Dungeon Warrior

Fantasy Treasure Search/ Monster Combat Game
for
NEC PC-8201A/TRS-80 Model 100
by
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1. Introduction

Dungeon Warrior is a game I originally wrote for the Ohio Scientific Instruments Challenger 1P computer in 1980. I later updated it for my TRS-80 Model 1 (16K Level 2). It was a self-published game. I generated a short manual and made copies of the cassettes. A local print company printed about 50 copies of the manual for me. I duplicated the cassettes manually as required. I did not sell very many – perhaps a dozen or so.

About 4 years ago, I rewrote the game in C++. I modified the game slightly with the addition of the treasure rooms and a magic dagger that glows either brighter or dimmer as you approached the treasure rooms. Finding a single healing potion somewhere (as was in the original game) did not cut it. The dungeon warrior took far too much damage and completing the game was nearly impossible. For the C++ update, I generated rooms that had magical healing properties. Simply entering a room with healing powers and you were healed. Since it did not have graphics, my grandkids were not too interested.

After dusting off the NEC PC-8201A that I had acquired in the early 80s, I have been rehosting/rewriting old BASIC games and other programs to run on it and the TRS-80 Model 100. I decided that Dungeon Warrior was the next game to convert.

The big challenge in this update was keeping everything on the display. It would be very annoying to have information scroll off the screen before the player gets to read it. I shortened some messages. I also count the lines printed and will pause the program with a "PRESS ANY KEY" message as appropriate. All commands are single character with no need to press return. I made some other changes with the big one being the magic dagger. The current properties of the dagger and other features are described in the next section.

2. Game Description

When you play the game, some brief instructions are displayed. These instructions are:

> You have entered a huge underground
> dungeon below the ruins where a mighty
> castle once stood.
>
> There are three secret rooms where a
> powerful magic scroll is hidden.
> Your dagger will glow whenever you
> come near one of these rooms.

Once a scroll is found, your dagger
help you find the exit. If you
become wounded fighting monsters,
there are rooms where you will be
healed simply by entering. Good luck.

The dungeon complex consists of up to 21 x 11 x 7 rooms for a possible total of 1617 rooms. There are 11 rooms in the north/south direction, 21 rooms in the east/west direction and 7 levels (up/down direction). It is unlikely that you will ever visit more than about 20 percent of these rooms when you play the game.

When you start the game, only the entrance/exit room is defined. The state of the other rooms is in sort of a quantum superposition state as in Schrodinger's cat. This means the room may or may not have gold; there may or may not be a landmark; there may or may not be healing properties and there may or may not be a monster. The exits to the room also have not been defined. Essentially, the dungeon is created by the player as he traverses the dungeon. If an adjacent room was defined (previously created), the exit (or lack of exit) to that adjacent room will agree with the present room. Otherwise, the exits are randomly defined.

The location of the treasure rooms holding the magic scrolls are defined at the beginning of the game, but only the location is defined. The other parameters (exits, gold, monsters, etc.) are defined when the room is entered. The treasure room location is selected randomly and any location that is within 4 rooms of the entrance/exit or the location of a previously determined treasure room location has its location reselected.

When a new room is entered, exits will be created on the sides where the adjacent room has an entrance to the room and the adjacent room has been defined. If the adjacent room is not defined, there is a 50% chance that an exit to the adjacent room will be created. It is possible (but quite unlikely) that a treasure room will have no way to enter it. The odds of this happening should be less than 2% since 0.5 raised to the 6 power is 0.015625. The probability increases if the room is located on the side, an edge, or a corner of the dungeon. It will increase more if you include the possibility of the treasure room being connected to a room or group of rooms that also have no way of entering.

On new rooms, there is a 10% chance a landmark is assigned to the room assuming that the landmark count is less than 25. Possible landmarks are some skulls, some broken weapons, some rusty chains, a large fireplace, a stone statue, a large table, scattered bones, musty rushes, gnawed bones or broken furniture. The only purpose the landmarks serve is to help identify the room. The same landmark may appear more than once.

In a similar manner, there is a 20% chance the new room contains a monster. The monster might be a big spider, rabid rat, snake, mad dog, poisonous viper, angry gnome, goblin, zombie, werewolf, ogre, troll, or mummy. The probability of which monster is created is related to the dungeon level. Tougher monsters are found at lower levels. The following table illustrates the probability of finding a particular monster based on the dungeon level.

