Trần Minh Quang_077206000063

Bài tập 6,7_Kỹ thuật lập trình

Chương 6

Exercise 5: Take the following Python code that stores a string:‘

str = ’X-DSPAM-Confidence:0.8475’

Use find and string slicing to extract the portion of the string after the colon character and then use the float function to convert the extracted string into a floating point number.

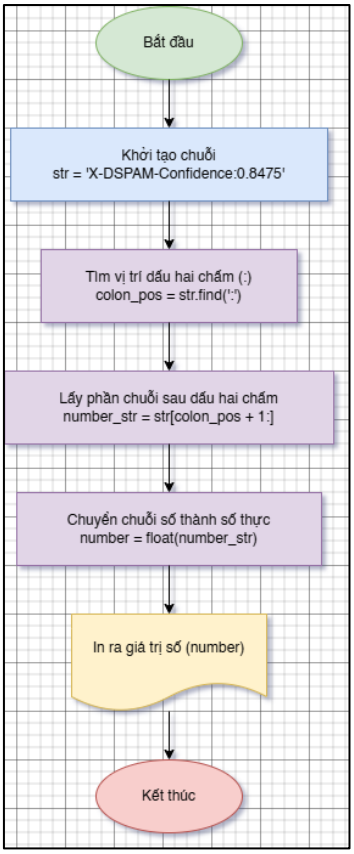
```
#Exercise 5: Take the following Python code that stores a string:‘
#str = ’X-DSPAM-Confidence:0.8475’
#Use find and string slicing to extract the portion of the string after the colon
#character and then use the float function to convert the extracted string into a
#floating point number

str = 'X-DSPAM-Confidence:0.8475'
colon_pos = str.find(':') #tìm chỗ có dấu hai chấm
number_str = str[colon_pos + 1:] #lấy phần sau dấu
number = float(number_str) #chuyển qua float
print(number)
```

[4] ✓ 0.0s

```
0.8475
```

Lưu Đồ Giải Thuật:



Exercise 6:

Read the documentation of the string methods at
https://docs.python.org/3.5/library/stdtypes.html#string-methods

STRIP

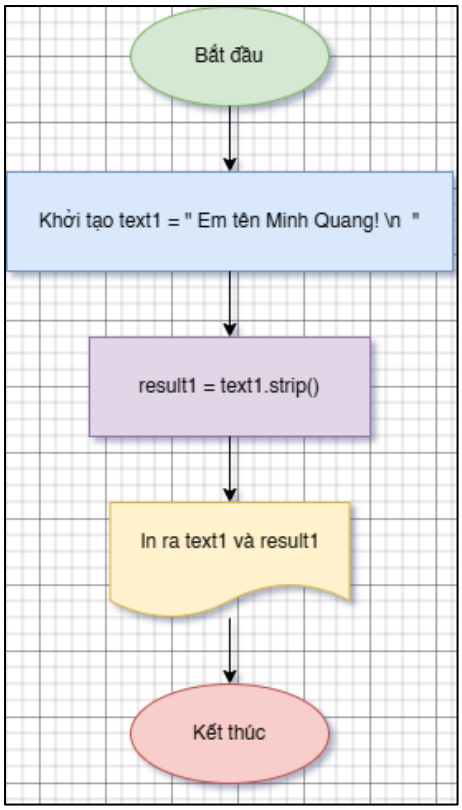
 # Ví dụ 1: Loại bỏ khoảng trắng mặc định

```
# Ví dụ 1: Loại bỏ khoảng trắng mặc định
T1 = "   Em tên Minh Quang!  \n "
KQ1 = T1.strip()
print(f"Chuỗi ban đầu: '{T1}'")
print(f"Chuỗi sau strip(): '{KQ1}'")
```

[8] ✓ 0.0s

```
Chuỗi ban đầu: '   Em tên Minh Quang!
 '
Chuỗi sau strip(): 'Em tên Minh Quang!'
```

