but current settings that I have made, in my opinion, are the best for games in terminal.