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# MouseTrap

MouseTrap records mouse movements and writes them to binary data files. It is aimed towards development on the Commodore 64. This is why the screen dimensions default to 320x200.

MouseTrap runs on 64 bit versions of Linux, MacOS, Windows and other systems supported by Python.

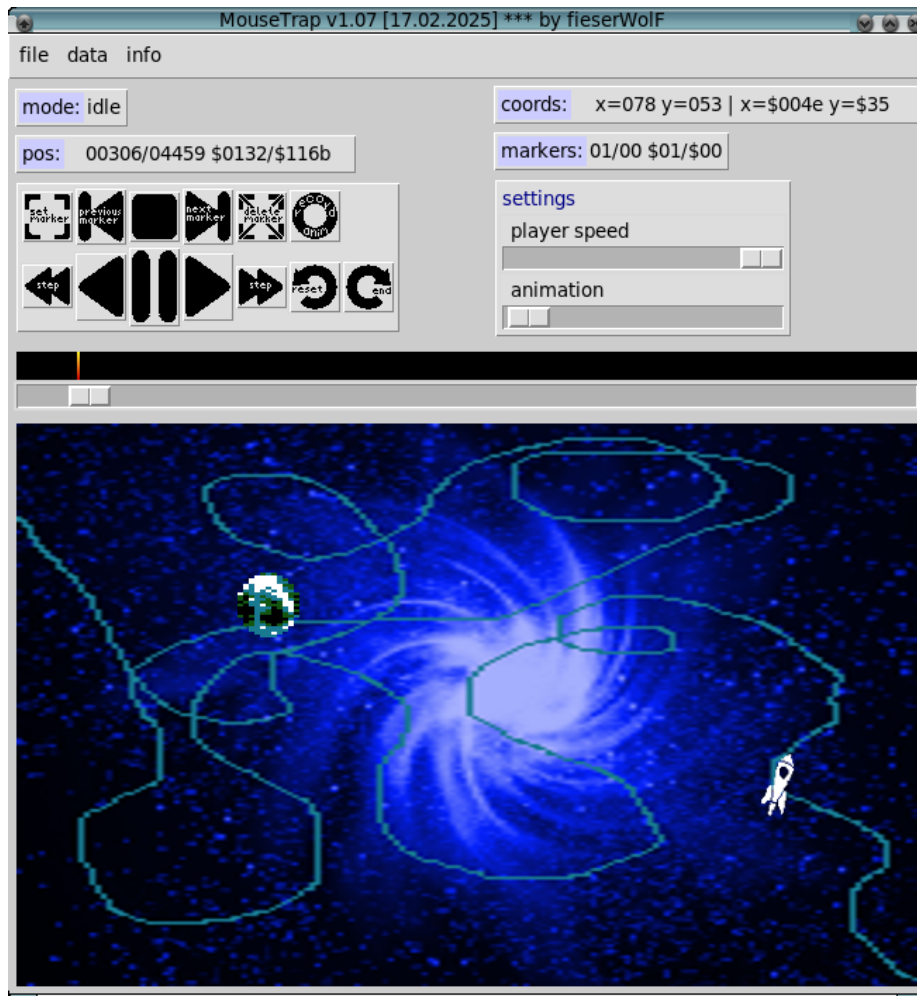


Figure 1: screenshot

This tool might be helpful for code projects that need some x-y positions stored as plain binary data. You can easily move your mouse pointer over some background-image that serves as a preview of the final result. A simple player

and a timeline is also provided for easy editing. You can play forwards and backwards at different speeds, or you can preview your movements step-by-step. When satisfied with your movements you may add markers at certain positions in the timeline. These markers can be used later on in your code then. Also, you can add animation steps to your object while playing the pre-recorded x-y positions.