Flowchart



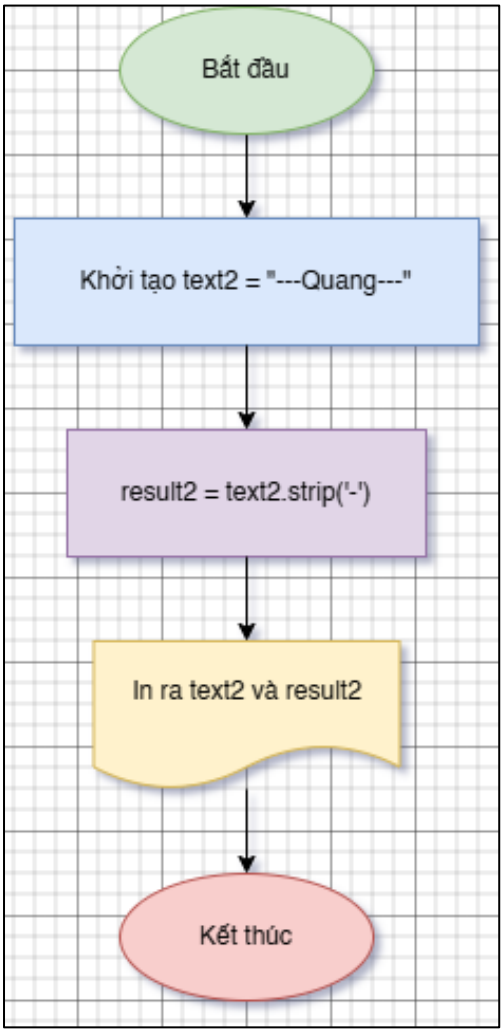
 # Ví dụ 2: Loại bỏ ký tự cụ thể

```python
# Ví dụ 2: Loại bỏ ký tự cụ thể
T2 = "---Quang---"
# Loại bỏ ký tự -
KQ2 = T2.strip('-')
print(f"\nChuỗi ban đầu: '{T2}'")
print(f"Chuỗi sau strip('-'): '{KQ2}'")
```

[9] ✓ 0.0s

```
Chuỗi ban đầu: '---Quang---'
Chuỗi sau strip('-'): 'Quang'
```

Flowchart



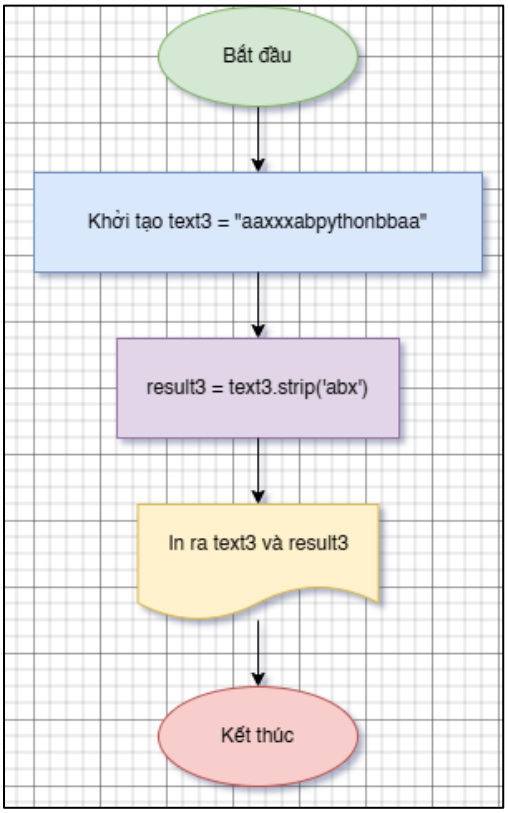
 # Ví dụ 3: Loại bỏ tập hợp ký tự (thứ tự không quan trọng)

```python
# Ví dụ 3: Loại bỏ tập hợp ký tự (thứ tự không quan trọng)
T3 = "aaxxxabpythonbbaa"
# Loại bỏ 'a', 'b', và 'x'
# cắt cho đến khi không còn
KQ3 = T3.strip('abx')
print(f"\nChuỗi ban đầu: '{T3}'")
print(f"Chuỗi sau strip('abx'): '{KQ3}'")
```

[17] ✓ 0.0s

```
Chuỗi ban đầu: 'aaxxxabpythonbbaa'
Chuỗi sau strip('abx'): 'python'
```

