

con cac

CÓ 17 TRANG NHƯNG MÀ TOÀN ẢNH THÔI KHÔNG CÓ CHỮ ĐÂU BẠN ĐỪNG SỢ NẾU BẠN SỢ THÌ BẠN NÊN UỐNG CHANH MUỐI. BẮT ĐẦU THÔI.

bạn tự viết regex tầm 2-3 lần là tự viết được mọi loại data cần get trong log. bạn có thể hỏi GPT nhưng mk không khuyến khích vì bạn chả hiểu vì sao lại viết như thế và cần sửa chỗ nào(nhiều khi nó bị ngu và không bắt được đâu). khi mà bạn hiểu thì có thể tự viết được mọi loại regex để bắt tất cả những loại data về sau mà bạn muốn.

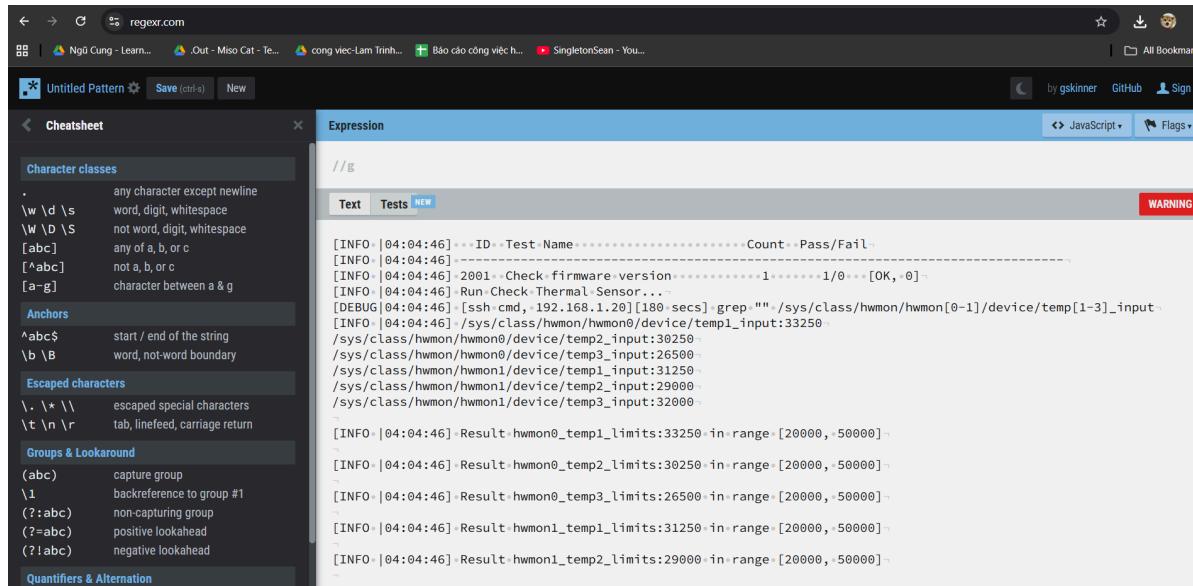
1. để thử nghiệm xem có bắt được đoạn data không thì vào <https://regexpr.com/> để thử nghiệm trực tiếp. có 2 phần quan trọng là expression và Text

The screenshot shows the regexpr.com website interface. On the left, there's a sidebar titled 'Cheatsheet' containing sections for 'Character classes', 'Anchors', 'Escaped characters', 'Groups & Lookaround', and 'Flags'. The main area is titled 'Expression' and contains the regex pattern `//g`. Below the expression input, there are tabs for 'Text' (which is currently selected), 'Tests', and 'NEW'. A red hand-drawn rectangle highlights the entire main content area, from the expression input down to the tools section. In the bottom right corner of the main area, there's a red 'WARNING' button. At the very bottom, there are buttons for 'Replace', 'List', 'Details', and 'Explain'.

