# xdotool X11 input automation

**START HERE**

`xdotool key ctrl+l`
Press a key combo

`xdotool search --name <regex>`
Find windows

`xdotool type "<text>"`
Type text

`xdotool windowactivate <id>`
Raise and focus

`xdotool mousemove <x> <y>`
Move the pointer

`xdotool getactivewindow`
Current window id

`xdotool click 1`
Left click

`xdotool getmouselocation`
Where is the pointer?

**search / getactivewindow** fills the stack → `%1` `%@` **Window stack** lives for one run → `cmd` **windowactivate, key, ...** act on %1 by default

## CONCEPTS

xdotool fakes X11 input and drives windows. It needs an X server; under pure Wayland it only reaches XWayland apps.

Commands chain in one call and share the window stack: xdotool search --name Firefox windowactivate key ctrl+t.

Without --window, input goes through XTEST to the focused window. With --window it uses XSendEvent, which many apps ignore.

## KEYBOARD

`xdotool key <keys>`
Press key combination(s)

`xdotool key ctrl+shift+t`
Combos are joined with +

`xdotool key Return Tab`
Several keys in a row

`xdotool type "<text>"`
Type a string

`xdotool type --delay <ms> "<text>"`
Slow down typing (default 12 ms)

`xdotool key --clearmodifiers <keys>`
Release held modifiers first

`xdotool key --window <id> <keys>`
Send to one window (XSendEvent)

`xdotool keydown <key>`
Hold a key down

`xdotool keyup <key>`
Release a held key

`xdotool key --delay <ms> <keys>`
Pause between key presses

## MOUSE

`xdotool mousemove <x> <y>`
Move pointer to absolute position

`xdotool click <button>`
Click: 1 left, 2 middle, 3 right

## MOUSE (cont.)

`xdotool click 4`
Scroll up (5 scrolls down)

`xdotool getmouselocation`
Print x, y, screen, window

`xdotool mousemove_relative -- <dx> <dy>`
Move pointer by an offset
*-- is needed when a value is negative.*

`xdotool click --repeat <n> --delay <ms> 1`
Repeated clicks

`xdotool mousedown <button>`
Press and hold a button

`xdotool mouseup <button>`
Release a button

`xdotool mousemove --window <id> <x> <y>`
Position relative to a window

`xdotool getmouselocation --shell`
Output as eval-able variables

## FIND WINDOWS

`xdotool search --name <regex>`
Windows whose title matches

`xdotool search --class <regex>`
Windows by WM_CLASS

`xdotool search --onlyvisible <regex>`
Only mapped windows

`xdotool getactivewindow`
Focused window id

`xdotool selectwindow`
Click a window to get its id

`xdotool search --pid <pid>`
Windows of one process

`xdotool search --sync --class <regex>`
Wait until a match appears

`xdotool search --all --name <a> --class <b>`
Require every condition (default is any)

`xdotool getwindowname <id>`
Print a window title

## WINDOW CONTROL

`xdotool windowactivate <id>`
Switch desktop, raise, focus

`xdotool windowactivate --sync <id>`
Wait until it is active

`xdotool windowfocus <id>`
Focus without raising

`xdotool windowmove <x> <y>`
Move the window

`xdotool windowsize <w> <h>`
Resize (pixels or %)

`xdotool windowminimize <id>`
Minimise a window

`xdotool windowraise <id>`
Raise to the top

`xdotool windowclose <id>`
Destroy the window
*Not graceful. Use windowquit to let the app clean up.*

`xdotool windowquit <id>`
Ask the app to close

`xdotool windowkill <id>`
Kill the owning client

`xdotool windowstate --add FULLSCREEN <id>`
Set state (also --remove, --toggle)

`xdotool windowmove x 100 <id>`
Use x or y to keep that axis

`xdotool getwindowgeometry --shell <id>`
Position and size as variables

## DESKTOPS

`xdotool get_desktop`
Current desktop number

`xdotool set_desktop <n>`
Switch to desktop n (0-based)

`xdotool set_desktop --relative -- -1`
Go to the previous desktop

`xdotool get_num_desktops`
Count desktops

`xdotool get_desktop_for_window <id>`
Which desktop holds a window

## DESKTOPS (cont.)

`xdotool set_desktop_for_window <id> <n>`
Send a window to a desktop

## SCRIPTING

`xdotool exec <cmd>`
Run a command inside a chain

`xdotool exec --sync <cmd>`
Wait and pass on its exit status

`xdotool sleep <seconds>`
Pause inside a chain (fractions ok)

`xdotool <file>`
Run commands from a script file

Commands that need EWMH (windowactivate, desktops, windowstate) fail on window managers without it.

On a failed command in a script, xdotool stops. Check the id with search before acting on it.

## RECIPES

**Focus or launch an app**

```
id=$(xdotool search --
onlyvisible --class firefox |
head -1)
if [ -n "$id" ]; then xdotool
windowactivate "$id"
else firefox & fi
```

**Auto-clicker (10 clicks/s)**

```
# stop with Ctrl+C
while :; do xdotool click 1;
sleep 0.1; done
```

**Type the clipboard into a window**

```
# for fields that block paste
sleep 3   # focus the target now
xdotool type --delay 20 "$(xclip
-o -selection clipboard)"
```

**Place a window top-left, half screen**

```
xdotool getactivewindow
windowsize 50% 100% windowmove 0
0
```