```cpp
#include "PlayerLeft.h"
#include "Window.h"
#include "ObservableCollisionDetection.h"
#include "Mixer.h"

PlayerLeft::PlayerLeft() : Player(false){
    appearance.x = 50;
    headLeft = false;
};

void PlayerLeft::checkInput() {
//CONDITION: If dead don't take anymore inputs
    if (healthbar->isEmpty() == true) {
        return;
    }

//CHECKING KEYBOARD INPUTS
    const Uint8* currentKeyStates = SDL_GetKeyboardState(NULL);

    //S Button Pressed
    if (currentKeyStates[SDL_SCANCODE_S]) {
        if (curr_state[1] != BLOCK) { //{current picture of state/ animation, current state}
            changeStateTo(BLOCK);
            blocking = true;
            Mixer::getInstance()->play(Mixer::BLOCK);
        }
        return;
    }
    else { blocking = false; }

    //D Button Pressed
    if (currentKeyStates[SDL_SCANCODE_D]) {
        headLeft = false;
        moveX(false, 4);
        if (curr_state[1] != WALK) {
            changeStateTo(WALK);
        }
    }

    //A Button Pressed
    if (currentKeyStates[SDL_SCANCODE_A]) {
        headLeft = true;
        moveX(false, 4);
        if (curr_state[1] != WALK) {
            changeStateTo(WALK);
        }
    }

    //W Button Pressed
    if (currentKeyStates[SDL_SCANCODE_W]) {
        if (curr_state[1] != JUMP) {
            Mixer::getInstance()->play(Mixer::JUMP);
```

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53              changeStateTo(JUMP);
54          }
55      }
56
57      //V Button Pressed
58      if (currentKeyStates[SDL_SCANCODE_V]) {
59          if (curr_state[1] != STAB) {
60              changeStateTo(STAB);
61              Mixer::getInstance()->play(Mixer::SWING);
62          }
63      }
64
65      //C Button Pressed
66      if (currentKeyStates[SDL_SCANCODE_C]) {
67          if (curr_state[1] != THROWBOTTLE) {
68              changeStateTo(THROWBOTTLE);
69              Mixer::getInstance()->play(Mixer::SWING);
70          }
71      }
72  };
73
74  void PlayerLeft::tick() {
75      //If dead don't do anything
76      if (healthbar->isEmpty() == true) {
77          changeStateTo(BLOCK);
78          blocking = true;
79      }
80
81      float increaseFactor = 15;
82      //JUMPING
83      //Increase height if jumped
84      if ((curr_state[1] == JUMP) && (heightAboveTheGround < 23)) {
85          float PI = 3.14159265;
86          heightAboveTheGround += 1;
87          float sinus = sin((float)heightAboveTheGround*(0.5*PI) / 23);
88          sinus = ((1 - sinus) * increaseFactor);
89          height_stack.push((int)sinus);
90          appearance.y -= (int)sinus;
91      }
92
93      //Decrease height after jump
94      if ((curr_state[1] != JUMP) && (heightAboveTheGround > 0)) {
95          heightAboveTheGround -= 1;
96          if (!height_stack.empty()) {
97              int tmp = height_stack.top();
98              height_stack.pop();
99              appearance.y += tmp;
100         }
101     }
102
103     //IF HURT
104     if (curr_state[1] == HURT) {
105         moveX(true, 15);
```

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106     }
107
108     //Ticking the Player
109     ++ticked;
110     if (ticked >= 5) {
111         //Ensuring that the sprite isn't changed after the first animation when blocking
112         if ((curr_state[1] == BLOCK) && (curr_state[0] == 7) && (blocking == true)) { ticked = 0; }
113         else {
114             ++curr_state[0];
115             //If the current_state is higher than there are sprites available -> IDLE
116             if (curr_state[0] >= max_sprites[curr_state[1]]) {
117                 curr_state[0] = 0;
118                 curr_state[1] = IDLE;
119             }
120             ticked = 0;
121         }
122     }
123 };
124
125 void PlayerLeft::restart() {
126     int window_size_h = Window::getInstance()->getWindowSizeH();
127     int window_size_w = Window::getInstance()->getWindowSizeW();
128
129     //Set size and position
130     appearance.x = 50;
131     appearance.y = window_size_h - (window_size_h / 4);
132     appearance.w = 128;
133     appearance.h = 128;
134
135     //set direction and other flags
136     headLeft = false;
137     blocking = false;
138     ticked = 0;
139
140     //Set state to start with
141     curr_state[0] = 0;
142     curr_state[1] = IDLE;
143
144     //Set Height
145     heightAboveTheGround = 0;
146     while (!height_stack.empty()) {
147         height_stack.pop();
148     }
149
150     //Refill Healthbar
151     healthbar->refill();
152 };
153
154 std::string PlayerLeft::getType() {
155     return "PLAYERLEFT";
```

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156 };
157
158 PlayerLeft::~PlayerLeft() {};
```