Giờ làm ví dụ với lấy sensor, ta có đoạn data sensor trong LOG như sau :

ID	Test Name	Count	Pass/Fail
[INFO  04:04:46] -----			
[INFO  04:04:46] 2001	Check firmware version	1	1/0 [OK, 0]
[INFO  04:04:46] Run Check Thermal Sensor...			
[DEBUG 04:04:46] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/temp[1-3]_input			
[INFO  04:04:46] /sys/class/hwmon/hwmon0/device/temp1_input:33250			
/sys/class/hwmon/hwmon0/device/temp2_input:30250			
/sys/class/hwmon/hwmon0/device/temp3_input:26500			
/sys/class/hwmon/hwmon1/device/temp1_input:31250			
/sys/class/hwmon/hwmon1/device/temp2_input:29000			
/sys/class/hwmon/hwmon1/device/temp3_input:32000			
[INFO  04:04:46] Result hwmon0_temp1_limits:33250	in range [20000, 50000]		
[INFO  04:04:46] Result hwmon0_temp2_limits:30250	in range [20000, 50000]		
[INFO  04:04:46] Result hwmon0_temp3_limits:26500	in range [20000, 50000]		
[INFO  04:04:46] Result hwmon1_temp1_limits:31250	in range [20000, 50000]		
[INFO  04:04:46] Result hwmon1_temp2_limits:29000	in range [20000, 50000]		
[INFO  04:04:46] Result hwmon1_temp3_limits:32000	in range [20000, 50000]		

**Đoạn** data màu vàng là đoạn chúng ta cần phải lấy ra và phải lấy ra toàn bộ không bỏ sót dòng nào.  
ta paste đoạn log trên vào <https://regexr.com/> ở mục text để tiến hành thử nghiệm.



Ta cần xác định trong đoạn data muốn lấy ra có những thành phần nào cố định thành phần nào thay đổi. Xem ví dụ dưới đây để viết regex:

[INFO |04:04:46] Result hwmon0\_temp1\_limits:33250 in range [20000, 50000]

[INFO |04:04:46] Result hwmon0\_temp2\_limits:30250 in range [20000, 50000]

[INFO |04:04:46] Result hwmon0\_temp3\_limits:26500 in range [20000, 50000]

[INFO |04:04:46] Result hwmon1\_temp1\_limits:31250 in range [20000, 50000]

[INFO |04:04:46] Result hwmon1\_temp2\_limits:29000 in range [20000, 50000]

[INFO |04:04:46] Result hwmon1\_temp3\_limits:32000 in range [20000, 50000]

Chúng ta sẽ đi từ trái qua phải từng phần từng phần

Như hình chúng ta để ý phần **Result hwmon** thì dòng nào cũng giống nhau. chỉ khác mỗi số đằng sau đó :

Result hwmon1

Result hwmon0

vậy thì regex sẽ là

**Result hwmon\d**

vì sao là \d vì \d là đại diện cho một số kiểu như là **Result hwmon\d=Result hwmon+một số nào đó.**

Giờ tôi thử paste vào expression đoạn regex kia xem kết quả:

```
/Result•hwmon\d/g
Text Tests NEW

[INFO•|04:04:46]•Run•Check•Thermal•Sensor...
[DEBUG|04:04:46]•[ssh•cmd, •192.168.1.20]•[180•secs]•grep•""•/sys/class/hwmon/t
[INFO•|04:04:46]•/sys/class/hwmon/hwmon0/device/temp1_input:33250
/sys/class/hwmon/hwmon0/device/temp2_input:30250
/sys/class/hwmon/hwmon0/device/temp3_input:26500
/sys/class/hwmon/hwmon1/device/temp1_input:31250
/sys/class/hwmon/hwmon1/device/temp2_input:29000
/sys/class/hwmon/hwmon1/device/temp3_input:32000
[INFO•|04:04:46]•Result•hwmon0_temp1_limits:33250•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon0_temp2_limits:30250•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon0_temp3_limits:26500•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon1_temp1_limits:31250•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon1_temp2_limits:29000•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon1_temp3_limits:32000•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon9_temp3_limits:32000•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon9_temp3_limits:32000•in•range•[20000, •50000]
[INFO•|04:04:46]•Result•hwmon9_temp3_limits:32000•in•range•[20000, •50000]
```

đã bắt được bắt kể là: Result hwmon9, Result hwmon1, Result hwmon3 hay Result hwmon0 thì đều bắt được.  
cùng xử lí phần tiếp theo nào. Lại giống hệt phần trước \_temp cố định và tiếp theo là một số, lại áp dụng công thức ta có :  
\_temp\d

Nối hai đoạn regex vào với nhau ta có :

Result hwmon\d và \_temp\d -----> Result hwmon\d\_temp\d

Vào lại web kia paste thử đoạn regex xem sao

The screenshot shows a regex testing interface with the following details:

