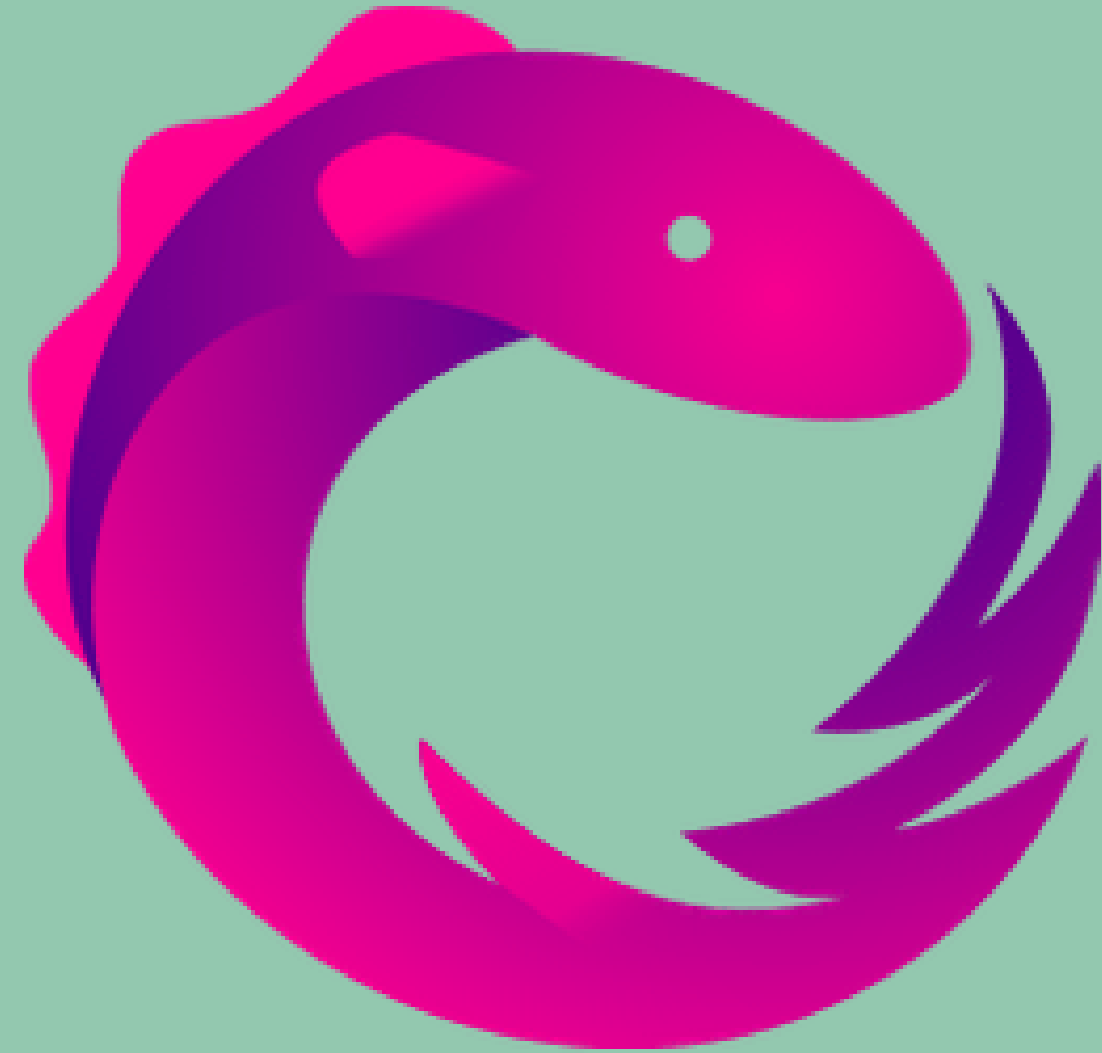


Programacion Reactiva

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Grupo 4



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Basado en el
Juego

Achtung, die Kurve!

