```
    1: // Copyright 2023 Thomas O'Connor
    2: #include "Sokoban.hpp"
    3:
    4: int main(int argc, char* argv[]) {
    5:     // Command line arguments
    6:     std::string inputFileName = argv[1];
    7:     // Open file and check for failure
    8:     std::ifstream myLevel;
    9:     myLevel.open(inputFileName);
   10:     if (!myLevel) exit(1);
   11:
   12:     // Create game and input values from file
   13:     Sokoban Game;
   14:     Game >> myLevel;
   15:
   16:     // Rednder the window using the appropriate game dimensions
   17:     sf::RenderWindow window
   18:     (sf::VideoMode(TILE_SIZE * Game.getWidth(),
   19:     TILE_SIZE * Game.getHeight()), "Sokoban");
   20:     window.setFramerateLimit(15);
   21:     // Create clock
   22:     sf::Clock clock;
   23:     // Load win condition variable
   24:     bool performWinConditionOnce = 1;
   25:
   26:     while (window.isOpen()) {
   27:         // Process events
   28:         sf::Event event;
   29:         while (window.pollEvent(event)) {
   30:             // Close window: exit
   31:             if (event.type == sf::Event::Closed) window.close();
   32:         }
   33:         // Clear screen
   34:         window.clear();
   35:
   36:         if (!Game.isWon()) {
   37:             // Get Keyboard input and impliment correct movement
   38:             if (Keyboard::isKeyPressed(Keyboard::W)) Game.movePlayer(UP);
   39:             if (Keyboard::isKeyPressed(Keyboard::A)) Game.movePlayer(LEFT
);
   40:             if (Keyboard::isKeyPressed(Keyboard::S)) Game.movePlayer(DOWN
);
   41:             if (Keyboard::isKeyPressed(Keyboard::D)) Game.movePlayer(RIGH
T);
   42:             if (Keyboard::isKeyPressed(Keyboard::Up)) Game.movePlayer(UP)
;
   43:             if (Keyboard::isKeyPressed(Keyboard::Left)) Game.movePlayer(L
EFT);
   44:             if (Keyboard::isKeyPressed(Keyboard::Down)) Game.movePlayer(D
OWN);
   45:             if (Keyboard::isKeyPressed(Keyboard::Right)) Game.movePlayer(
RIGHT);
   46:             // Draw the arena and clock
   47:             window.draw(Game);
   48:             Game.drawElapsingTime(window, clock);
   49:             // Display all elements
   50:             window.display();
   51:         } else if (performWinConditionOnce) {
   52:             // Draw the win state
   53:             sf::Time elapsed = clock.restart();
   54:             int minutes = elapsed.asSeconds() / 60;
   55:             int seconds = static_cast<int>(elapsed.asSeconds()) % 60;
   56:             std::string timeString = "     you win\nyour time: " + std::t
o_string(minutes) + ":" +
   57:             (seconds < 10 ? "0" : "") + std::to_string(seconds);
```

```
   58:
   59:             sf::Font font;
   60:             font.loadFromFile("sokoban/arial.ttf");
   61:             sf::Text timeText(timeString, font, 30);
   62:             timeText.setFillColor(sf::Color::White);
   63:             timeText.setPosition(sf::Vector2f(
   64:                 (Game.getWidth() * TILE_SIZE / 2) - 120,
   65:                 (Game.getHeight() * TILE_SIZE / 2) - 60));
   66:             window.draw(timeText);
   67:             window.display();
   68:             // Play win sound after screen display
   69:             Game.playSound();
   70:             performWinConditionOnce = 0;
   71:         }
   72:         // Special keyboard input for restarting game, undoing actions, a
nd closing window
   73:         if (Keyboard::isKeyPressed(Keyboard::R)) {
   74:             Game.restart(clock);
   75:             performWinConditionOnce = 1;
   76:         }
   77:         if (Keyboard::isKeyPressed(Keyboard::Z)) {
   78:             Game.undo();
   79:             performWinConditionOnce = 1;
   80:         }
   81:         if (Keyboard::isKeyPressed(Keyboard::X)) window.close();
   82:     }
   83:     return 0;
   84: }
```