

# GNU Penguin Tower

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for version 0.7, 2011-10-03

Gaius Mulley ([gaius@gnu.org](mailto:gaius@gnu.org))

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This manual is for GNU Penguin Tower (version 0.7, 2011-10-03).

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# 1 About penguin tower

Penguin tower is a multiplayer 2 dimensional game which was inspired by a game from the late 1970s, Morloc Tower <http://www.mobygames.com/game/dunjonquest-morlocs-tower> Although Penguin Tower is a very different game it does retain a similar screen layout and many of the key commands are the same.

The goal of the game is to stay alive as long as possible and to inflict the most damage on other players. The games genre is probably a graphical multiuser dungeon which has a limited graphical interface and limited number of objects and weapons.

Penguin tower consists of three main components, a client, a server and a protocol. The client is written in Python and it utilises the pygame libraries. The server is mostly written in Modula-2 and a small amount of C. The protocol is entirely character and string based.

The pengiun tower server was written during two Augusts in 1985 and 1986 and originally ran on a 6 Mhz PC clone connected by two Visual 200 terminals (making it a three player game). The maps were drawn with simple ASCII characters, and it was quite playable (for those days!). The 6 Mhz PC ran the server code quite comfortably, it occasionally slowed down, which perhaps added to its charm.

Some of the server code has been replaced to allow it to run under the GNU Modula-2 coroutine set of libraries and also to allow arbitrary numbers of clients to connect using sockets. The protocol has also been retrofitted into the server code.

## 2 Obtaining penguin tower

You can download a copy of the game from <http://floppsie.comp.glam.ac.uk/download/penguin-tower/penguin-tower-0.7.tar.gz> and then you need to extract the archive using the following command line:

```
tar xvf penguin-tower-0.7.tar.gz
```

The game consists of a client and server. To run the client you need to have installed `pygame` and then should be able to run it by typing:

```
mkdir -p build $HOME/opt
cd build
../penguin-tower-0.7/configure --prefix=$HOME/opt
python penguin-tower.py mcgreg.comp.glam.ac.uk:7000
cd ..
```

You can now install penguin tower by:

```
cd build
make install
cd ..
```

Hereafter you can invoke the installed copy by:

```
$HOME/opt/penguin-tower mcgreg.comp.glam.ac.uk:7000
```

However you will have had to set your path to include the `$HOME/opt/bin` directory as specified by the initial `./configure`. If you just want to run `penguin-tower` without installing it (perhaps to test the game). Then skip the install and just run it via the python interpreter thus:

```
cd penguin-tower-0.7
python penguin-tower.py mcgreg.comp.glam.ac.uk:7000
cd ..
```

You can build penguin tower by:

```
cd build
make
cd ..
```

The build will require `flex`, `gcc`, `gm2` (GNU Modula-2 release  $\geq 0.62$ ), `groff` and `pthread`s to have been installed.

### 3 Penguin tower client options

Penguin tower can be invoked with the following options:

- `-v` display the current version of penguin tower.
- `-h` display a synopsis of the command line options.
- `-w` run in full screen mode rather than in a window.
- `-f` identical to the `-w` option.
- `-d` turns on debugging messages
- `-Idirectory` specifies `directory` as the location for where the subdirectories `data` and `sound` exist.

lastly server and port address can be given. For example:

```
penguin-tower server-name.example.org:7000
```

## 4 Key commands

The following table details the keys and their meaning.<sup>1</sup>

Esc	quit game
1	move forward 1 unit
2	move forward 2 units
[1-9]	move forward n units
g	get treasure (must be facing treasure)
d[1-9]\n	drop a treasure. The treasure is one of 1 to 9.
d1[0-2]\n	drop a treasure. The treasure is one of 10 to 15.
u[1-9]\n	use treasure 1 to 9. Note that only some of the treasures can be used.
o	open a door, must be facing a door and next to it.
c	close a door, must be facing a door way and next to it.
e	examine a wall for a secret door, must be facing the wall and next to it.
f	fire normal arrow. An arrow travels at approximately 25 units per second and they may be jumped over. An arrow causes 23% damage should it hit its target and costs a 70 Kg player 19% fatigue. An arrow may be repelled by the magic shield.
m	fire magic arrow. A magic arrow travels at approximately 25 units per second and they may be jumped over. It causes 74% damage should it hit its target and costs a 70 Kg player 27% fatigue.
p	parry, must be directly facing an opponent. It inflicts 6% damage and costs a 70 Kg player 7% fatigue.
a	attack, must be directly facing an opponent. It inflicts 13% damage and costs a 70 Kg player 11% fatigue.
t	thrust must be directly facing an opponent. It inflicts 17% damage and costs a 70 Kg player 18% fatigue.
r	turn right.
l	turn left.
v	vault turn.

Notice that as your characters weight increase so it consumes more fatigue to move forward, fire arrows and fight. The weight of each treasure is shown below together with its number and a summary of its effect in the game.

