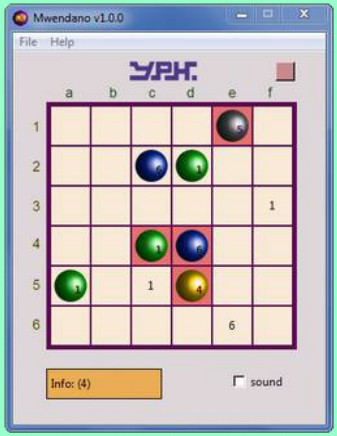
March24 - 2018

Mwendano Guide



Ebook for
Mwendano game

By H. Halfani

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Mwendano Guide

Mwendano game is the puzzle that player has to move objects to the required location in 6×6 board.

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Dear Readers:

Mwendano Guide book is the soft copy that helps to learn about this new idea of game and also getting started with the software used to play the game. I made my extra efforts to make them more useful however nothing is perfect under the hands of human. So, I present this material and my software in hope that they will be useful to you but without any warranty.

So by using my products, I believe you find them appropriate to you and you enjoy them. Otherwise don't use them. If you have any concern or any suggestion please contact me via e-mail. Or even developer can create his/her own version of this game that does better or works for other platforms. I like to see them.

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Warning: The game is developed for purpose of self-recreation and improving strategic skills and logic. It should not be used as the means of money extraction. Also never lose your time or miss prayer time while using it. Play only on free time when you have done anything important.

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Introduction

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Mwendano is the logic game that any one can play. The player has to move all spheres to the required locations. Those spherical objects have their distinct colours and numbers to indicate locations they are supposed to be moved to.

Game name

The name *mwendano* is the Swahili word which means equivalence or matching. The consideration here is the equivalence of colours of objects to be moved. Movement is possible if there are at least two objects with similar colours can move, see game rules for more about this situation.

Requirement

The game is written using python compiled language. This version was tested in Windows 7 but it should work in other versions of Windows from Window XP. You may contact developer for any issue concerning operating environment. The program is standalone so you don't need to install anything more.

The game runs in 32-bit computer architecture. This software can be deployed as portable or with installer. If portable, to uninstall just delete program folder otherwise run uninstaller. Just open *Control Panel* and use *Programs and Features* to uninstall game.

Runtime privilege

You can run the program as any user but if there is problem when you try to run you can fix by running as administrator. Limitation made using UAC (User Account Control) can sometimes cause unexpected errors when running some executables. However since the game does not modify anything in program folder, those common errors are not expected.

Game type

The game is actually logical puzzle. It is also board game. While it is possible to play with physical board and pieces, the game is more suitable to play with software interface because single move consists of many other moves of other objects with similar colours so it is easy to mistakenly cheat even yourself. Also player has to be given solvable game setup. The game isn't timed, so you have unlimited time to think before making move.

Developers are encouraged to create this type of game for Windows OS or more platforms and add more features .

Given solutions

Mwendano game is deployed with solutions of two levels (9 and 10). You can use them for learning purpose.

The solution is in form of grid system like a2-b2, this represents actual move from cell a2 to b2 (read more here). The grid system is shown on the Mwendano game interface. The solutions are available in this page.

Game interface

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Main game interface

The following is the main game interface ...