Monster	Dungeon Level 1	Dungeon Level 2	Dungeon Level 3	Dungeon Level 4	Dungeon Level 5	Dungeon Level 6	Dungeon Level 7
big spider	4%	0%	0%	0%	0%	0%	0%
rabid rat	8%	4%	4%	0%	0%	0%	0%
snake	12%	8%	8%	4%	4%	0%	0%
mad dog	16%	12%	12%	8%	8%	4%	4%
poisonous viper	20%	16%	16%	12%	12%	8%	8%
angry gnome	16%	20%	20%	16%	16%	12%	12%
goblin	12%	16%	16%	20%	20%	16%	16%
zombie	8%	12%	12%	16%	16%	20%	20%
werewolf	4%	8%	8%	12%	12%	16%	16%
ogre	0%	4%	4%	8%	8%	12%	12%
troll	0%	0%	0%	4%	4%	8%	8%
mummy	0%	0%	0%	0%	0%	4%	4%

There is no limit to the number of monsters that will be created as the dungeon is explored, however the total number of monsters at any given time will be limited to 25. This includes both live and dead monsters. A circular buffer is used to store the created monsters. As new monsters are created, the memory that had been allocated to a monster that was created 25 monsters ago is reused. It is quite likely that the recycled monster is a monster that was killed. However, it is possible that the dungeon warrior retreated from a fight and left a monster in a room somewhere. After 25 more monsters are created, the abandoned monster will disappear, and its memory locations will be used to identify a new monster's parameters.

There are 4 levels of monsters with 3 monster types in each monster level. The monsters were listed by monster level. An ogre, troll or mummy are all level 4 monsters whereas a big spider, rabid rat or snake are level 1 monsters. The monster level determines the probability of a monster attack being successful and how much damage is inflicted by the monster. The monster level also determines the monster's endurance which is the amount of damage a monster can take before it is killed. This is described further in the monster combat discussion.

There is a 5% chance that the new room is a "healing" room provided that the total number of healing rooms is less than 10. Possible healing room creation is the last task of the room creation subroutine. The game then continues with the displaying of the room that was entered.

Displaying the details of the room begins with a search of the landmark, monster and healing room arrays to determine if they are pointing to the room that was entered. The distance from the room that was entered to the treasure rooms is then checked and the magic dagger status is set accordingly.

The screen is cleared and the intro message, "You have entered a room." is displayed. If this room is the entrance/exit, an additional message is displayed instructing the player how to leave the dungeon. If there is an item in the landmark array corresponding to the room entered, a message describing the landmark is displayed.

In a similar manner, if the monster parameter for its location is equal to the current location, a message is displayed indicating that the monster is present. If the monster is dead, this will also be indicated in the message. For example, "There is a dead troll." might be a possible message. If the monster is alive, then the player must select either to fight or retreat by pressing the letter, "f" or "r", respectively.

If the player retreats, the location is set to the room he had been previously.

If the player selects fight, the monster will attack. Whether or not it hits is based on the monster level. The amount of damage that gets inflicted by a hit is also determined by the monster level. The following table shows the hit probability and damage inflicted as based on the monster level . The monster endurance is also shown in this table.

Monster Level	Monster Type	Hit Probability	Damage Inflicted	Monster Endurance
1	big spider rabid rat snake	33%	1-3	2
2	mad dog poisonous viper angry gnome	50%	1-4	4
3	goblin zombie werewolf	67%	1-5	8
4	ogre troll mummy	83%	1-6	16

The dungeon warrior endurance level starts at 30 and is restored back to 30 when the current room is a room of healing. During combat, if the monster achieves a hit, the dungeon warrior endurance level is reduced by a random number (damage inflicted) whose range is shown in the table above. The dungeon warrior's wound state is then reported. The following table shows the wound state for various levels of reduced warrior endurance.

Warrior Endurance	Level of Reported Wounds
25-29	slight wounds
13-24	wounds
5-12	severe wounds
1-4	major severe wounds

Should the dungeon warrior's endurance level drop below 1, the dungeon warrior has died and the game ends. A tally of the results will still be displayed indicating the number of rooms visited, the number of scrolls found, the number of slain monsters and the number of gold pieces

collected. This will be followed by a message indicating that Diordorus the Wizard mourns your demise.

