# Zsh Shell with power globbing

## CONCEPTS

Zsh does not word-split unquoted $var, and a glob pattern that matches nothing is an error unless you add (N).

**History** !! and !$
↓ alias
**Aliases** global and suffix too
↓ expand
**Expansion** ${...}, $(...), globs
↓ run
**Command** status in $?

Startup files: .zshenv always, .zprofile for login, .zshrc for interactive. Put aliases and prompt in .zshrc.

Array indices start at 1, not 0, unless KSH_ARRAYS is set.

## GLOBBING

**`ls **/*.<ext>`**
Match files in all subdirectories

**`ls *(/)`**
Directories only

**`ls *(.)`**
Regular files only

**`ls *(om[1,5])`**
Five most recently modified

**`ls *(.N)`**
Match or give nothing, no error

## PARAMETER EXPANSION

**`${var:-<default>}`**
Use default if unset or empty

**`${var:t}`**
Tail: file name of a path

**`${var:h}`**
Head: directory of a path

**`${var:r}`**
Strip the extension

**`${var/<old>/<new>}`**
Replace first match

**`${var//<old>/<new>}`**
Replace all matches

## PARAMETER EXPANSION (cont.)

**`${(s:,:)var}`**
Split on commas into an array

## ARRAYS & MAPS

**`arr=(a b c)`**
Create an array

**`$arr[1]`**
First element

**`$arr[-1]`**
Last element

**`arr+=(<item>)`**
Append an element

**`typeset -A <map>`**
Declare an associative array

**`typeset -U path`**
Keep PATH entries unique

**`path=(~/bin $path)`**
Prepend to PATH

## HISTORY

**`!!`**
Repeat the previous command

**`sudo !!`**
Rerun the last command as root

**`!$`**
Last word of previous command

**`history`**
List commands with numbers

**`Ctrl+R`**
Search history backwards

**`Alt+.`**
Insert last argument of previous

**`setopt share_history`**
Share history between sessions

## OPTIONS

**`setopt <option>`**
Turn an option on

**`unsetopt <option>`**
Turn an option off

**`setopt extended_glob`**
Enable ^, ~ and # patterns

**`HISTSIZE=<n> SAVEHIST=<n>`**
Memory and file history sizes

## PROMPT, ALIASES & COMPLETION

**`PROMPT='%n@%m %~ %# '`**
Set the prompt

**`alias <name>='<cmd>'`**
Define an alias

**`autoload -Uz compinit && compinit`**
Enable the completion system

**`zstyle ':completion:*' menu select`**
Arrow-key completion menu

**`Tab Tab`**
Show or cycle completions

**`source ~/.zshrc`**
Reload the config file

## DIRECTORIES & FUNCTIONS

**`<name>() { ... }`**
Define a function

## DIFFERENCES FROM BASH

### Behaviour changes

| Topic | Bash | Zsh |
|---|---|---|
| Unquoted $var | word-split | not split |
| Array start | index 0 | index 1 |
| No glob match | passes pattern | error |
| Prompt read | read -p | read '?txt ' |
| Config file | ~/.bashrc | ~/.zshrc |
| Ignore case | nocasematch | (#i) |

**`read -r '?Name: ' <var>`**
Prompt text with read

## RECIPES

### Starter ~/.zshrc

```
autoload -Uz compinit && compinit
setopt auto_cd share_history
HISTFILE=~/.zsh_history
SAVEHIST=50000
typeset -U path; path=(~/bin
$path)
```

### Delete old logs, dry run first

```
ls -l **/*.log(.Lm+10mw+4)
# review the list, then
rm -- **/*.log(.Lm+10mw+4)
```