- Expression:** /Result hwmon\d\_temp\d/\_limits:.\*?limits:[\d,]\*[\d,]\* in range [\d,]\*[\d,]\*
- Text:** [INFO | 04:04:46] Run Check Thermal Sensor...  
[DEBUG | 04:04:46] [ssh cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon0/device/temp1\_input:33250  
[INFO | 04:04:46] /sys/class/hwmon/hwmon0/device/temp1\_input:33250  
/sys/class/hwmon/hwmon0/device/temp2\_input:30250  
/sys/class/hwmon/hwmon0/device/temp3\_input:26500  
/sys/class/hwmon/hwmon1/device/temp1\_input:31250  
/sys/class/hwmon/hwmon1/device/temp2\_input:29000  
/sys/class/hwmon/hwmon1/device/temp3\_input:32000  
[INFO | 04:04:46] Result hwmon0\_temp1\_limits:33250 in range [20000, 50000]  
[INFO | 04:04:46] Result hwmon0\_temp2\_limits:30250 in range [20000, 50000]  
[INFO | 04:04:46] Result hwmon0\_temp3\_limits:26500 in range [20000, 50000]  
[INFO | 04:04:46] Result hwmon1\_temp1\_limits:31250 in range [20000, 50000]  
[INFO | 04:04:46] Result hwmon1\_temp2\_limits:29000 in range [20000, 50000]  
[INFO | 04:04:46] Result hwmon1\_temp3\_limits:32000 in range [20000, 50000]  
[INFO | 04:04:46] Result hwmon9\_temp3\_limits:32000 in range [20000, 50000]  
[INFO | 04:04:46] Result hwmon9\_temp3\_limits:32000 in range [20000, 50000]
- Tests:** NEW

oke đã bắt được . Phần tiếp theo là \_limits: phần này thì dòng nào cũng như nhau thế nên ghép thẳng vào regex ta có :

[Result hwmon\d\\_temp\d\\_limits:](#)

Cùng xem kết quả :

(anh to quá trôi sang trang dưới)

```
/Result.hwmon\d_temp\d_limits:/g

Text Tests NEW

LINFO | 04:04:46] Run Check Thermal Sensor...
[DEBUG| 04:04:46] [ssh.cmd, 192.168.1.20] [180 secs]
[INFO | 04:04:46] /sys/class/hwmon/hwmon0/device/temp1_input:30250
/sys/class/hwmon/hwmon0/device/temp2_input:30250
/sys/class/hwmon/hwmon0/device/temp3_input:26500
/sys/class/hwmon/hwmon1/device/temp1_input:31250
/sys/class/hwmon/hwmon1/device/temp2_input:29000
/sys/class/hwmon/hwmon1/device/temp3_input:32000

[INFO | 04:04:46] Result.hwmon0_temp1_limits:33250
[INFO | 04:04:46] Result.hwmon0_temp2_limits:30250
[INFO | 04:04:46] Result.hwmon0_temp3_limits:26500
[INFO | 04:04:46] Result.hwmon1_temp1_limits:31250
[INFO | 04:04:46] Result.hwmon1_temp2_limits:29000
[INFO | 04:04:46] Result.hwmon1_temp3_limits:32000
[INFO | 04:04:46] Result.hwmon9_temp3_limits:32000
[INFO | 04:04:46] Result.hwmon9_temp3_limits:32000
```

vậy là còn phần giá trị nữa là xong !

ta có 33250 là giá trị cần lấy, mà \d chỉ đại diện cho MỘT CHỮ SỐ mà số 33250 có nhiều hơn MỘT CHỮ SỐ thì ta dùng \d+ cùng xem kết quả :