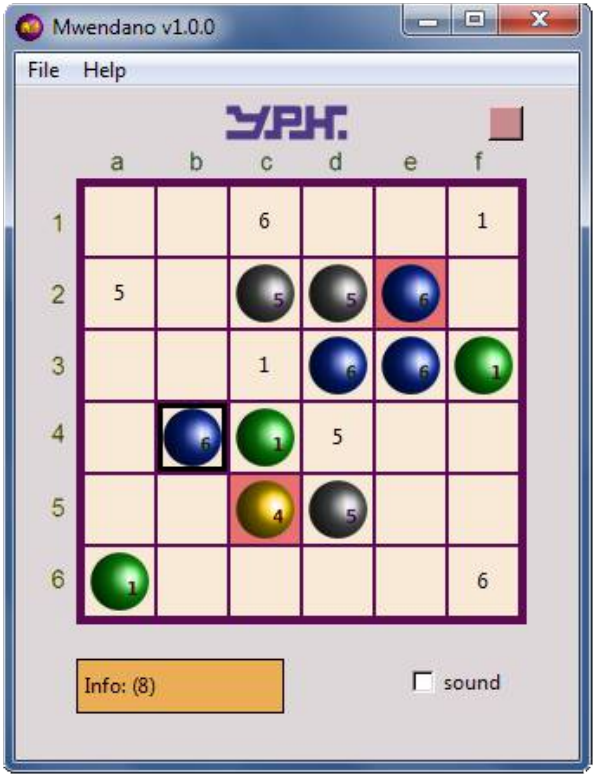


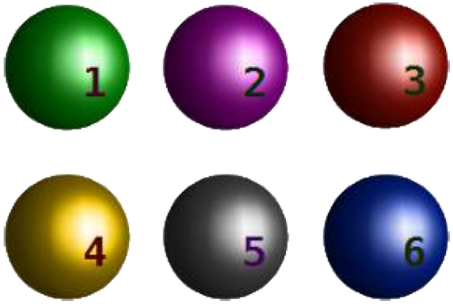
Image shows game interface which has 36 squares or rooms. Spherical objects, if movable, can be moved from where it is to empty room. Interface also shows grid system for reference.

On top-right it's knob to show map of locations. Info display shows current game levels. It also tells if player wins.

The next is the sound switch where you can toggle sound on or off. By default the sound is off. Just tick to turn on.

Spheres

There are six types of objects to move. Each type is distinguished by colour or number 1 – 6. Numbers on them also indicate appropriate locations where they should be moved to.



All types move through board using the same convention. Some levels can have fewer of these objects than other levels.

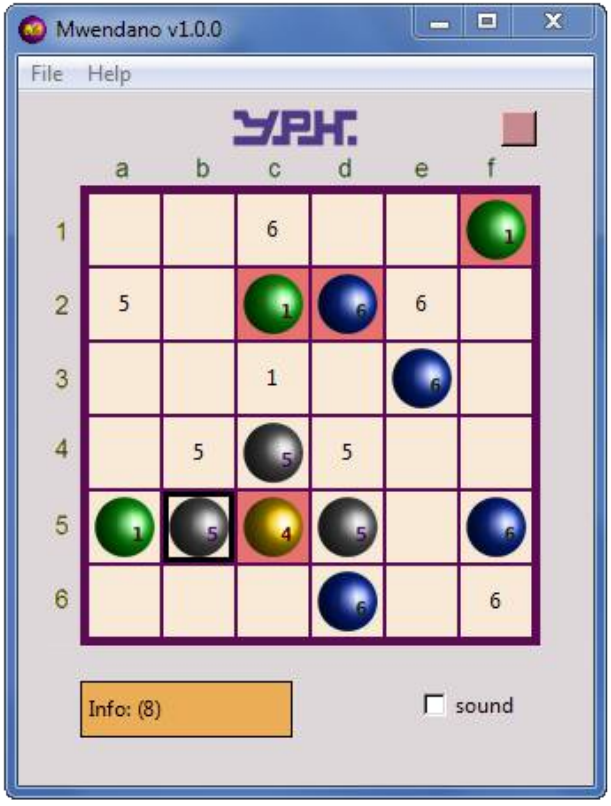
Locations

These are destinations where all objects are to be present in order to win the game. When sphere is on a required location then the room is highlighted. By default, location numbers are visible if room is empty i.e. if numbers are not hidden by objects (spheres). You can still show them on top of spheres by pressing **L** or **S** on keyboard.

Example of location for blue sphere (sphere no. 6).

Location map

Locations can also be shown in temporary separate window using location map feature. You can activate this by clicking top right knob or by pressing **M** or **R** on keyboard. When you start new level this window is closed automatically.



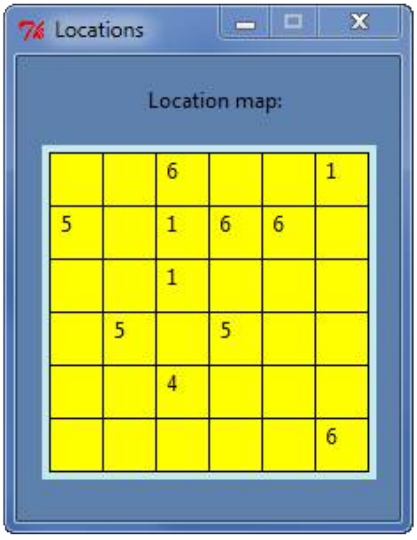
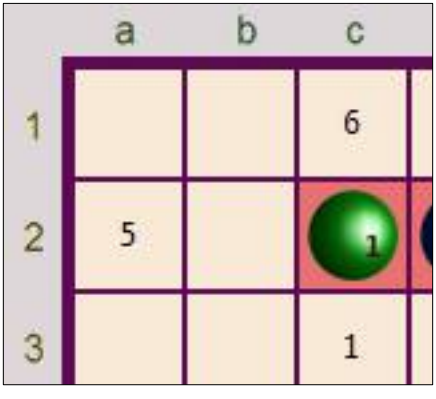


Image of the game interface and location map window on right side.