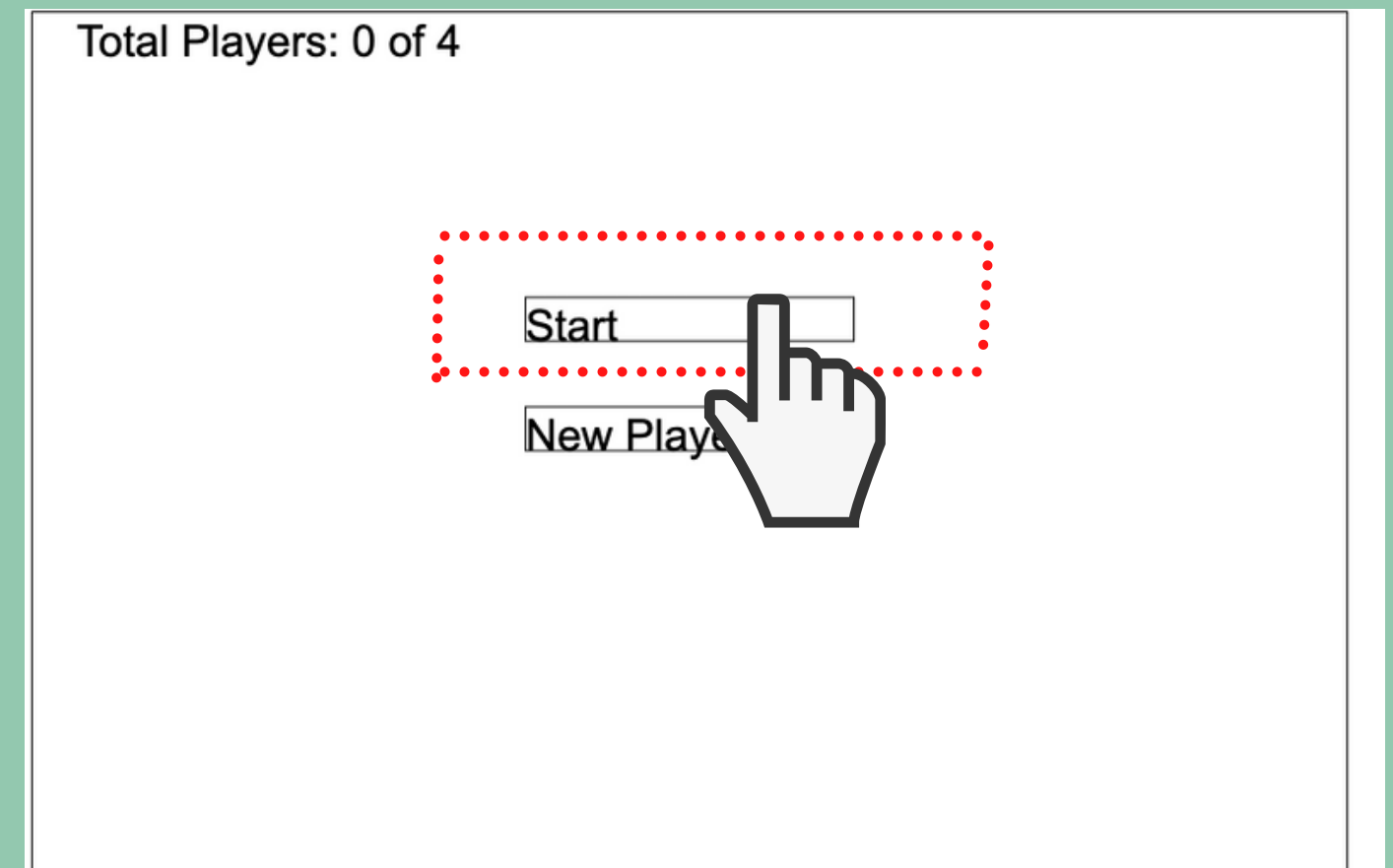


Funcionamiento General y Reglas

Menu Inicio

Observables ocupados:

- fromEvent
- filter

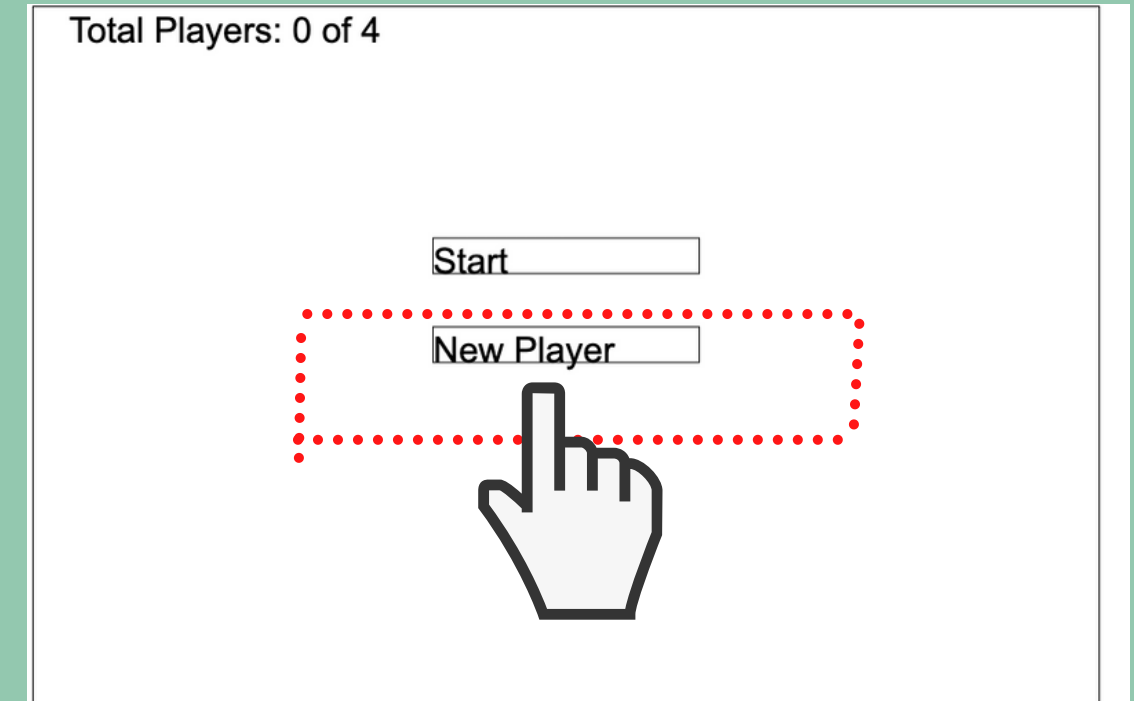


```
// Start Button
var startbutton = Rx.Observable.fromEvent(document, 'click');
startbutton
.filter(click => (players.length !== 0) && inMenu && click.x > 347 && click.x < 573 && click.y < 237 && click.y
.subscribe(() => {
    snakeboard_ctx.clearRect(0,0,width,height);
    startGame();
    inMenu = false;
});
```

Agregar jugador

Observables ocupados:

- fromEvent
- filter



```
// New Player
var newplayerbutton = Rx.Observable.fromEvent(document, 'click');
newplayerbutton
.filter(click => inMenu && click.x > 347 && click.x < 573 && click.y < 309 && click.y > 278)
.subscribe(() => {
  if(PLAYER_OPTIONS.length != 0){
    players.push(PLAYER_OPTIONS.pop());
    console.log(players)
  }
  snakeboard_ctx.clearRect(0,0,width,height);
  pixels = [];

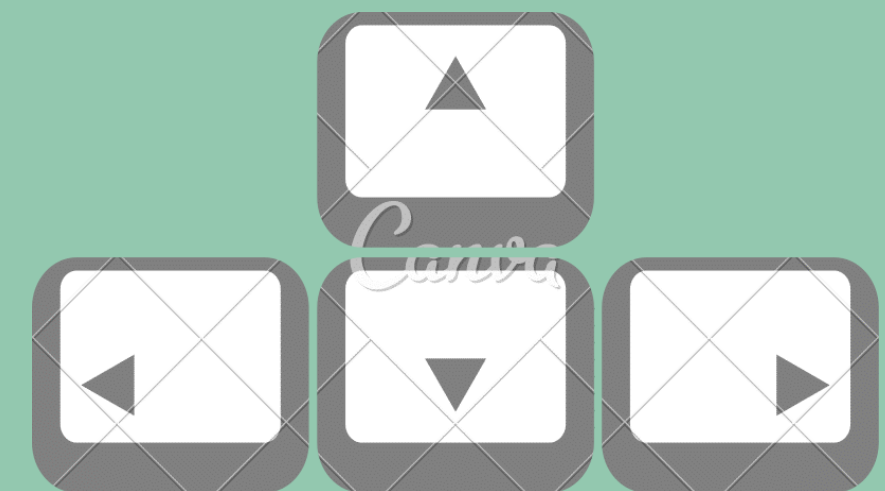
  drawMainMenu();
});
```