Expression

```
/Result hwmon\d_temp\d_limits:\d+/g
```

Text Tests NEW

```
[INFO | 04:04:46] Run Check Thermal Sensor...
[DEBUG| 04:04:46] [ssh cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon0/device/temp1_input:33250
[INFO | 04:04:46] /sys/class/hwmon/hwmon0/device/temp2_input:30250
[INFO | 04:04:46] /sys/class/hwmon/hwmon0/device/temp3_input:26500
[INFO | 04:04:46] /sys/class/hwmon/hwmon1/device/temp1_input:31250
[INFO | 04:04:46] /sys/class/hwmon/hwmon1/device/temp2_input:29000
[INFO | 04:04:46] /sys/class/hwmon/hwmon1/device/temp3_input:32000
[INFO | 04:04:46] Result hwmon0_temp1_limits:33250 in range [20000, 50000]
[INFO | 04:04:46] Result hwmon0_temp2_limits:30250 in range [20000, 50000]
[INFO | 04:04:46] Result hwmon0_temp3_limits:26500 in range [20000, 50000]
[INFO | 04:04:46] Result hwmon1_temp1_limits:31250 in range [20000, 50000]
[INFO | 04:04:46] Result hwmon1_temp2_limits:29000 in range [20000, 50000]
[INFO | 04:04:46] Result hwmon1_temp3_limits:32000 in range [20000, 50000]
[INFO | 04:04:46] Result hwmon9_temp3_limits:32000 in range [20000, 50000]
[INFO | 04:04:46] Result hwmon9_temp3_limits:32000 in range [20000, 50000]
```

Vậy là đã bắt được hết đoạn data muốn lấy. Nhưng còn 1 phần nữa trước khi paste regex vào tool đó là nhóm.

### BẠN CẦN NHÓM LÀM 2 PHẦN

Phần 1 là tiền tố, phần 2 là giá trị. ta có đoạn regex đã bắt được toàn bộ đoạn data là

[Result hwmon\d\\_temp\d\\_limits:\d+](#)

phần tiền tố là [Result hwmon0\\_temp1\\_limits:](#)

phần giá trị là [33250](#)

tương ứng trong regex là

phần tiền tố là [Result hwmon\d\\_temp\d\\_limits](#):

Phần giá trị là [\d+](#)

Nhóm thì thêm ngoặc tròn vào là được giúp mình. regex cuối cùng sẽ là:

[\(Result hwmon\d\\_temp\d\\_limits:\)\(\d+\)](#)

tách nhóm này để tool chia data cho tiện chỉ là thêm ngoặc tròn thôi mà dễ hiểu mà đúng không bạn 😊 .

The screenshot shows a regex editor interface. At the top, there is a search bar containing the regular expression `/(\bResult\b.hwmon\d_temp\d_limits:)(\d+)/g`. Below the search bar, there are three tabs: "Text", "Tests", and "NEW", with "Tests" being the active tab. The main area displays a log of system messages. The messages are colored and highlighted by the editor to show matches. The first message is: [INFO | 04:04:46] Run Check Thermal Sensor... [DEBUG | 04:04:46] [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon [INFO | 04:04:46] /sys/class/hwmon/hwmon0/device/temp1\_input:33250 /sys/class/hwmon/hwmon0/device/temp2\_input:30250 /sys/class/hwmon/hwmon0/device/temp3\_input:26500 /sys/class/hwmon/hwmon1/device/temp1\_input:31250 /sys/class/hwmon/hwmon1/device/temp2\_input:29000 /sys/class/hwmon/hwmon1/device/temp3\_input:32000. Below this, several lines of "[INFO | 04:04:46]" messages are shown, each containing a highlighted "Result" followed by a sensor name and its value, such as "temp1\_limits:33250", all of which are highlighted in blue. These lines are preceded by the text "[INFO | 04:04:46] •". The entire screenshot is framed by a red border.

```
[INFO | 04:04:46] Run Check Thermal Sensor...
[DEBUG | 04:04:46] [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon
[INFO | 04:04:46] /sys/class/hwmon/hwmon0/device/temp1_input:33250
/sys/class/hwmon/hwmon0/device/temp2_input:30250
/sys/class/hwmon/hwmon0/device/temp3_input:26500
/sys/class/hwmon/hwmon1/device/temp1_input:31250
/sys/class/hwmon/hwmon1/device/temp2_input:29000
/sys/class/hwmon/hwmon1/device/temp3_input:32000

[INFO | 04:04:46] •Result.hwmon0_temp1_limits:33250.in.range.[20000, 50000]
[INFO | 04:04:46] •Result.hwmon0_temp2_limits:30250.in.range.[20000, 50000]
[INFO | 04:04:46] •Result.hwmon0_temp3_limits:26500.in.range.[20000, 50000]
[INFO | 04:04:46] •Result.hwmon1_temp1_limits:31250.in.range.[20000, 50000]
[INFO | 04:04:46] •Result.hwmon1_temp2_limits:29000.in.range.[20000, 50000]
[INFO | 04:04:46] •Result.hwmon1_temp3_limits:32000.in.range.[20000, 50000]
[INFO | 04:04:46] •Result.hwmon9_temp3_limits:32000.in.range.[20000, 50000]
[INFO | 04:04:46] •Result.hwmon9_temp3_limits:32000.in.range.[20000, 50000]
```