Reading grid system

You can get room value using grid system shown in the main game interface. Start reading letter then number. For example **c2** means the second room in **c** column.



So, here the green sphere is at **c2**. If movable, it can also be moved to **c3** which is the appropriate location as well.

Object moves from one room to another and can be written as: **c2–c3**.

Object selection

The selected object is enclosed in the black rectangle. Any sphere is selectable regardless if it's movable or not.

Image shows an example of selected black sphere ready to be moved somewhere. To cancel selection, just select another object.

Game rules

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Directions

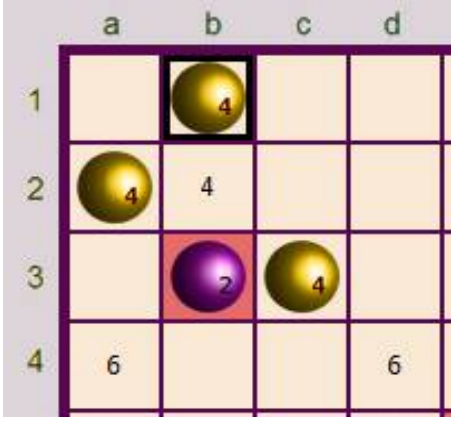
Sphere can move right, left, up or down. Each move is done from selected room to adjacent target room. You cannot skip room or rooms, so move should be done from adjacent to another adjacent room only. The target room must be empty, so if target room has non movable object or is adjacent to the wall, that direction is said to be ***blocked***. If location number matches the object number, the room is highlighted, this indicates that the object is at required place.

Object moves

Move of pieces is possible if there are at least two pieces/objects can be moved. This means when you choose object to move, all similar (by colour or number) objects move as well provided direction is not blocked. It should also be noted that, even if sphere (i.e. object) is at required position, when you move similar object it will be moved as well if movable.

Also you cannot make diagonal movement. To avoid move of certain movable object, you have to use your skills to block its direction by other unrelated object.

Let's examine the following image:



Here object at **b1** is selected. If you move down to **b2**, all other yellow spheres will move down to adjacent room as well. If you move right to **c1**, all other yellow spheres will move right to next room as well.

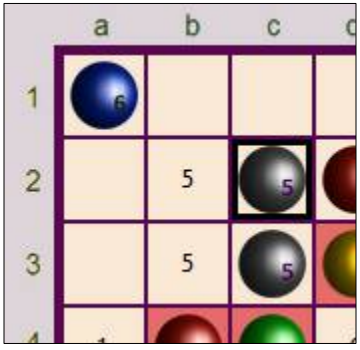
However if you try to move left to **a1**, it will not be possible because no other sphere of similar colour (in this case yellow) can move even though the selected sphere is not blocked on that direction. It would be possible if room **b3** is empty, so two yellow spheres could move. This applies to all other types of spheres in this game.

If there is only single sphere of certain colour, it cannot move in entire game play. For that case its room is always highlighted indicating that, it is on the required position. So don't deal with it! However it can still be useful for rearranging other movable types.

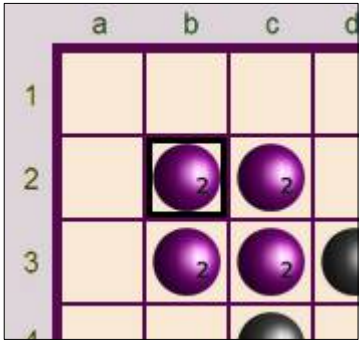
Compacted objects

In the next image, the selected object (**c2**) can be moved to **b2** or **c1**.

Note that, when you move selected to upper room (**c1**), the move is possible since the sphere at **c3** will also move to room where the front sphere left. So this creates 2 total number of movable spheres of that type.



In general, if objects are in straight line compacted together and move direction is parallel to the line, the move is possible if direction of front, selected object is not blocked.



From the left image, if selected sphere (**b2**) is moved to **a2**, all other purple spheres will moved to the left. So this makes entire block of purple spheres move.

Deadlocks

There is small chance of deadlock to occur in this game. Usually normal blocking occurs in the game play but it can be resolved by moves of other objects. The complete known deadlock that is the part of game is if the level has only one object of certain colour. As explained earlier, the unique sphere cannot move to any direction and they are already in required locations.

