

#### About the Game

When was the last time we played those Arcade Games? To relive those moments and bring back the nostalgia, we present you with a crossover episode of two of the most famous games!

This is a hybrid multi-player of Super Mario Bros. and Pac-Man, where Mario and Luigi compete against each other to collect coins and dodge Goombas.

# Graphics All four enemies in the

All four enemies in the game, beware of them

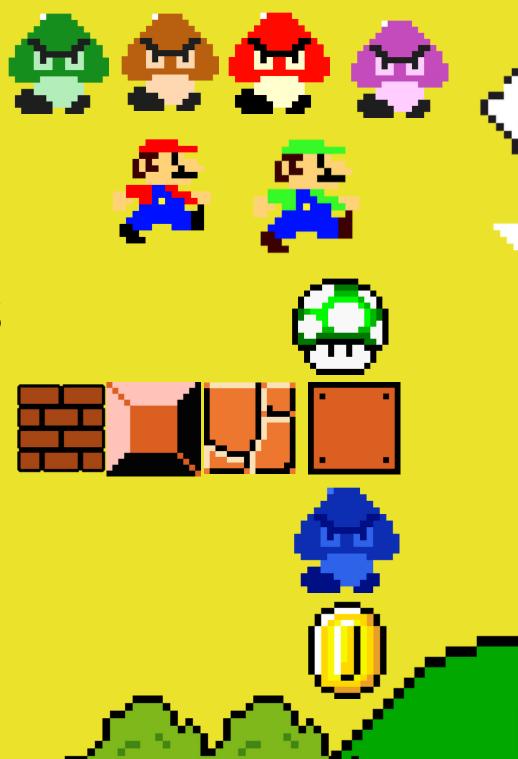
Player1 (Mario) & Player 2 (Luigi) respectively

Eat mushroom to kill enemies and earn points

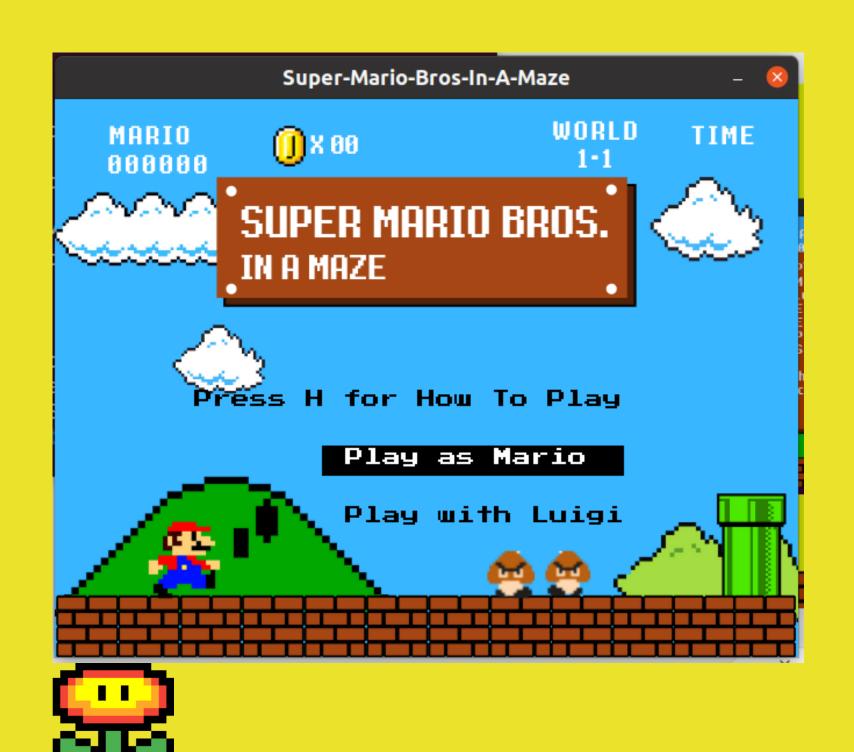
Different maze walls for different levels