## LÀM TIẾP VÍ DỤ NỮA NHÉ !

bạn tự viết regex tầm 2-3 lần là tự viết được mọi loại data cần get trong log

lần này lấy fan data ( thằng này mỗi con hàng 1 khác nhau nhưng mà đừng lo dễ như ăn bánh vì pattern vẫn như cũ mà thôi )  
ta lại có log:

```
[INFO |15:17:09] Disabled PID auto fan
[DEBUG|15:17:09] [ssh cmd, 192.168.1.20][180 secs] sed -i "/fanctrl_wrapper.sh/ s/^/#/" /etc/inittab; init -q
[INFO |15:17:10] Set '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]_enable' to 'manual' mode
[DEBUG|15:17:10] [ssh cmd, 192.168.1.20][180 secs] echo 1 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]_enable && sleep 1
[INFO |15:17:11] Set '255' to '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'
[DEBUG|15:17:11] [ssh cmd, 192.168.1.20][180 secs] echo 255 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3
[DEBUG|15:17:15] [ssh cmd, 192.168.1.20][180 secs] echo 255 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3
[INFO |15:17:19] Waiting for 5 secs
[DEBUG|15:17:24] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[DEBUG|15:17:24] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[INFO |15:17:25] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9473' (Checked)
[INFO |15:17:25] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9457' (Checked)
[INFO |15:17:25] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9457' (Checked)
[INFO |15:17:25] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9490' (Checked)
[INFO |15:17:25] Set '128' to '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'
[DEBUG|15:17:25] [ssh cmd, 192.168.1.20][180 secs] echo 128 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3
[DEBUG|15:17:29] [ssh cmd, 192.168.1.20][180 secs] echo 128 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3
[INFO |15:17:32] Waiting for 5 secs
[DEBUG|15:17:37] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[DEBUG|15:17:38] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[INFO |15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4757' (Checked)
[INFO |15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4753' (Checked)
[INFO |15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4745' (Checked)
[INFO |15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4741' (Checked)
```

```
[INFO |15:17:38] Set '64' to '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'  
[DEBUG|15:17:38] [ssh cmd, 192.168.1.20][180 secs] echo 64 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3  
[DEBUG|15:17:42] [ssh cmd, 192.168.1.20][180 secs] echo 64 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3  
[INFO |15:17:46] Waiting for 5 secs  
[DEBUG|15:17:51] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input  
[DEBUG|15:17:51] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input  
[INFO |15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2354' (Checked)  
[INFO |15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2354' (Checked)  
[INFO |15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2341' (Checked)  
[INFO |15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2358' (Checked)  
[INFO |15:17:52] Set '0' to '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'  
[DEBUG|15:17:52] [ssh cmd, 192.168.1.20][180 secs] echo 0 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3  
[DEBUG|15:17:55] [ssh cmd, 192.168.1.20][180 secs] echo 0 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3  
[INFO |15:17:59] Waiting for 5 secs  
[DEBUG|15:18:04] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input  
[DEBUG|15:18:05] [ssh cmd, 192.168.1.20][180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input  
[INFO |15:18:05] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '0' (Checked)  
[INFO |15:18:05] Enabled PID auto fan
```

Bước 1 vẫn như cũ, xác định mục tiêu chính là đoạn màu vàng cần lấy ra. lại paste vào <https://regexr.com/> để thử nghiệp tiếp thôi

