Numbers Puzzle User's Manual

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1. System Requirements

Operating Systems
Microsoft Windows (Windows XP SP3 or Windows7) or Mac OS X

Disk Space
Hard drive with 50 MB free for required install

System Configurations
1GHz-equivalent processor

256MB RAM

256MB graphics card

Minimum screen resolution 640x480

Prerequisite
This application requires a Java Runtime Environment (JRE) 1.7

2. Launch the Game

Required files
An executable NumbersPuzzle.jar file will be provided. Save the NumbersPuzzle.jar file on your computer.

Launch the Game
After locating the .jar file, you can launch it as follows

1. Double-click the NumbersPuzzle.jar file
2. From the command line type `java.exe -jar NumbersPuzzle.jar`

3. Issues that might affect installation or use
If you are using a computer that does not meet the minimum system requirements you may still be able to install and play the game but may experience some issues with the game display and performance. Computers that meet the listed requirements should experience maximum enjoyment and gameplay.

4. Troubleshooting

Game does not launch when double-clicking the .jar file
- Ensure that the correct Java Runtime Environment (JRE) was installed.
- Ensure Java Runtime is the default program for opening .jar files. To set the default program (Windows 7) follow the steps below:

Step 1: Start Control panel

Step 2: Click Default Programs

Step 3: Click Associate a file type or protocol with a specific program

Step 4: Double click .jar

Step 5: Browse C:\Program Files\Java\jre7\bin\javaw.exe

Step 6: Click the button Open

Step 7: Click the button OK

Game performance issues

- See System Requirements.
- Try closing all other applications.
- Re-start the game after closing all other applications.

5. Play the game

Start the Game

You may launch the game by double-clicking the NumbersPuzzle.jar file.

Main Menu

The Main Menu screen is the first screen you will see once you open the game. The options available on the Main Menu are explained below. To begin playing right away with the pre-selected default options click the Play Game button.

Play Game

Click on this button to get started right away.

Game Types

Select between **Numbers** and **Pictures** to choose the type of game you want to play. The **Numbers** option will be selected by default when the game is started. Selecting **Pictures** will activate a list of pictures to the right to chose from.

Grid Size

Select the grid size for your game. There are three grid sizes available for solving:

3x3 - the easiest difficulty grid to solve contains 8 square tiles and the empty tile. The 3x3 grid option will be selected by default when the game is started.

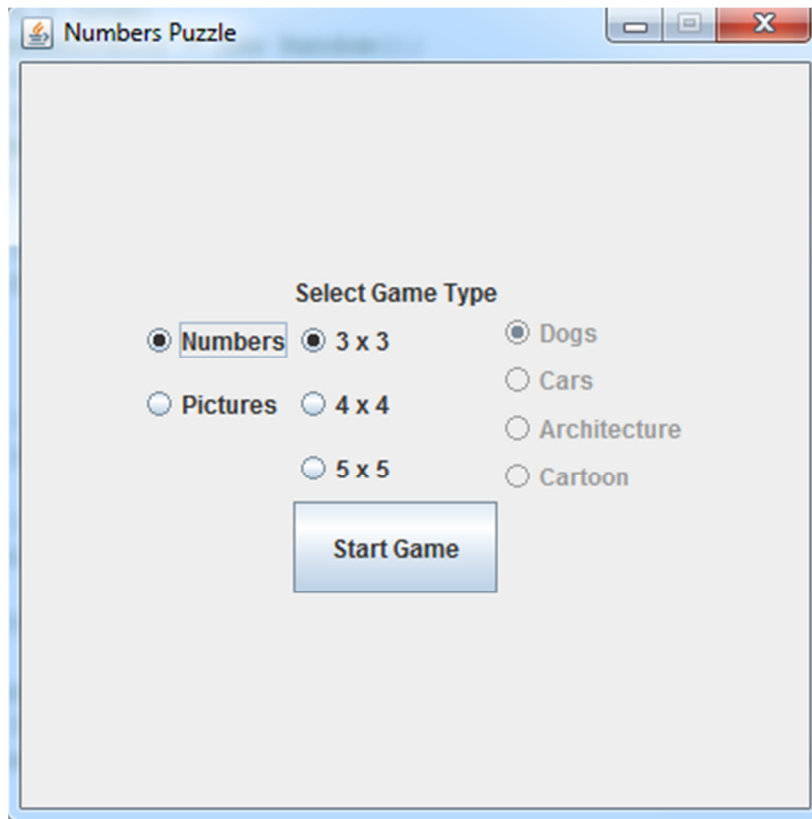*4x4* - the medium difficulty grid to solve contains 15 square tiles and the empty tile.

5x5 - the medium difficulty grid to solve contains 24 square tiles and the empty tile.