Enemeis appear blue when they are killed

Collect all coins to move to complete the level



#### Main Menu

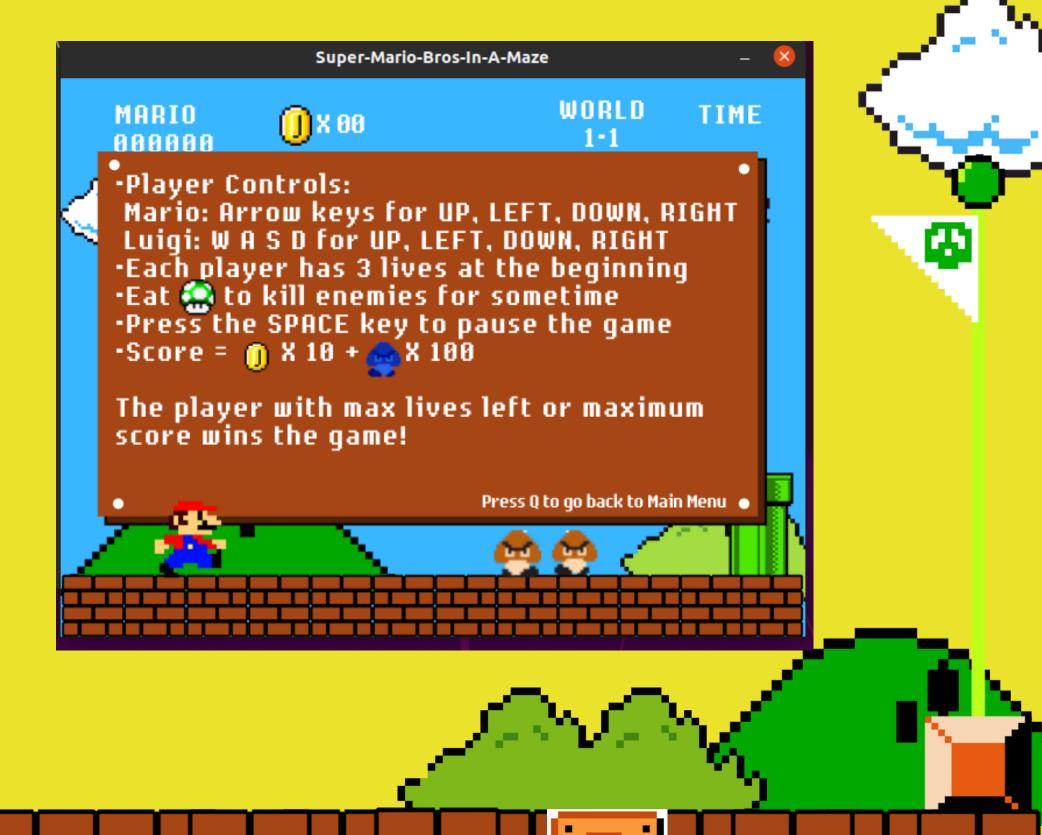


This is how our Main Menu looks like, when we run the binary executable file "mario-bros", it has three options: Game rules, Single Player Mode, and Multiplayer Mode.

#### Instructions

Pressing H prompts
the instruction
window, which briefs
out about rules,
player controls, and
win conditions.

Pressing Q will take us back to Main Menu.