If you are sure that your move could make complete deadlock just don't do that move unless it makes you win.

Another situation to consider is when there are only two spheres of the same colour. Although this is not deadlock it is important to know that positions of these objects are always proportional until the end of the game. You can never extends distance between them but you can move them when possible.

Game play

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Playing

When you start the game, the game starts with level 1, as you pass levels you get into next level. You can also select yourself the level you want. To make move just click on the movable sphere and click on empty room where you want to move to. While making move you have to, as explained in previous topic, note also other objects of the same type that will be moved to determine move effects.

Starting new game

To start new game, on menu bar click **File** then click **New**. Then enter level number 1 – 20 number to play. Note that, your current game progress will be lost if you start new game.

Quitting game

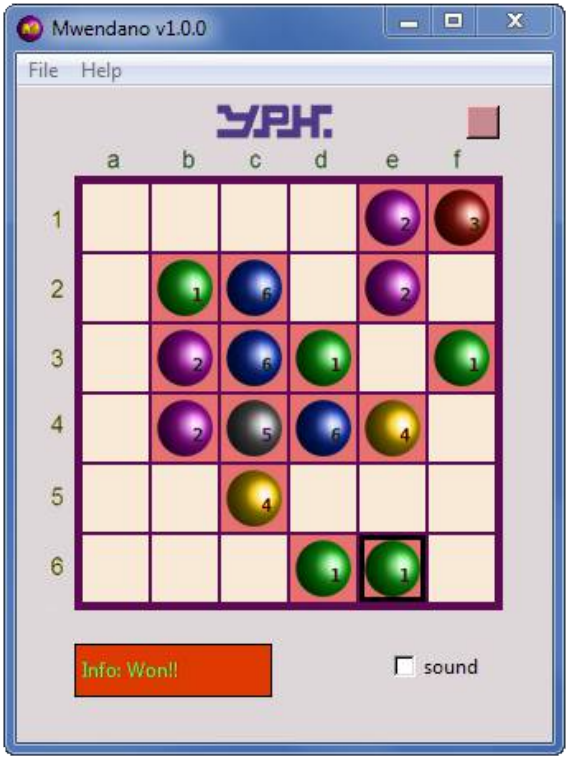
To quit the game, click on **File** then **Quit** in menu bar. You will also lose the current game progress.

The image on the right side shows how to quit program properly. You can also quit the game using default window x button available in any windowed or framed program.

Winning

You become winner if all spheres are moved to appropriate locations. The information display will notify if you win.

The image below is an example when player becomes winner after completing level 15.



If you win you will be unable to play until you start new game using game menu.

Play sound

You can easily turn on sound. This enables sound effects during game play indicating selection and move.

If you experience problem during game play when you turn on sound then turn it off to play more efficiently. You can turn on again to check if there is no problem now. The sound checkbox is at the bottom right of the program interface.

Extra

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Information summary

You can read extra information via game help menu. Click **Help** in menu bar then click **Info**. To view the program version you are using click **Help** and then **About** in menu bar. To get new version if available click link provided and see if there is new version released. New version may fix some errors if found in previous version. Please send your email report-message to the contact provided for any problem.

Solutions (Level 9 and 10)

The following are solutions for levels 9 and 10. You can use them for learning purpose or if you want to explore more. Solutions are in grid system. See this page for more about it.

(a) Level 9:

a2-a3, d6-e6, e6-f6, f1-f2, d3-e3, e5-d5, d5-c5, d5-d4, c4-b4, c4-c3, c3-c2, c2-d2, d2-e2, e4-e5, a4-b4, d4-d5, d5-d6, d5-e5, e4-d4, e3-e2.

(b) Level 10:

f5-e5, e5-d5, d5-c5, c5-b5, c4-c5, c5-c6, d5-e5, e5-f5, b5-b4, b4-b3, f5-f4, f4-f3, b3-b4, b4-b5, d6-d5, f6-e6, e6-d6, c4-c3, e4-d4, d4-c4, b5-b4, f3-f4, a3-b3, b3-c3, f2-e2, c5-c6, c5-d5, d5-e5, e2-e3, e3-e4, f3-e3, e3-d3, a4-b4, f4-f3, e4-f4, d3-d2, c5-d5, d6-e6, c6-d6, f3-f2 .

These solutions are just for learning but you can even play these levels with your own solutions which can be more optimal since most of mwendano games have more than one solutions.

Troubleshooting

If your program runs slowly try turning sound off. If it has serious problem re-install it. You can also report any problem so that we can try fixing it on next update. If Windows operating system you use is too old, the game might not run.

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