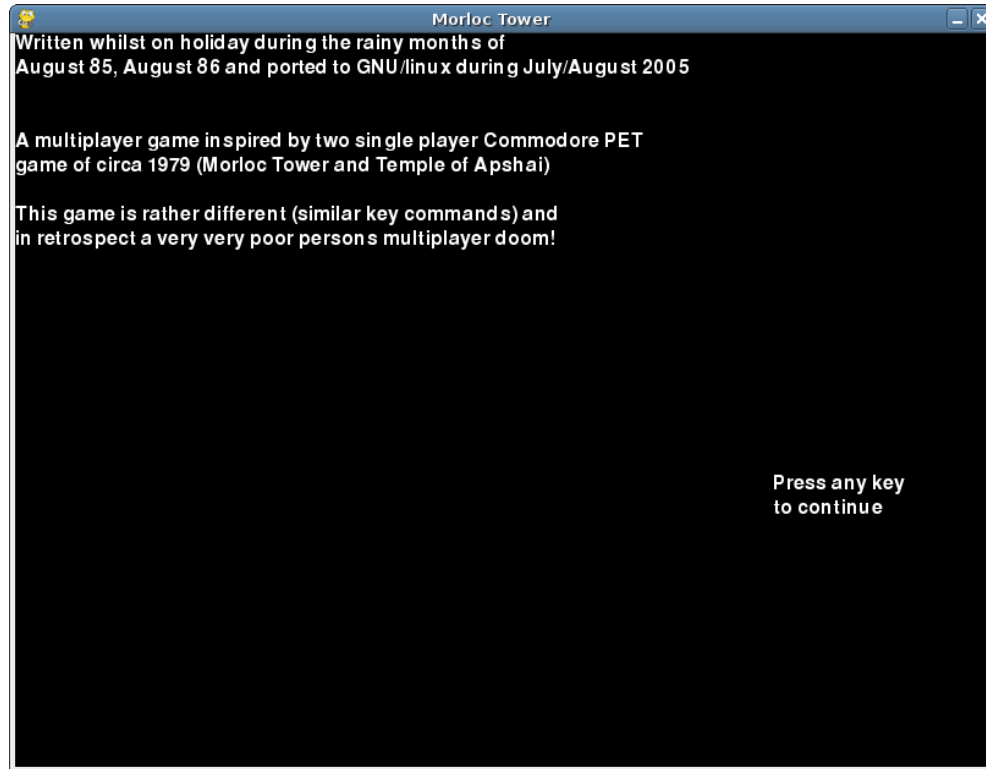
---

<sup>1</sup> We use the syntax [0-9] to mean any character 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9. Also \n indicates the <enter> key and Esc indicates the escape key.

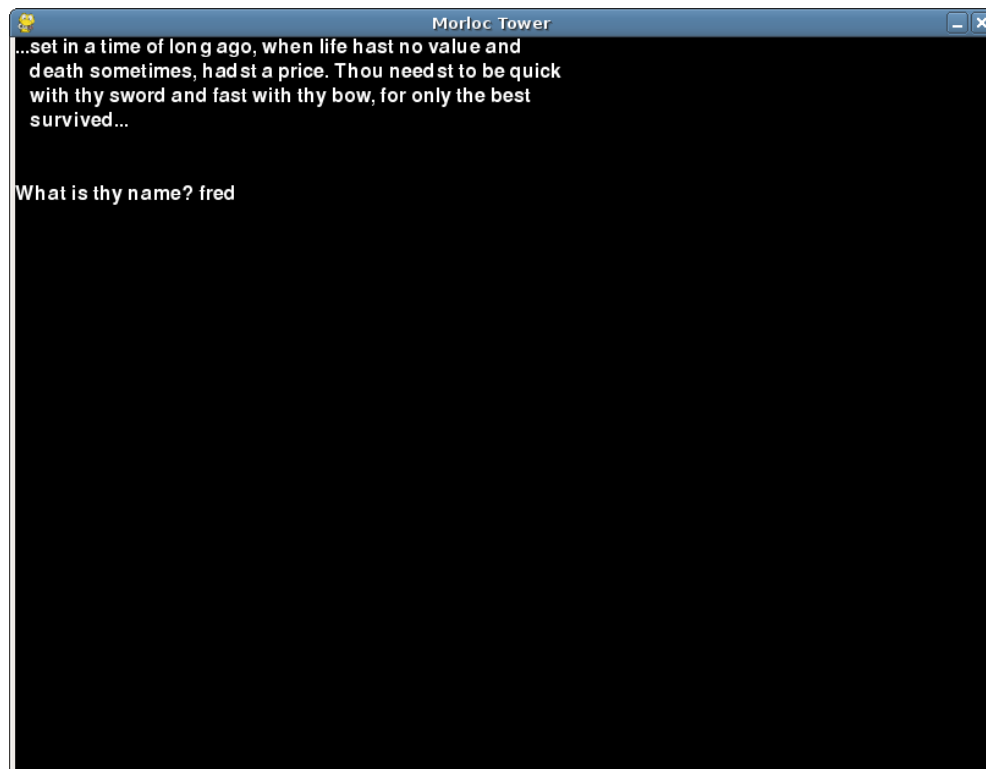
- 1 Magic key, converts doors into the appearance of a wall - or a secret door. Any player can use **e** to examine the wall for a secret door. Although the player must be directly next to the original doorway. No noticeable weight.
- 2 Crystal ball, can be used **u** to give hints as to where other players are located. Treasure weighs 33 Kgs.
- 3 Magic spring, teleports you to a random room. This treasure then disappears to another random room.
- 4 sack of coal, cursed and must be taken to a specific room. It cannot be dropped until this room is reached and it weighs 150 Kgs!
- 5 another sack of coal, identical to treasure 4. It is unlikely that a map has two sacks of coal, unless the map creator was having a bad day.
- 6 hot iron, weighs 4 Kg and inflicts 19% damage on the person who picks it up.
- 7 hand grenade. When it explodes it causes 69% damage, it weighs 3 Kg and can be used **u**. When used, the pin is pulled and it will explode in 25 seconds time. The explosion effects everyone in the same room.
- 8 magic sword. This weighs an additional 1 Kg, but it causes additional damage to be inflicted when parry, attack or thrust is used. It also causes much less fatigue to be used when fighting. The damage for parry, attack and thrust is: 8, 14 and 18. The fatigue used is: 3, 7 and 12 respectively.
- 9 magic shoes. Makes running consume less fatigue (almost half the amount).
- 10 sleep potion. This weighs 5 Kgs and puts the person who picks it up to sleep for 24 second.
- 11 repelling magnet. Causes all treasures including the magnet to flee from you and find random places throughout the map. It also effects everyone in the same room in exactly the same way.
- 12 treasure trove. Can be used to locate all treasures in the map. It weighs 53 Kgs.
- 13 speed potion. Raises players priority in the server, increasing the response time relative to the rest of the players.
- 14 magic shield. Reflects normal arrows. It weighs 2 Kgs but has no effect on magic arrows.

