Radare2 Cheatsheet

- **Radare2 Initialization**

Command	Description
`r2 ./myprogram`	Analyze a binary file
`r2 -d ./myprogram`	Debug a program
`r2 -A ./myprogram`	Auto-analyze on startup
`r2 -w ./myprogram`	Open in write mode
`r2 -p <process_id>`	Attach to running process

- **Basic Navigation**

Command	Description
`s <address>`	Seek to address
`s+`	Next instruction
`s-`	Previous instruction
`pdf`	Print disassembly of current function
`pdg`	Print decompilation of current function using r2ghidra
`pdi @ <address>`	Disassemble at address
`V`	Enter visual mode
`VV`	Enter visual graph mode

- **Analysis Commands**

Command	Description
`aaa`	Auto-analyze all
`af`	Analyze function at current address
`afl`	List all functions
`afn new_name`	Rename current function
`afvn old_var new_var`	Rename variable

- **Debugging Commands**

Command	Description
`dc`	Continue execution
`dc until <address>`	Continue until address
`dcu main`	Continue until main
`ds`	Step into
`dso`	Step over
`dr`	Show registers
`dr <reg>=<value>`	Set register value

- **Breakpoints & Watchpoints**

Command	Description
`db <address>`	Set breakpoint
`db sym.main`	Break at main function
`dbt`	List breakpoints
`db- <bp_num>`	Remove breakpoint
`dw <address>`	Set write watchpoint
`dr <address>`	Set read watchpoint

- **Memory Operations**

Command	Description
`px 64 @ <address>`	Hexdump 64 bytes
`ps @ <address>`	Print string
`pf [format] @ <address>`	Print formatted data
`w <value> @ <address>`	Write value to memory
`wo <value> @ <address>`	Write overwrite

- **Binary Patching**

Command	Description
`wa nop @ <address>`	Write NOP instruction

Command	Description
`wa jmp <target> @ <address>`	Write jump instruction
`"wa mov eax, 0x41" @ <address>`	Write assembly instruction
`wA <assembly> @ <address>`	Write assembly code

- Information & Help

Command	Description
`i`	Binary information
`ii`	Imports
`iS`	Sections
`iz`	Strings in data sections
`is`	Symbols
`? <command>`	Get help for command

- Search Operations

Command	Description
`/ <pattern>`	Search for bytes
`/x 41 42 43`	Search for hex pattern
`/i mov eax`	Search for assembly instruction
`/v 0xdeadbeef`	Search for value
`/s "hello"`	Search for string

- Visual Mode Shortcuts

Key	Action
`/P`	Previous/Next page
`/k`	Up/Down
`/l`	Left/Right
`:`	Enter command
`;`	Add comment

Key	Action
	X-refs to location
	Undo seek

- Scripting & Automation

Command	Description
`. <script>`	Execute r2 script
`#!pipe command`	Pipe output to shell command
`$(command)`	Execute shell command
`> variable = value`	Set variable
`.*`	List all macros

- Advanced Analysis

Command	Description
`ag <address>`	Generate graph of function
`agfd`	Generate graph of current function
`ax`	Find references to
`axt @ <address>`	Find references to address
`afll`	List function locals