系統程式設計

Lab7 setjmp/longjmp

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1. Where are the errors located?

以下是每個 Case 錯誤的地方：

1. twetrewt.terthbbb.com.tw
   Email format error: at least one @
   ----

2. spta@embed@ded.cs.cc@u.edu.tw
   @ found at 5
   @ found at 11
   @ found at 21
   Email format error: more than one @
   ----

3. pv#pig@hot#mail.com
   @ found at 7
   # found at 3 (error occur)
   # found at 11 (error occur)
   Email format error: can't exists #
   ----

4. pvpig@hot*mail.com
   @ found at 6
   * found at 10 (error occur)
   Email format error: can't exists *
   ----

5. aaawww@ccu.cs..edu.tw
   @ found at 7
   .. found at 14 (error occur)
   Email format error: can't exists ..
   ----

6. EA.EA@ccucsedutw
   @ found at 6

Email format error: at least one . behind the @

2. What is the error message format?

(you must not print any message after you print error message)

1. Email format error: at least one @
2. Email format error: more than one @
3. Email format error: can't exists #
4. Email format error: can't exists *
5. Email format error: can't exists ..
6. Email format error: at least one . behind the @

輸出的方式和投影片範例的截圖一樣。

3. How did you use the setjmp/longjmp function?

Setjmp :

```c
if((i = setjmp(jmpbuffer)) != 0){
    if (i == 1)
            printf("Email format error: at least one @ \n");
    else if(i == 2)
            printf("Email format error: more than one @ \n");
    else if (i == 3)
            printf("Email format error: can't exists # \n");
    else if (i == 4)
            printf("Email format error: can't exists * \n");
    else if (i == 5)
            printf("Email format error: can't exists .. \n");
    else if (i == 6)
            printf("Email format error: at least one . behind the @ \n");
}
```

第 21 行 ~ 第 34 行

longjmp :

longjmp 會在 error 發生的時候被呼叫。

```c
void    compare_at(char *);   // Sample Code 已經做好了
void    compare_sharp(char *); // 第 76 行 longjmp(jmpbuffer, 3);
void    compare_asterisk (char *); //第 88 行 longjmp(jmpbuffer, 4);
```

```
void     compare_doubleDot(char *); //第 100 行 longjmp(jmpbuffer, 5);
void     compare_dot(char *); //第 112 行 longjmp(jmpbuffer, 6);
```

4. Final result.

```
owen@LAPTOP-65HPDS2:/mnt/c/Users/Admin/Desktop/SP/Lab7/Lab7_example$ ./lab7_stu
---------------------------------------------------
spta@embedded.cs.ccu.edu.tw
@ found at 5
valid email address!
---------------------------------------------------
twetrewt.terthbbb.com.tw
Email format error: at least one @
---------------------------------------------------
spta@embed@ded.cs.cc@u.edu.tw
@ found at 5
@ found at 11
@ found at 21
Email format error: more than one @
---------------------------------------------------
pv#pig@hot#mail.com
@ found at 7
# found at 3 (error occur)
# found at 11 (error occur)
Email format error: can't exists #
---------------------------------------------------
pvpig@hot*mail.com
@ found at 6
* found at 10 (error occur)
Email format error: can't exists *
---------------------------------------------------
aaawww@ccu.cs..edu.tw
@ found at 7
.. found at 14 (error occur)
Email format error: can't exists ..
---------------------------------------------------
EA.EA@ccucsedutw
@ found at 6
Email format error: at least one . behind the @
```