

C++ Quick Reference

A concise C++ cheat sheet: stack vs heap memory, STL containers, debugging, and Linux essentials — the reference you'll reach for daily.

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C++

hash

```
std::map<string,int> prices; prices['aa']=310; prices={'aa':310, 'bb':410}
```

stack

```
std::stack stk; stk.push(5); stk.pop(); //5
```

queue

```
std::queue q; q.push(5); ... 89 q.pop(); //5
```

```
from collections import deque stk=deque() stk.append('asdfas') stk.pop() - o(n) stk=[]  
stk.pop().rstk[-1]
```

```
collections import lifo deque() appendLeft(5) pop
```

stack

- automatically managed
- LIFO
- at compile time
- short term
- 8 MB : 8192 kb
- fast
- ulimit_a : show memory
- push / pop

heap

- need managed by yourself
- if we need to use more than 8 MB we need to use heap
- run time;
- dynamic
- long time
- new/delete
- slower

- pointer
- pmap 'pidof _____' | tail _n1 | grep_o '[0-9]' / awk '{print \$ 0/(10241024)" [GiB]"}'
- tools
 - valgrind ./my_program
 - fsanitize = address
- echo %errorlevel%
- gflags /i print+Greeting.ext +sls
- cdb printGreeting.ext
- start with "/" is absolute path
- start with "folder/file..." is relative path
- "/" is root
- "~" is home folder
- "." is current folder
- ".." is parent folder
- [a-c] is abc
- grep & ls.txt search inside file
- ";" calls all command one after
- && same but if error stop next
- "|" pipe
- htop
- struct like class that all members is public using for simple data
-

log level

1- debug 2- trace 3- info 4- critical 5- error 6- warning

- basic log
- defined

unit test google test md5sum

git

- git fixes #xx