On connecting you should a screen similar to that below.

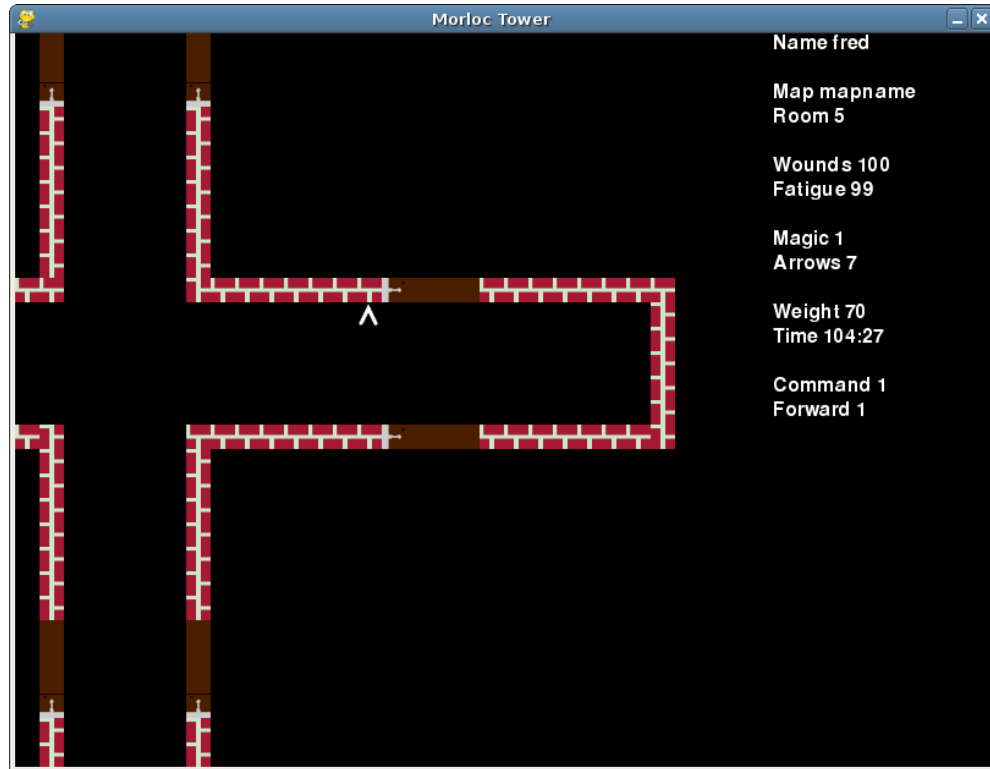




You should then press any key (other than the escape key) and you will be presented with the following screen.



The user has entered **fred** and is just about to press the <enter> key. After entering your name the screen will alter to display a map on the left hand side and a status description on the right hand side.



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