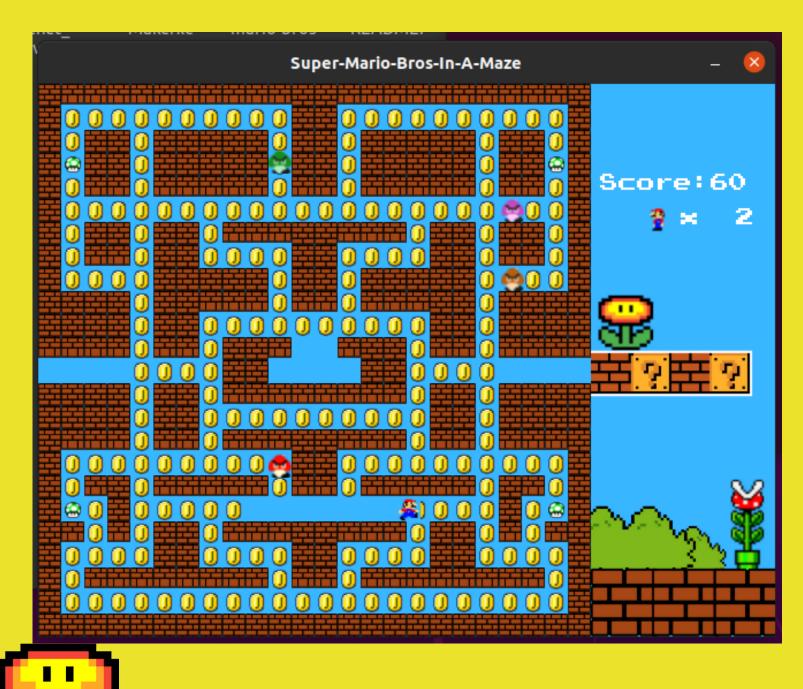
## Features of the Game

- There is a tunnel in the middle that connects the right end and left end, which can only be accessed by Mario and Luigi, and not by Goombas.
- There is special food "Mushroom", which when consumed
   by any player makes it immune to the Goombas.
  - When a Goomba is killed by an immunized Player, it backtracks its path back to its home, and can't come out until the game is in Immunity Mode.

## Features of the Game • Pressing the Space Bar will pause the game

- In Multiplayer Game, the game for both the player is completely synchronized in every aspect.
- Each level of the game has different graphics, to keep the
   game interesting.
  - Audio effects are added for each action.
  - Graphics and sounds are used to depict the iconic pixel Mario Bros.

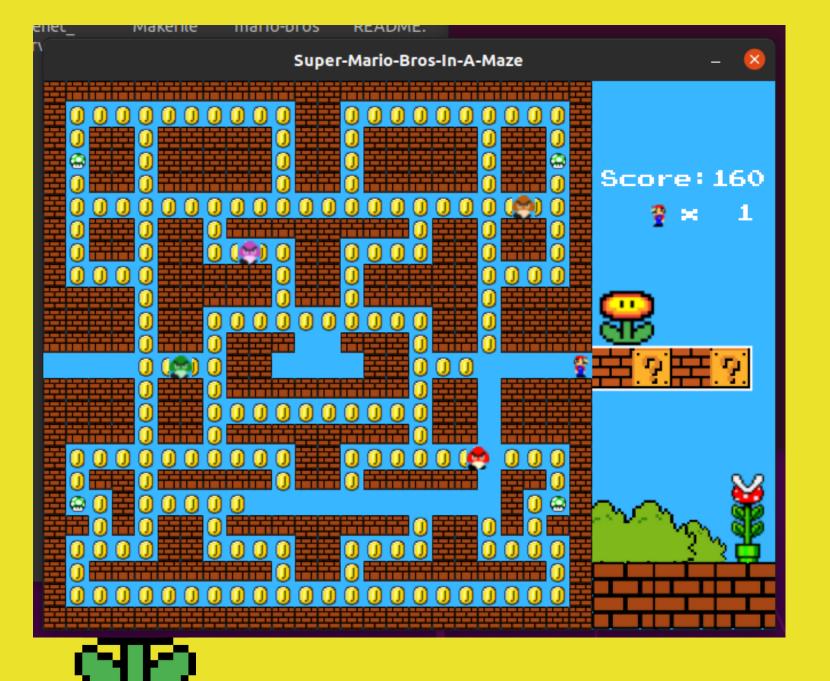
## Single Player



The score and Remaining lives of both the players can be seen in the left panel of the game.

Tunnel

The snapshots taken below depict the working of the tunnel.



