Lawn Mower Simulator User Manual

Everyone, at some point in their lives, has had an irrepressible desire to mow a lawn. However, buying a mower and paying for oil and maintenance is a costly and annoying task. In creating Lawn Mower Simulator, we have solved this problem. In the game Lawn Mower Simulator, players will be able to control a virtual lawn mower to mow a vast expanse of untamed wilderness. In free play mode, the player may mow to their heart’s content on a 10 by 10 grid of pure lawn. We have also provided various levels for the user to mow. These levels contain obstacles like boulders, which cannot be traversed. If we have time, we also plan to add a map-builder feature, which allows the player to create and mow their own personalized lawn.

To use LMS, begin by running the program. This will open up a Menu with three buttons. Each button allows for a different game mode: free play, level select, and level creator. We will go over each of these game modes separately, but the overall gameplay is the same for all three.

Clicking the free play button opens up the default 10 by 10 level with only a mower and 99 patches of grass. Move the mower using the up, down, right, left arrows on the keyboard. Whenever the mower passes a square with grass in it, it will leave behind a pile of dirt. As this is free play mode, the user may traverse the lawn whenever he/she wants. Once all the patches of grass have been mowed, the user may still move the mower but nothing more will happen. At the bottom of the screen, the score and number of moves are displayed. Score increases by one each time grass is mowed and decreased by one each time the mower travels over a patch of dirt. The mower needs to be as fuel efficient as possible, so to maintain a high score, plan the mowing path carefully. The number of moves increases by one each time the mower makes a move. The game status in free play mode will always be “in progress” because there is no end in free play mode.

Level select mode allows the user to select a level by entering in an integer from 1 to 4. If the user enters anything else, an error message will pop up. In level select mode, the levels have a fixed ending position, denoted with a checkered flag. The goal of the game is to mow all patches of grass and end at the ending position in as few moves as possible. Once the mower arrives at the ending position with all patches of grass mowed, the game status changes to “over” and a rank is displayed. The user may then press the “next level” button to advance to the next level (does not apply to the final level, level 4).

Level creator mode opens up a pop-up window asking the user to input information about the lawn. The number of rows and the number of columns may not exceed 10, and any incongruencies will produce an error message. Incongruencies include: trying to put starting or ending position outside the dimensions of the map, trying to make starting and ending positions the same, putting a boulder in the starting/ending position. The user may enter the coordinates of up to three boulders. If the user decides to repeat coordinates, say enters boulder 1 coordinates as (1, 1) and enters boulder 2 coordinates as (1, 1) as well, only one boulder will appear. If the user enters nonintegral coordinates for a boulder, no error message will occur, but instead that boulder will not appear in the map (this is so that the user has the option of having less than three boulders on the map). Of course, any square that is not a start/end square and does not contain a boulder will have grass.