

## charIO

```
1 # io - Functions for input/output
2
3 import os
4 import platform
5 import stat
6 import sys
7
8 # Tested on Windows and Ubuntu 16.04
9
10 def getchWindows():
11     "getchWindows() - Return an unbuffered character"
12     ch = msvcrt.getch()
13     return ch.decode('utf-8')
14
15 def getchUnix():
16     "getchUnix - Return an unbuffered character"
17     try:
18         tty.setraw(fd) # Set tty to unbuffered
19         ch = sys.stdin.read(1) # Read one character
20     finally:
21         # Reset to buffered I/O
22         termios.tcsetattr(fd, termios.TCSADRAIN, sanetty)
23     return ch
24
25
26 def getchBuffered():
27     """getchBuffered() - Read a Line, user must terminate with carriage return
28     Not as fancy as the raw reads, but more likely to not have problems
29     """
30
31     line = input()
32     # Only care about the first character
33     return line[0] if len(line) else ""
34
35
36 fd = sys.stdin.fileno() # get stdin file descriptor handle
37 # If anything other than a TTY, use buffered input
38 mode = os.fstat(fd).st_mode
39 if stat.S_ISCHR(mode):
40     # chracter device
41
42     systype = platform.system()
43     if systype == "Windows":
44         import msvcrt
45         getch = getchWindows
46     elif systype == "Linux":
47         # Get the current tty settings and save them
48         import tty, termios
49         fd = sys.stdin.fileno()
50         sanetty = termios.tcgetattr(fd)
51         getch = getchUnix
52     else:
53         getch = getchBuffered
54 else:
55     getch = getchBuffered
56
57
58 is_buffered = getch == getchBuffered
```