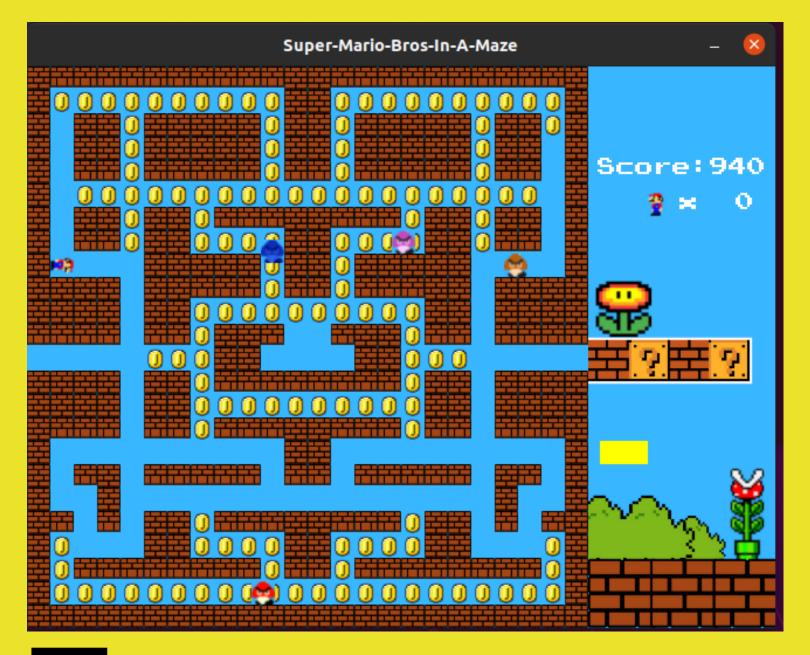


#### Paused Game

This shows when the game is paused using the Space Bar.

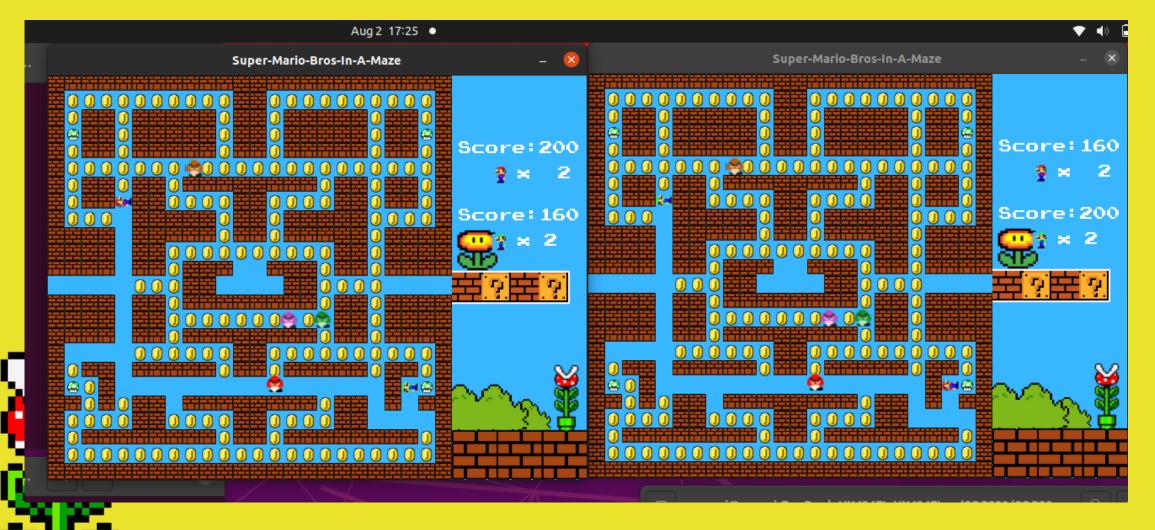


Immunity Mode



The attached screenshot shows the killed enemy in blue, backtracking to its house. The length of the yellow bar below the score tells us the remaining time of Immunity Mode.