Expression

JavaScript ▾ Flags ▾

/|g

**Text** **Tests NEW** **WARNING**

```
[INFO|15:17:11]•Set•'255'•to•'/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'•
[DEBUG|15:17:11]•[ssh•cmd,•192.168.1.20][180•secs]•echo•255•|•tee•/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]•&&•
sleep•3•-
[DEBUG|15:17:15]•[ssh•cmd,•192.168.1.20][180•secs]•echo•255•|•tee•/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]•&&•
sleep•3•-
[INFO|15:17:19]•Waiting•for•5•secs•
[DEBUG|15:17:24]•[ssh•cmd,•192.168.1.20][180•secs]•grep•""•/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input•
[DEBUG|15:17:24]•[ssh•cmd,•192.168.1.20][180•secs]•grep•""•/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input•
[INFO|15:17:25]•'/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input':•'9473'•(Checked)•
[INFO|15:17:25]•'/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input':•'9457'•(Checked)•
[INFO|15:17:25]•'/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input':•'9457'•(Checked)•
[INFO|15:17:25]•'/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input':•'9490'•(Checked)•
[INFO|15:17:25]•Set•'128'•to•'/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'•
[DEBUG|15:17:25]•[ssh•cmd,•192.168.1.20][180•secs]•echo•128•|•tee•/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]•&&•
sleep•3•-
[DEBUG|15:17:29]•[ssh•cmd,•192.168.1.20][180•secs]•echo•128•|•tee•/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]•&&•
sleep•3•-
[INFO|15:17:32]•Waiting•for•5•secs•
[DEBUG|15:17:37]•[ssh•cmd,•192.168.1.20][180•secs]•grep•""•/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input•
[DEBUG|15:17:38]•[ssh•cmd,•192.168.1.20][180•secs]•grep•""•/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input•
[INFO|15:17:38]•'/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input':•'4757'•(Checked)•
[INFO|15:17:38]•'/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input':•'4752'•(Checked)•
```

Giờ vẫn phân tích như cũ xem 16 dòng bôi vàng kia giống nhau ở những chữ nào. Ở này chúng ta sẽ được học thêm về ký tự đặc biệt trong regex.

Trong có vế chữ fan[1-2]\_input ở dòng nào cũng có paste thử vào web kia xem sao

Expression JavaScript ▾ Flag

`/fan[1-2]_input/g`

Text Tests NEW No match (0.2s)

```
[INFO | 15:17:38] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': • '4745' • (Checked)-
[INFO | 15:17:38] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': • '4741' • (Checked)-
[INFO | 15:17:38] • Set • '64' • to • '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'-
[DEBUG | 15:17:38] • [ssh.cmd, 192.168.1.20] [180 secs] echo 64 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3-
[DEBUG | 15:17:42] • [ssh.cmd, 192.168.1.20] [180 secs] echo 64 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3-
[INFO | 15:17:46] • Waiting for 5 secs-
[DEBUG | 15:17:51] • [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input-
[DEBUG | 15:17:51] • [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input-
[INFO | 15:17:52] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': • '2354' • (Checked)-
[INFO | 15:17:52] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': • '2354' • (Checked)-
[INFO | 15:17:52] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': • '2341' • (Checked)-
[INFO | 15:17:52] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': • '2358' • (Checked)-
[INFO | 15:17:52] • Set • '0' • to • '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'-
[DEBUG | 15:17:52] • [ssh.cmd, 192.168.1.20] [180 secs] echo 0 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3-
[DEBUG | 15:17:55] • [ssh.cmd, 192.168.1.20] [180 secs] echo 0 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] && sleep 3-
[INFO | 15:17:59] • Waiting for 5 secs-
[DEBUG | 15:18:04] • [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input-
[DEBUG | 15:18:05] • [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input-
```

Ô điều gì đang xảy ra sao không bắt được thằng nào ??????????

