

Mummy Maze Plus

[Group 9]

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The Mummy Maze Plus game will be hosted on a local web server as a Java web applet. To begin the game, the player will open a local web address to access the Mummy Maze Plus game applet. Upon opening the game, a welcome screen is displayed and the player is prompted to press any key to continue. A menu will then appear showing three options to choose from : 1. "Select Level" (Level-1, Level-2, Level-3, Level-4 or Level-5), 2. "High Scores" for viewing players scores, and 3. "Quit Game" for quitting the game.

On choosing the "Select Level" option, the player will be able to choose among five different levels of varying difficulties (higher level meaning more difficult). The player will be able to select a level via keyboard input (in example, player selects level one by pressing the number key "1"); the floor maps will then be loaded according to the level selected. The level will load from a top view perspective. Each level contains different number of floors based on the level of difficulty (in example, Level-1 will contain 2 floors, Level-2 will contain 3 floors and so on). The grid size of the loaded maps will be 20x20 blocks. All floors will contain obstacles (such as water, pitfalls, etc), walls, ladders (to go above floor), fire-poles (to go lower floor) and an exit (finishing point). However, the ground floor will not have any fire-pole and the top most floor will not have any ladders. All five levels will be fully designed with different map layouts and will have multiple floors each with their own tricks and traps.

The human character (player) can move up, down, left or right one step at a time, by using the keyboard. The default keyboard inputs used to move the character will be "Up Arrow" for up, "Left Arrow" for left, "Down Arrow" for down and "Right Arrow" for right. The player can pause the game by pressing "P" and resume the game by pressing "R" from keyboard. At any instant of playing the game, the player can press the "Escape key" and choose the option to exit to main menu by pressing "M" or quit the whole game by pressing "Q".

The player will be able to navigate between different floors (using ladders and fire-poles), cannot move beyond the walls of each floor, cannot move past pools of water and cannot go beyond the boundaries of that floor. The mummy itself cannot move beyond the walls of each level and cannot go beyond the boundaries of the level. The mummy can, however, can use its supernatural mummy powers to walk across water.

The goal of the game will be to guide the player to the exit from their starting position. The three dimensional thinking portion of the game will come from the players ability to navigate between various floors, using the fire-poles and ladders, of the level to find the exit. The exit can be found on any floor of that level. The player will be given 3 lives at the beginning of each level. Everytime the mummy catches the player, the player will lose a life and the player's position will be reset back to the beginning. When the player runs out of lives, the game gets over for the user.

Depending on the difficulty of the level, the number of ways to reach exit may vary. After the game gets over, the score of the player for the current instance of the game will be displayed and the player will be prompted to enter his/her name to save his score for that instance of game. The player can then choose the option to exit to main menu by pressing “M” or quit the whole game by pressing “Q”.

The player will move to the next subsequent level automatically after he/she clears a particular level. When a player wins the final level (here, Level-5), a final screen will be displayed informing the player that he/she has obtained the mastery of the game which is the highest attainable honor in Mummy Maze Plus game.

At all times, the player will be able to see a small display showing the attributes of that instance of game like level number, floor number, timer and remaining life count. This display will come alongside the map throughout the duration of the game.

The player will be able to view the high scores of all the players by choosing the “High Scores” option from the main menu. High scores will be the sum total of weighted scores a player secures at each level. Weighted scores will be calculated based on the amount of time the player takes to complete a particular level, the level difficulty and how often the player gets hit by the mummy in that level. High scores will be displayed in a tabulated format displaying the players name in one column and his total score in the other.

In this release of the game, we will focus on implementing a mummy AI capable of traversing through the maze with an objective to catch the player. We also plan to make the AI's movement patterns will be predictable in relation to the player's move. One advantage the player will have over the mummy is that the player can see the whole maze layout, but the mummy is “blindly” traversing through the maze and remembering its visited locations. This way, the player can analyze his/her next move and the mummy's counter move. Making the mummy more predictable will also help us to see if the game is beatable or not, by testing the game move by move.

During gameplay, there will be background music and in addition, the game will contain additional sound effects for critical events. The user will also get an option to stop the background music and sound effects.

The game is developed in the Java language allowing it to be compatible with multiple platforms. Mummy Maze Plus will be implemented as a Java Applet and will run on any web browser with Java installed on it. The browser will provide the java runtime environment to run the game and the user will be able to play the Mummy Maze Plus game using any web browser.