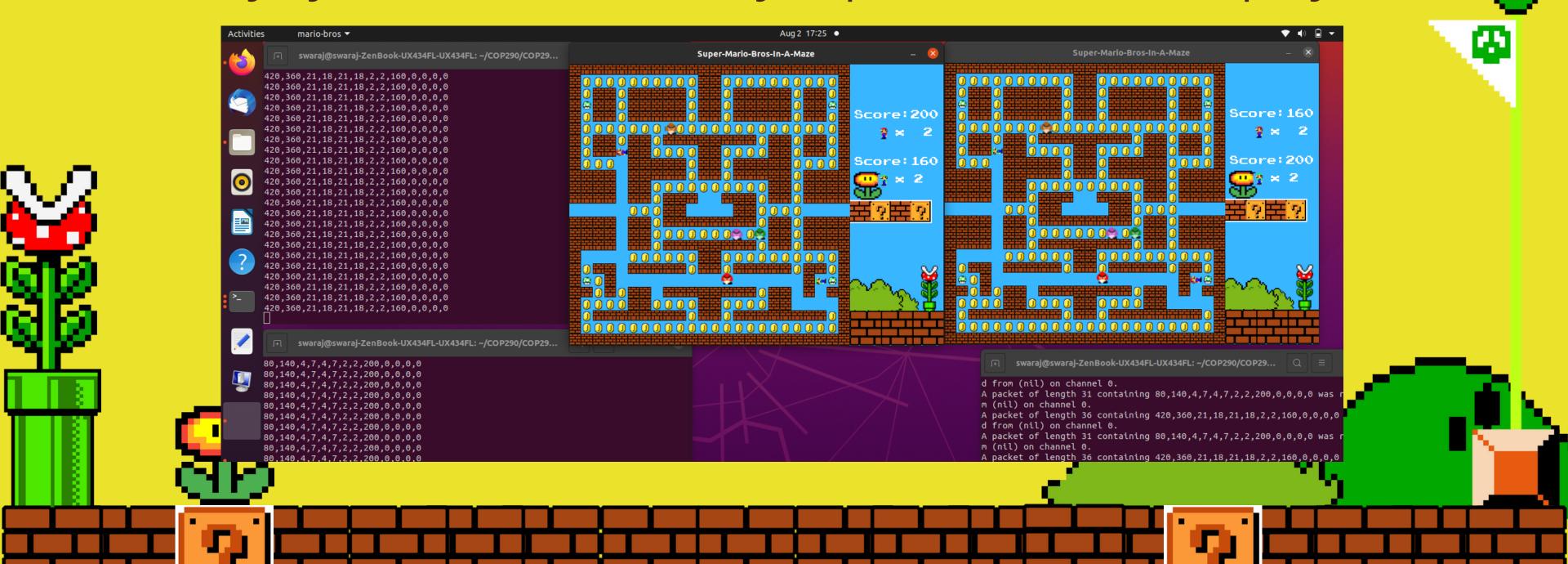
## Multiplayer



The score and Remaining lives of the both the players can be seen in the left panel of the game.

### Networking

Networking is done using UDP Sockets. It makes the game is smoothly synchronized in every aspect for both the players.



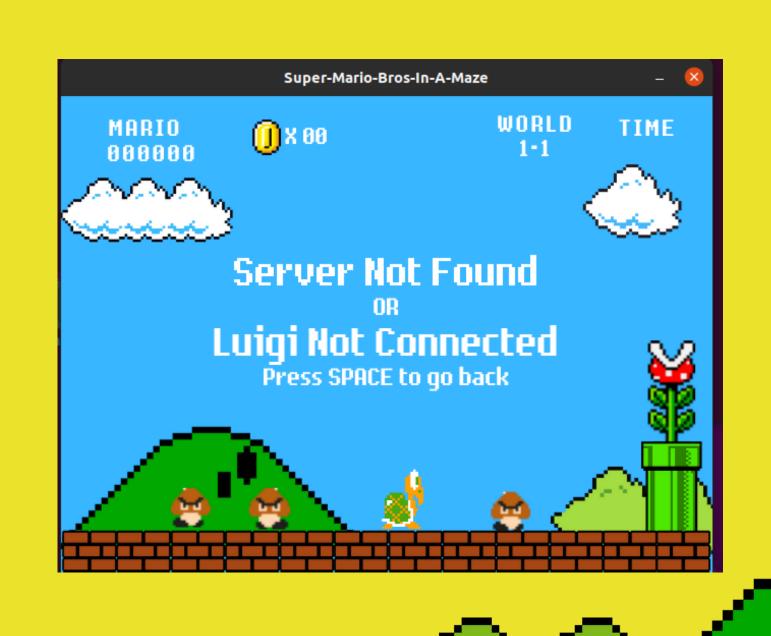
Connectivity

The game will start automatically as soon as both the players join the server.



#### Connection Not Found

In the Multiplayer setting, if the second player has not joined the server or left because of some technical issue, it prompts the message displayed.



#### Game Over

In Single Player, the game gets over as soon as all 3 lives of Mario are exhausted, whereas, in the Multiplayer setting, the game is over when either of the two players exhausts their lives.

The winning player's name & score along with a customized background. After each game is over, in Single Player Mode or Multiplayer Mode, press the Space bar to head back to the Main Menu.

#### Game Over WORLD 1-1 WORLD MARIO 000000 MARIO 000000 TIME TIME ① X 00 ① X 00 lost slide win slide