Chose Picture

If you chose the Picture option above you will have to select a picture to unscramble. The first available picture (Dogs) is selected for you by default. You may keep the default selection or make your own selection.
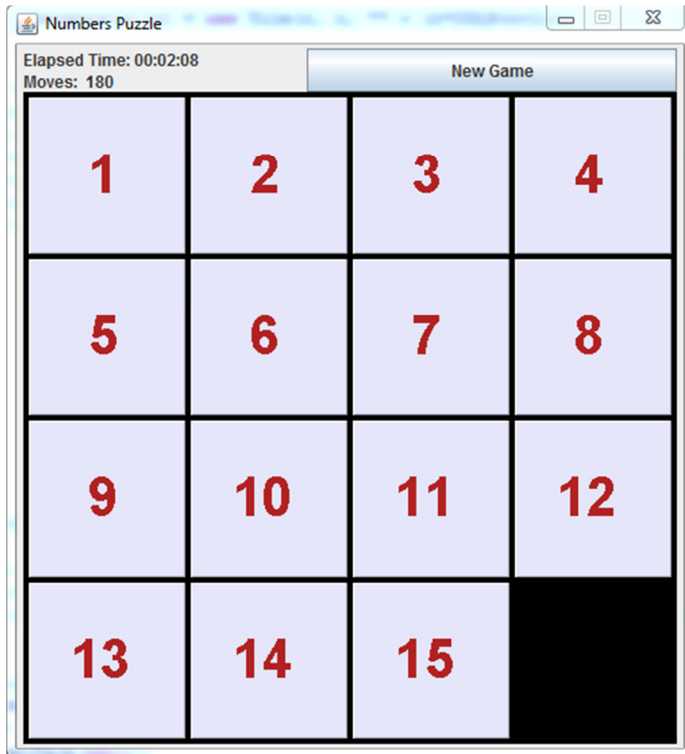
Exit

Click here to close the Numbers Puzzle. You can also close the game by closing the window by clicking the "X" in the upper right corner of the Main Menu screen.
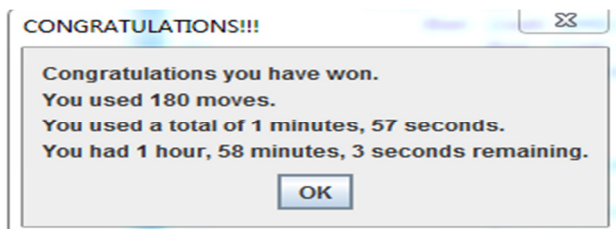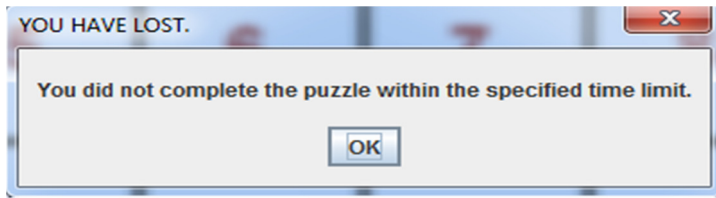
Game Rules

Numbers Game

Play the game by clicking on a tile adjacent to the empty tile. The clicked tile will switch places with the empty tile. Continue to move tiles arranging them from 1 to the greatest number as in the example above. The remaining empty tile should be placed in the lower right hand corner.

Keep an eye on the Elapsed Time and Moves to keep track of how you're doing. When you complete the puzzle your total number of moves and remaining time will be displayed one last time.
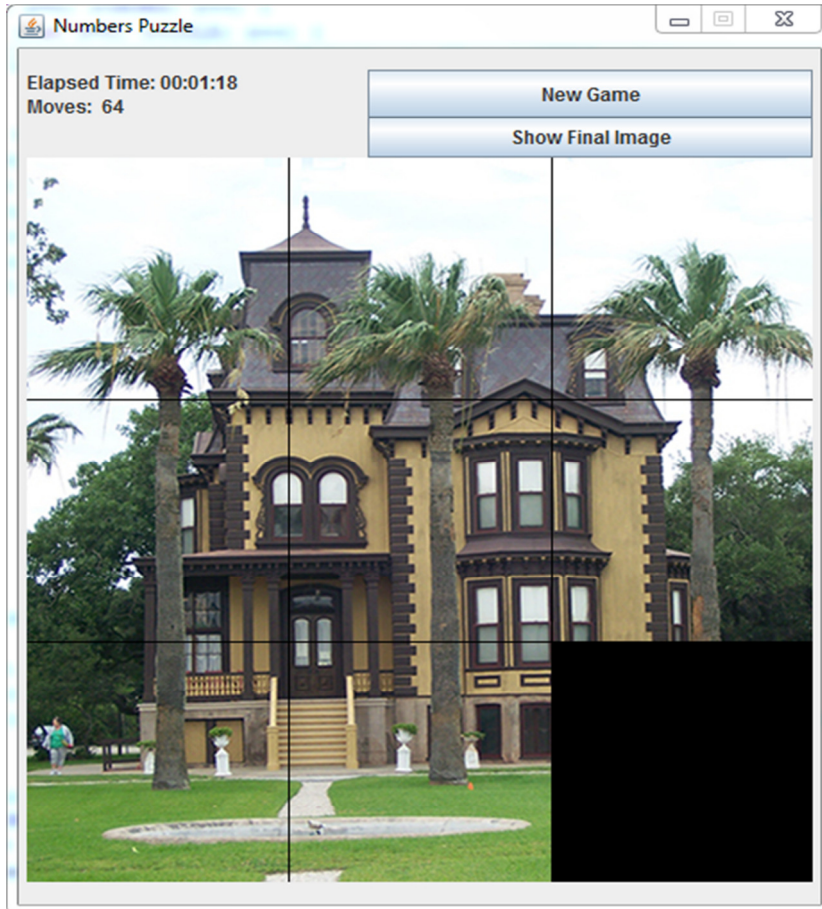