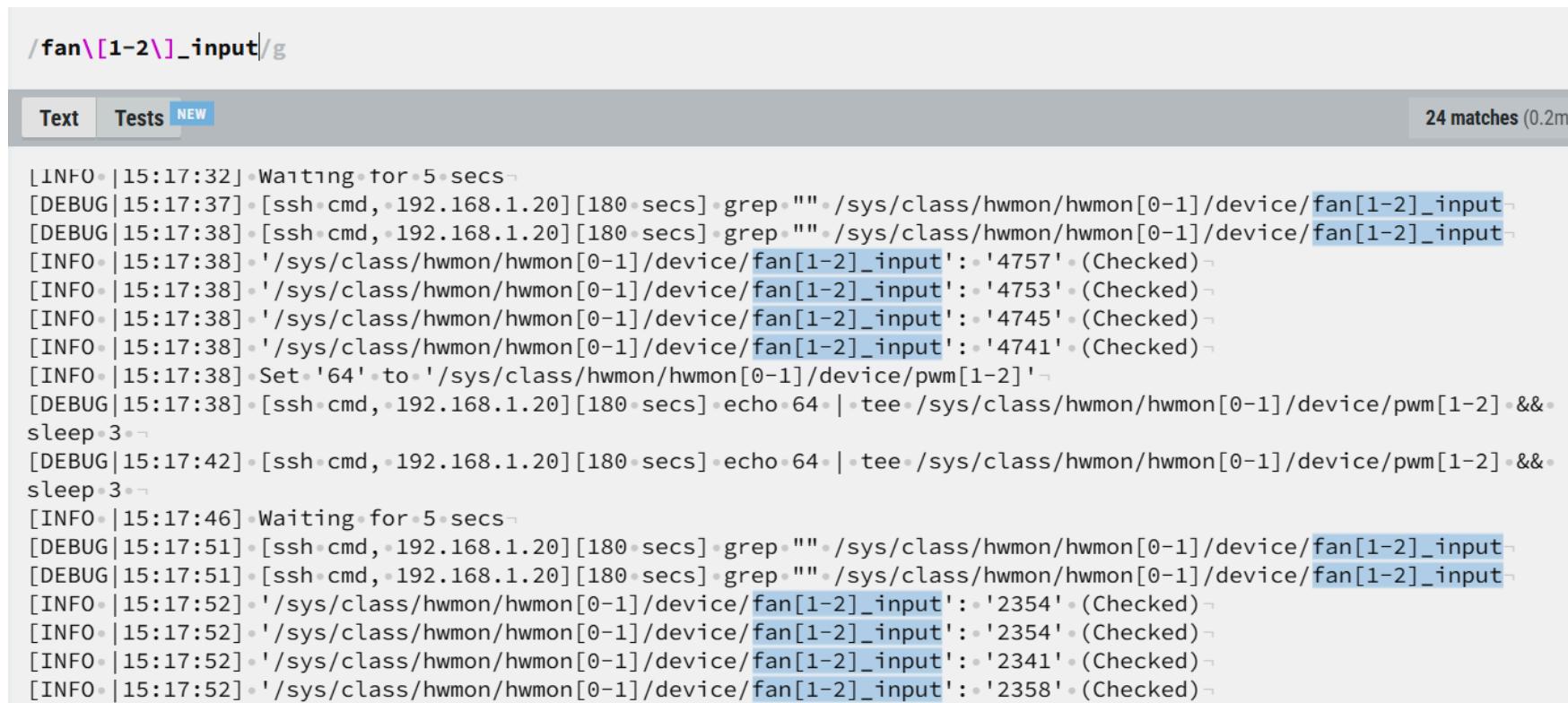
đó chính là tại ký tự ngoặc vuông chính là đoạn **[1-2]** giờ sao ??? vậy ký tự ngoặc vuông trong regex là gì ?

quy tắc chung nhé nếu bạn nghĩ ký tự nào là đặc biệt thì bạn thêm dấu \ trước ký tự đó ví dụ ký tự [ trong regex sẽ là \[ ký tự ] sẽ là \]

vậy sửa đoạn `fan[1-2]_input` thành `fan\[1-2\]_input`

à sẽ có bạn thắc mắc sao không có \d kiểu như `fan[\d-\d]_input` vì dòng nào cũng là `fan[1-2]_input` vì số 1-2 có thay đổi đâu nếu có 1-3 hay 1-4 chúng ta mới phải dùng \d như đã làm ở ví dụ 1.

cùng xem kết quả nào :



/fan\[1-2\]\_input/g

Text Tests NEW 24 matches (0.2ms)

```
[INFO | 15:17:32] Waiting for 5 secs
[DEBUG | 15:17:37] [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[DEBUG | 15:17:38] [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[INFO | 15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4757' (Checked)
[INFO | 15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4753' (Checked)
[INFO | 15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4745' (Checked)
[INFO | 15:17:38] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '4741' (Checked)
[INFO | 15:17:38] Set '64' to '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'
[DEBUG | 15:17:38] [ssh.cmd, 192.168.1.20] [180 secs] echo 64 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] &&
sleep 3
[DEBUG | 15:17:42] [ssh.cmd, 192.168.1.20] [180 secs] echo 64 | tee /sys/class/hwmon/hwmon[0-1]/device/pwm[1-2] &&
sleep 3
[INFO | 15:17:46] Waiting for 5 secs
[DEBUG | 15:17:51] [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[DEBUG | 15:17:51] [ssh.cmd, 192.168.1.20] [180 secs] grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input
[INFO | 15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2354' (Checked)
[INFO | 15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2354' (Checked)
[INFO | 15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2341' (Checked)
[INFO | 15:17:52] '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '2358' (Checked)
```

ngon luôn ! đã bắt được

bạn sẽ thấy nó bắt thêm cả mấy cái chúng ta không muốn bắt nhưng không sao còn phần sau nữa mà !