If the dungeon warrior survives the monster's attack, the dungeon warrior attacks the monster. There is always a 75% chance of a hit when the dungeon warrior attacks. The number of damage points inflicted on a hit is a random number from 1-8. This is subtracted from the monster's endurance and when the monster endurance drops below 1, the monster is killed. There is also a chance (and it is rare) that the monster will flee. When the monster flees, it is always to the room where the dungeon warrior was previously. If the dungeon warrior should later return to that room, the monster will be there ready to resume combat.

If both the dungeon warrior and the monster are still alive after a round of combat, the player will again be asked whether to fight or retreat. It is highly advised that retreat is selected when the wound level is major severe wounds.

Once any combat is resolved, other display room functions are performed. This includes reporting if there was any gold found. Incidentally, gold is found only in newly created rooms. For rooms that were previously created, the gold (if any) was already recovered, and no new gold will be found. Finding gold is a clue that you are in a room you have never been to before. Not finding gold does not tell you much in that you that you have either been to that room before or it is a newly created room where no gold was present.

The message, "This room healed your wounds." will be displayed if the room has healing properties and the dungeon warrior has wounds. The dungeon warrior's endurance is restored to 30. If the dungeon warrior has no wounds, there will not be a message regarding the presence (or absence) of the room's healing properties. It is a good idea to keep a mental record (or written record if you prefer) of where the healing rooms are in relationship to your present location. If you become severely wounded, you may want to find one before fighting any more monsters.

The magic dagger has three different states which are not glowing, glowing, and glowing brightly. If the present location is greater than three rooms distance from a treasure room in any of the three dimensions (east/west, north/south and up/down), then the dagger state will be not glowing and no message will be displayed. When the present location is three rooms away (or less) from the treasure room in all three dimensions, the dagger state will be glowing. However, if the present location is one room or less from the treasure room, the message will instead be that the magic dagger is "brightly" glowing.

When the present location is not the entrance/exit and the present location matches that of a treasure room, a message will be displayed that may read:

> You have found a hidden scroll that
> a skilled wizard (and you are not) can
> use to cast fire."
>
> Diodorus the Wizard will pay you much

gold for that scroll.

The message might vary slightly depending on which scroll was found. The other two scrolls are for conjuring dragons or confusing the enemy. The treasure room location is then set equal to the entrance/exit room. This will result in the magic dagger glowing or brightly glowing as the entrance/exit is approached.

Finally, the exits for the room are displayed (up, down, north, south, east, or west) and you are to select a direction from those that were displayed. It is only necessary to use the first letter of the direction. It does not matter if it is upper or lower case. If a valid direction is selected, the present location is changed to the room that was entered and the room will be created and displayed if it does not already exist. If the room does exist, the room will be displayed as was previously described.

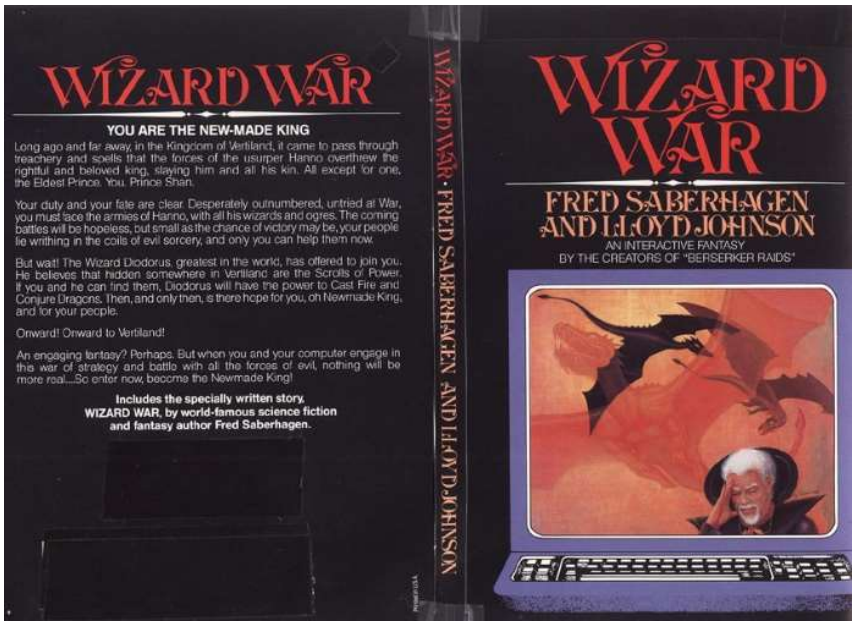
If the present location is the entrance/exit and the letter x is pressed (or u), the dungeon warrior will have exited the dungeon. This will result in a tally being displayed and a message customized based upon the number of monsters killed and the number of scrolls found. The message to strive for is:

> Great job! You found all the
> scrolls. Diodorus will richly reward
> you. He will find these scrolls
> useful during his campaign with Prince
> Shan to free Vertiland from the
> usurper.

That is the game. The scrolls, Diodorus the Wizard, Prince Shan and Vertiland are references to the game, Wizard War that I worked on with Fred and Joan Saberhagen in the early 80s. Fred Saberhagen was a very prolific science fiction and fantasy writer. The games that Fred and Joan were involved in (including Wizard War) are described at:

http://www.berserkerfan.org/games.htm#nmr

The following image is the packaging for Wizard War. On the back, Fred (I think it was Fred) wrote about Diodorus, Prince Shan, Vertiland and the search for the scrolls. Perhaps you can think of Dungeon Warrior as a prequel to Wizard War.



Here is an enlarged view of the back cover of Wizard War:

YOU ARE THE NEW-MADE KING

Long ago and far away, in the Kingdom of Vertiland, it came to pass through treachery and spells that the forces of the usurper Hanno overthrew the rightful and beloved king, slaying him and all his kin. All except for one, the Eldest Prince. You. Prince Shan.

Your duty and your fate are clear. Desperately outnumbered, untried at War, you must face the armies of Hanno, with all his wizards and ogres. The coming battles will be hopeless, but small as the chance of victory may be, your people lie writhing in the coils of evil sorcery, and only you can help them now.

But wait! The Wizard Diodorus, greatest in the world, has offered to join you. He believes that hidden somewhere in Vertiland are the Scrolls of Power. If you and he can find them, Diodorus will have the power to Cast Fire and Conjure Dragons. Then, and only then, is there hope for you, oh Newmade King, and for your people.

Onward! Onward to Vertiland!

An engaging fantasy? Perhaps. But when you and your computer engage in this war of strategy and battle with all the forces of evil, nothing will be more real....So enter now, become the Newmade King!

Wizard War can be run on a PC using the DOSBox emulator. It can be downloaded from https://archive.org/details/wizard_war. DOSBox must first be run. The help instructions for

DOSBox are good. You basically must first use the mount command to point to the folder where the executables are, then use the DOS commands to navigate there. Typing WWINTRO, launches the game. Doing a cntl-F11 slows down the emulation. Wizard War was developed on an IBM PC with an 8088 processor. It was written in RatBAS which is a PASCAL like version of Microsoft BASIC. RatBAS simply translated the source to Microsoft BASIC. The resulting BASIC program was then compiled. You will need to slow a modern PC down substantially for Wizard War to run properly.

To get back to the topic of Dungeon Warrior, this concludes the description of the game in its present state. I have thought about additional modifications to this game that would make it a bit more complicated but not too much. It still needs to run on a NEC PC-8201A or TRS-80 Model 100.

As earlier mentioned, the dungeon is 21 x 11 x 7 rooms for a possible total of 1617 rooms. This means that there are sides, a top and a bottom. A totally diabolical modification would be to remove the sides (and maybe even crazier the top and bottom). For example, when you are on the eastern side of the dungeon, an exit to the east would now be possible. If you take this exit, you will end up on the western side of the maze with the same north/south, up/down coordinates. It will be difficult to ever know where the sides are. If this change were implemented for the top and bottom of the dungeon, you could go up when you were at the top level of the dungeon and end up at the bottom of the dungeon exactly 7 levels down. Monsters are much tougher at dungeon level 7 then at dungeon level 1 which would be a good indication that taking the exit leading up does not always take you to an upper level. I probably would not try and make the magic dagger work across dungeon boundaries since the additional software comparisons that would be necessary might unacceptably slow down the game. Let us just say that the magic of the dagger overcomes the dungeon's magic of removing the boundaries. There might be other changes forthcoming as well as bug corrections if any are reported.

Anyway, I hope you can try the game and that you find it entertaining.