## Why MouseTrap?

reason	description
open source	easy to modify and to improve, any useful contribution is highly welcome
portable	available on Linux, MacOS, Windows and any other system supported by Python3
easy to use	simple GUI provided

## Files

file	description
ball.png	(sprite)pointer image
ghost.png	(sprite)pointer image of previously-recorded data
image.png	background-image
rocket-image.png	background-image for rocket animation
rocket.webp	rocket animation, 16 layers
marker_hi.bin	marker binary high (values above 255)
marker_lo.bin	marker binary low (values 0 to 255)
posx_hi.bin	x-position binary high (values above 255)
posx_lo.bin	x-position binary low (values 0 to 255)
posy.bin	y-position (values 0 to 255)
animation.bin	look of sprite, animation steps (values 0 to 255)

## Commandline options

MouseTrap v1.07 [17.02.2025] \*\*\* by fieserWolf

```
usage: mousetrap.py [-h] [-ai ANIM_IMAGE_FILE] [-b BACKGROUND_FILE] [-p POINTER_FILE] [-g GHOST_FILE]
                  [-y POSY_FILE] [-a ANIM_FILE] [-ml MARKER_LO_FILE] [-mh MARKER_HI_FILE]
```

This records mouse movements and writes them to binary data files. Press F1 for help in the options:

```

-h, --help                show this help message and exit
-ai ANIM_IMAGE_FILE, --anim_image_file ANIM_IMAGE_FILE
                           animation pointer image file
-b BACKGROUND_FILE, --background_file BACKGROUND_FILE
                           background image file (320x200 pixel)
-p POINTER_FILE, --pointer_file POINTER_FILE
                           optional pointer image file (44x46 pixel): it follows the mousepoint
-g GHOST_FILE, --ghost_file GHOST_FILE
                           optional ghost pointer image file (44x46 pixel): it follows the reco
-xl POSX_LO_FILE, --posx_lo_file POSX_LO_FILE
                           posx low file (default="posx_lo.bin")
-xh POSX_HI_FILE, --posx_hi_file POSX_HI_FILE
                           posx high file (default="posx_hi.bin")
-y POSY_FILE, --posy_file POSY_FILE
                           posy file (default="posy.bin")
-a ANIM_FILE, --animation_file ANIM_FILE
                           animation-datafile: which sprite is used for each position (default=
-m1 MARKER_LO_FILE, --marker_lo_file MARKER_LO_FILE
                           marker file (default="marker_lo.bin")
-mh MARKER_HI_FILE, --marker_hi_file MARKER_HI_FILE
                           marker file (default="marker_hi.bin")

```

Example: `./mousetrap.py -b image.png -p ball.png -ai rocket.webp -g ghost.png -xl posx-low.b`

## Controls

### main control

control	function
left-mousebutton	start/stop recording
F1	show help
Alt+q	quit
Alt+i	open image
Alt+p	open pointer-image
Alt+g	open ghost-image
Alt+a	open animation-image
Alt+s	save data
Alt+r	reload data

### player controls

control	function
pos1	go to start
end	go to end
cursor up	play forward
space	stop playback
return	toggle record movement
cursor down	play backward
cursor right	play next step
cursor left	play previous step

### animation controls

control	function
a	toggle record animation on/off
c	next animation step
x	previous animation step

### marker controls

control	function
m	set marker
n	jump to next marker
p	jump to previous marker
g	go to current marker

## Author

- fieserWolf/Abyss-Connection - *code* - <https://github.com/fieserWolf> <https://csdb.dk/scener/?id=3623>

## Getting Started

Clone the git-repository to your computer:

```
git clone https://github.com/fieserWolf/mousetrap.git
```

Start the python script:

```
python3 mousetrap.py -i image.png -p ball.png -g ghost.png -xl posx-low.bin -xh posx-high.b
```

Or: Start the sample bash file:

```
./go.sh
```

### Prerequisites

At least this is needed to run the script directly:

- python 3
- argparse
- python tkinter module
- python “The Python Imaging Library” (PIL)

Normally, you would use pip like this:

```
pip3 install argparse tk pillow
```

On my Debian GNU/Linux machine I use apt-get to install everything needed:

```
apt-get update
```

```
apt-get install python3 python3-tk python3-pil python3-pil.imagetk python3-argh
```

# Changelog

## Future plans

- improve GUI features

Any help and support in any form is highly appreciated.

If you have a feature request, a bug report or if you want to offer help, please, contact me:

<http://csdb.dk/scener/?id=3623> or [wolf@abyss-connection.de](mailto:wolf@abyss-connection.de)

## Changes in 1.07

- improved keybindings
- added: jump to start and end of timeline
- bugfixes

## Changes in 1.05

- added support for animations

## Changes in 1.04

- bug-fixes and improvements

## Changes in 1.03

- initial public release



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