giờ xử lý phần còn lại. lấy 1 mẫu ra bóc tách .

fan[1-2]\_input': '4757'

còn đoạn nhì nhằng đằng sau **fan[1-2]\_input** thì sao thì chả sao cả copy paste thằng vào regex :

The screenshot shows a terminal window with a light gray background. At the top, there is a command line input field containing the regex pattern `/fan\[1-2\]_input': \d/g`. A red underline highlights the entire pattern. Below the input field, there are two tabs: "Text" and "Tests". The "Tests" tab is selected, indicated by a blue border. The test output is displayed below the tabs, showing several log entries from a system. The entries are as follows:

```
[DEBUG | 15:17:24] • [ssh.cmd, 192.168.1.20] [180 secs] • grep "" /sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': \d (Checked)
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9473' • (Checked)
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9457' • (Checked)
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9457' • (Checked)
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input': '9490' • (Checked)
[INFO | 15:17:25] • Set '128' to '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]'
```

A red box highlights the last line of the output, which corresponds to the part of the regex pattern that was highlighted in the input field.

bắt ngoạn mục !

giờ lấy phần giá trị nữa thôi là xong

vẫn như cũ giá trị là số tự nhiên vẫn dùng \d+

```
/fan\[1-2\]_input':\.\'\d+|g
```

Text Tests NEW

```
[INFO | 15:17:19] • Waiting for 5 secs ↵
[DEBUG | 15:17:24] • [ssh.cmd, 192.168.1.20] [180 secs] • grep "" • /sys/class/hwmon/hwmon0/device/fan[1-2]_input' : '9473' ↵
[DEBUG | 15:17:24] • [ssh.cmd, 192.168.1.20] [180 secs] • grep "" • /sys/class/hwmon/hwmon0/device/fan[1-2]_input' : '9457' ↵
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input' : '9473' ↵
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input' : '9457' ↵
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input' : '9457' ↵
[INFO | 15:17:25] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input' : '9490' ↵
[INFO | 15:17:25] • Set '128' to '/sys/class/hwmon/hwmon[0-1]/device/pwm[1-2]' ↵
[DEBUG | 15:17:25] • [ssh.cmd, 192.168.1.20] [180 secs] • echo 128 • | • tee • /sys/class/hwmon/hwmon0/device/pwm[1-2] ↵
sleep 3 ↵
[DEBUG | 15:17:29] • [ssh.cmd, 192.168.1.20] [180 secs] • echo 128 • | • tee • /sys/class/hwmon/hwmon0/device/pwm[1-2] ↵
sleep 3 ↵
[INFO | 15:17:32] • Waiting for 5 secs ↵
[DEBUG | 15:17:37] • [ssh.cmd, 192.168.1.20] [180 secs] • grep "" • /sys/class/hwmon/hwmon0/device/fan[1-2]_input' : '4757' ↵
[DEBUG | 15:17:38] • [ssh.cmd, 192.168.1.20] [180 secs] • grep "" • /sys/class/hwmon/hwmon0/device/fan[1-2]_input' : '4753' ↵
[INFO | 15:17:38] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input' : '4745' ↵
[INFO | 15:17:38] • '/sys/class/hwmon/hwmon[0-1]/device/fan[1-2]_input' : '4741' ↵
sleep 3 ↵
```

vậy là xong và dĩ nhiên không lấy dấu phẩy đằng sau số kia vì nó tác dụng gì đâu  
Đừng quên nhóm thành 2 nhóm nhé tiền tố và giá trị

```
fan[1-2]_input': '4757
(fan\[1-2\]_input': ')(\d+)
```

đó vậy là xong dễ vl ta có regex cuối cùng là : (fan\[1-2\]\_input': ')(\d+)

vậy là bạn đã tốt nghiệp khóa regex cơ bản chúc mừng bạn !  
PASTE TIỀN TỐ VÀ GIÁ TRỊ VÀO TOOL LÀ OKE !