If you get stuck or want to start over click "New Game."

If you're too slow and do not complete the puzzle the game will end and you will need to start over.
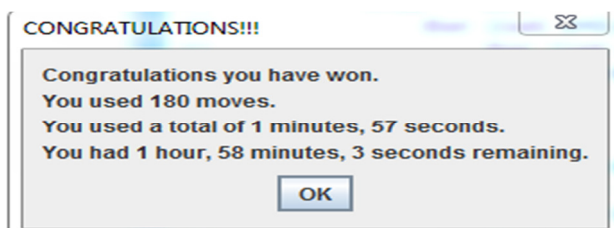
YOU HAVE LOST.

You did not complete the puzzle within the specified time limit.

OK

Picture Game

Numbers Puzzle

Elapsed Time: 00:01:18
Moves: 64

New Game

Show Final Image

Play the game by clicking on a tile adjacent to the empty tile. The clicked tile will switch places with the empty tile. Continue to move tiles arranging them to form a complete image as in the example above. The remaining empty tile should be placed in the lower right hand corner.
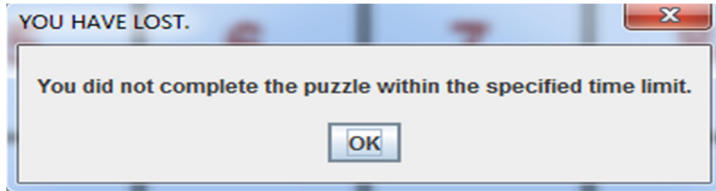
Keep an eye on the Elapsed Time and Moves to keep track of how you're doing. When you complete the puzzle your total number of moves and remaining time will be displayed one last time.

CONGRATULATIONS!!!

Congratulations you have won.
You used 180 moves.
You used a total of 1 minutes, 57 seconds.
You had 1 hour, 58 minutes, 3 seconds remaining.

OK

If you get stuck you can click "New Game" to see what the image should look like when completed.

If you would like to start over click "New Game."

If you're too slow and do not complete the puzzle the game will end and you will need to start over.

6. Game Hints and Tips

Sliding puzzles can be incredibly difficult to solve, as anyone who's tried can tell you. Mathematicians categorize sliders as PSPACE-complete, which is a measure of their mathematical complexity. Essentially, it means that even computers find it hard to come up with a solution.

The Numbers Puzzle, because all of its pieces are squares, is one of the most straightforward to solve. If you need some help start with the **Numbers** option until you get the hang of the game by following the hits below for solving the medium difficulty **4x4** grid game:

- Begin by maneuvering the 1 and 2 into their proper positions in the upper left corner.
- Position the 3 in the upper right corner.
- Maneuver the 4 under the 3
- Now slide the 3 to the left and the 4 up; the first row is done.
- Repeat this process with next row, leaving row above intact.
- Complete the puzzle by rearranging the pieces in the last two rows until they are in position.
- Sometimes it's easier to create "snakes" of pieces in the proper order rather than put them in their final position individually.
- If you're assembling a picture, study the design carefully before it's scrambled. It's harder to solve if you're not clear about the final outcome.

While you can find walk-through solutions to sliding puzzles on the Internet, most players aren't interested in getting help. The fun of sliders comes from the "eureka!" moment when you finally stumble on the solution. One general rule is that it can be helpful to concentrate on solving individual areas of the puzzle, while always keeping the larger picture in mind. You might start with one row or a particular corner.

The real secret that applies to solving every sliding puzzle ever invented can be summed up in one word: patience. Keep trying. The longer it takes, the more satisfying the solution.