The game first appeared on Amiga and was later released on many other platforms. I chose to review the Amiga version, which was run using winUAE (an Amiga emulator) under Windows 98.

The object of the game is to lead a horde of tiny creatures, which would wander aimlessly to their certain doom without help, towards a designated exit through a landscape filled with all manner of fatal traps and hazards. It looks like a platform game, but instead of having direct control over a single character, the player's job is to shepherd a group of rodents to safety.

The lemmings appear in a succession of levels, each representing a self contained world. From their release point the lemmings will walk in a set direction into whatever stands in their way, march blindly into mortal peril - drowning in the sea, stepping into traps or plunging to their deaths off high ledges. To counter this the player has to coerce and re-direct the lemming population towards the safety of an exit.
The only device the gamer has to help him or her is that the lemming population can be given one (or more) of a set of skills (allowing them to block the progress of other lemmings temporarily, build bridges, or float harmlessly off a precipice, amongst others). The quantity and type of each skill vary from level to level and it is at the discretion of the gamer to decide which lemming gets which skill. The official names for the skills are climber, floater, bomber, blocker, builder, basher, miner and digger. Before the start of each level, a screen appears which outlines the task, including the time limit and the percentage of the population to be saved (which varies from level to level).

The game should belong to the puzzle genre as there are no enemies to beat and the players only need to plan the moves for lemmings to complete a level, which is just like solving a puzzle.

Although there is a two-player mode in Lemmings, the game is primarily designed for single player (in fact, the game only has single-player mode in other platforms such as PC). The two-player mode simply allows two players to control two groups of lemmings respectively and see who can save the most number of lemmings. It does not make the game much more entertaining as the multiplayer mode does in some other games.

The technology that Lemmings employed was not considered to be breakthroughs or particularly advanced when compared with other games released at the time. In fact, according to the DMA Design website, the graphics were deliberately made to be crude.

"... Lemmings began as an argument between two of the DMA programmers, Mike Dailly and Scott Johnson. Scott was convinced that the smallest you could make a sprite and still retain 'character' was 16 pixels high. Mike, on the other hand, was absolutely certain that it could be done with a sprite only 8 pixels high. In order to prove he was right Mike produced an animation of tiny creatures meeting their doom in bizarre ways...."

The game is two-dimensional and the animated lemmings are done by sprites, which are fairly typical of the games released in the early 1990s. The graphics are generally neat

1 See DMA Design Ltd. website at http://www.dma.co.uk/
and effective. Though small, the Lemming sprites are well animated and drawn, making it clear most of the time what action any particular lemming is undertaking. The sounds are also used effectively, the famous 'oh! No!' cries by the lemmings when they are about to be exploded is disheartening (or entertaining depending on how you look at it).

The majority of the screen shows the immediate surroundings of the lemming release hatch at the beginning of every level. Since most worlds are more than one screen wide, scrolling right or left reveals the rest of the landscape. A Defender style overview of the world, in the bottom right hand corner, shows where the viewing screen currently is. The remainder of the screen shows icons used to assign skills to lemmings and the current status of the game.

The game uses mouse as the main control. All tasks can be achieved by using mouse alone. Designating lemmings with jobs are also simple via mouse clicks. To scroll the screen left or right, one simply has to move the mouse cursor to the edges of the screen. The only problem that might occur is it would be difficult to pinpoint a lemming when the player gets a large number of lemmings caught in a small space. However, ending up in situation like this is usually the player's fault.
The interface is intuitive and controls easy to pickup. The game was designed so the first few levels act as tutorials to allow users become familiar with the controls and the capabilities of the lemmings, while not making users feeling frustrated or bored. It seems to achieve what Chris Crawford calls the 'Smooth Learning Curves'. The more difficult levels become easier to complete as the players become more familiar with the gameplay. Of course, skills only play a part in completing the levels. One might need some inspiration to complete the harder levels as is the case for most puzzle games.

What makes this game original is that you have to guide the lemmings in the framework of a simple, yet addictive, combinations of strategy and dexterity that the gaming world has rarely seen. Players' strategic skills are needed in deciding exactly when a lemming should get a skill and in doing it in the right order; dexterity is needed to execute the strategies within the time limit specified. This is the crux of the game and it takes the combination of lateral thinking, patience and a willingness to try things out in order to complete this game.

The first impression of playing Lemmings is usually of how simple is the game design. But after playing the game for a while, it becomes clear that the game can become quite complicated. The latter levels in the game require meticulously planning ahead with flawless execution as the game progresses. A password is given after the completion of each level, so the players do not have to repeat the same levels.

In a way, the game is about the best allocation of resources (the jobs that can be designated to lemmings) to achieve the best result. For example, the player, with careful planning, might be able to save a higher percentage of lemmings if he or she assigns a different combination of skills to the lemmings.

Chris Crawford mentioned that an important factor of the 'illusion of winsability' is that the player believes failures to be attributable to correctable errors on his or her own part.

2 "The Art of Computer Game Design" by Chris Crawford, 1982
3 Chapter 6 of “The Art of Computer Game Design” by Chris Crawford,
This complements the ideas of regrets and alternative worlds proposed by Loftus\(^4\). The ideas are implemented to great effects in Lemmings. The players direct the actions of the lemmings and some may die unnecessarily as the result of less-than-perfect planning or bad execution of the strategies by the players. The resulting regret and the belief that the player can do it right the next time keep him or her playing the same level over and over again until the level is passed.

Loftus also mentioned the concept of reinforcement. The game is also successful in this respect - it provides players with instant feedback of how good their plans are, and the satisfaction of seeing the lemmings executing the moves that the player planned is very rewarding.

Lemmings suffers from the same problems as many other puzzle genre games. The biggest drawback is its re-playability. Once the game is completed there doesn't seem to be any incentive to play the game again. This is one of the reasons that many sequels were released to introduce new levels to the players to leverage the game play that is so addictive.

The problem of re-playability was partially ameliorated by the introduction of level editor, albeit not by DMA Design itself. The level editor allows players to design levels and challenge other players to solve them.

Sometimes, the most addictive games are the simplest. For all the pretty Quake-clones and adventures with digitized voices and animation that try to seduce players, it is often games like Minesweeper that retain the attention, despite having only simple graphics and no life-like gory deaths. Lemmings is just one of those games. Although the game had no breakthroughs in terms of technology such as graphics or sounds, it sold hundreds of thousands of copies and has frequently been included in the top computer games lists.\(^5\)

\(^4\) “Why Video Games Are Fun” by Geoffrey R. Loftus and Elizabeth F. Loftus.
Many games were inspired by the game design of Lemmings. Its influence can be seen in games like Worms. Lemmings itself remains a classic, addictive game even after a decade. There were many follow-ups to the original Lemmings, such as Oh No! More Lemmings, Holiday Lemmings, Lemmings 2: The Tribes, The Lemmings Chronicles, Lemmings 3D and Lemmings Revolution. The graphics and sounds have become better over time but the game play and the interface still remained very similar. In fact, the latest incarnation of the Lemmings series, Lemmings Revolution, still uses a three-dimensional interface that resembles the old two-dimensional interface. The relatively little changes in the game play and interface has shown that they have stood the test of time.