University of Engineering and Technology, Lahore

Proposal of OS Lab
(Ping Pong)

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Introduction:

This project is an example game written in c language based upon the principles of operating system. It is not the world's best game, but it does give you an idea of what you can achieve from relatively simple C program implemented using threads.

]Functionalities of this game:

- ➢ It is a kind of table tennis game.
- ➢ It is 2D table tennis game and you watching the game from upper side.
- ➢ Two players can play this game and both players will have pads in place of their racket.
- ➢ Ball will remain inside the table. Whenever the the ball touches the table's border the ball will bounce back in the direction defined in the code.
- ➢ If any player wouldn't be able to hit the ball and the ball touches the boundary of the table score of other player will increase by one.

Methods in this game:

- **Initiliaze()**

   This function will initialize the variables of game. X and Y coordinates of table will be initialized in this function.

- **Structure()**

   This function will draw the structure of the game such as table, ball and pads to play with.

- **Pad movement()**

   This function will control the movement of pad in y co-ordinates. Pad movement will be controlled using a **thread.**

- **Ball movement()**

   This function will control the movement of ball in x, y co-ordinates given by the coder. Ball movement will be controlled using a **thread.**

- **Pad logic()**

   This function will apply the logic on movement of pad i.e. it will should go out of table. If it happens then it would be a logical error in our game.

- **Ball logic()**

     This function will apply the logic on movement of ball i.e. it will stop the ball to go outside the boundaries of table. If this happens then it would be a logical in our game.

- **Logic()**

     All above discussed functions will be used in this function such as:

     Pad_movement()

     Ball_movement()

     Pad_logic()

     Ball_logic()

     Score of player will be calculated using **fork()** statement

Note:

We will use GCC Compiler for the code of this game and normal compiler of the Ubuntu software and built-in libraries of the GCC Compiler and different functions.