Dirección jugador

Observables ocupados:

- fromEvent

```
// Keys Events, Controls player movements, sets direction of snake
var keyDowns = Rx.Observable.fromEvent(document, 'keydown');
keyDowns.subscribe((e) => {
  // output.textContent = e.key;
  players.forEach((player)=>{
    if (player.controls.includes(e.key)) {
      if (player.controls[0] === e.key){ // Apreto tecla Izquierda
        if (player.direction === 'up'){
          player.direction = 'left'
        } else if (player.direction === 'left') {
          player.direction = 'down'
        } else if (player.direction === 'down') {
          player.direction = 'right'
        } else if (player.direction === 'right') {
          player.direction = 'up'
        }
      }
    }
  })
})
```



Movimiento

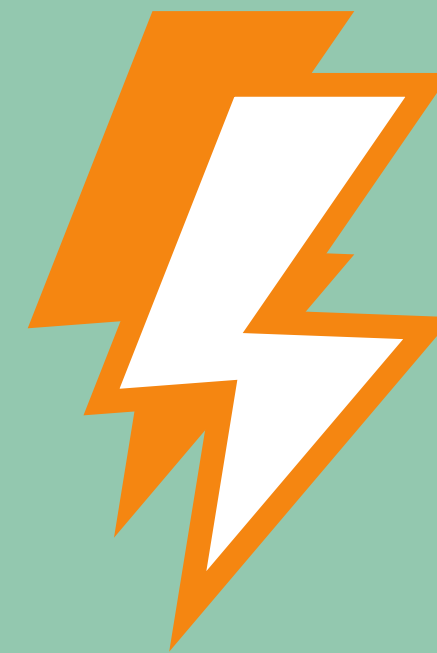
Observables ocupados:

- timer



```
// Snake Movement
players.forEach((player) => {
  const {timer} = Rx.Observable
  const source = timer(1, 100)
  const unsubs = source.subscribe({
    next(event) {
      if (player.direction === 'right') {
        player.location[0] = player.location[0] + 10 > width - 10 ? width - 10 : player.location[0] + 10
      } else if (player.direction === 'left'){
        player.location[0] = player.location[0] - 10 < 0 ? 0 : player.location[0] - 10
      }
    }
  })
})
```

Poderes



Observables ocupados:

- interval
- scan
- filter

```
// Powers
const {interval} = Rx.Observable
let superPowers = interval(9000);
let superPowers2 = superPowers.scan((acc, curr) => {acc + curr}, 0).filter(x => x % 2 !== 0);

const superUnsub = superPowers2.subscribe((e) => {

  let x_index = Math.floor(Math.random()* (width/10 + 1)) * 10
  let y_index = Math.floor(Math.random()* (height/10 + 1)) * 10
  while (pixels.some(obj => obj.x === x_index && obj.y === y_index && (obj.power === true || obj.power === false))) {
    x_index = Math.floor(Math.random()* (width/10 + 1)) * 10
    y_index = Math.floor(Math.random()* (height/10 + 1)) * 10
  }
  pixels.push({x: x_index, y: y_index, power: true})
  drawSnakePart({color: "purple", x: x_index, y: y_index})
});
```


Fin del programa



```
player.unsub.unsubscribe()
deaths +=1
if (deaths >= players.length - 1) {
  players.forEach((player)=>player.unsub.unsubscribe())
  inMenu = true
  pixels = []
  players = []
  PLAYER_OPTIONS = JSON.parse(JSON.stringify(copy))
  snakeboard_ctx.fillStyle = 'black'
  deaths = 0
  drawMainMenu()
  console.log(superUnsub.unsubscribe())
}
```

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