Flowchart



REPLACE

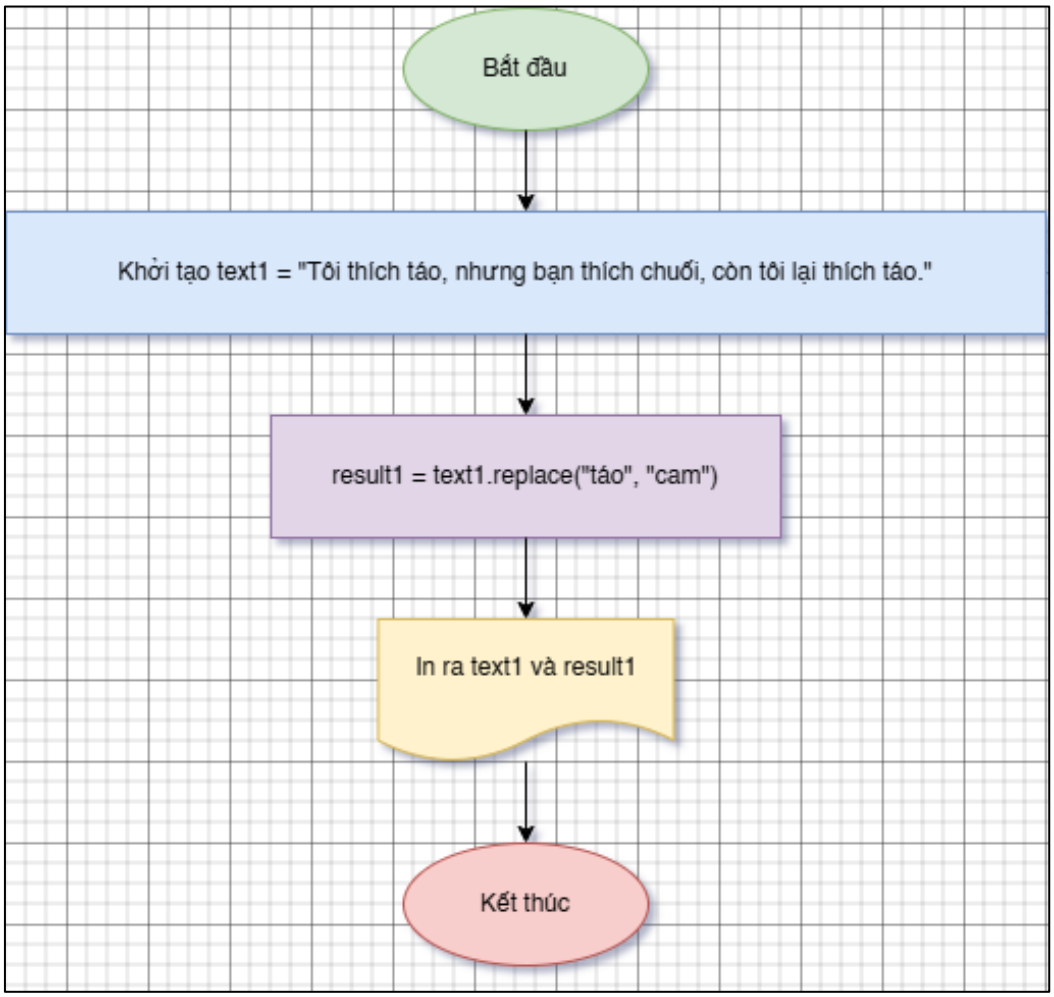
 # Ví dụ 1: Thay thế tất cả các lần xuất hiện

```
# Ví dụ 1: Thay thế tất cả các lần xuất hiện
text1 = "Tôi thích táo, nhưng bạn thích chuối, còn tôi lại thích táo."
result1 = text1.replace("táo", "cam")
print(f"Chuỗi ban đầu: {text1}")
print(f"Chuỗi sau replace(): {result1}")
```

[13] ✓ 0.0s

```
Chuỗi ban đầu: Tôi thích táo, nhưng bạn thích chuối, còn tôi lại thích táo.
Chuỗi sau replace(): Tôi thích cam, nhưng bạn thích chuối, còn tôi lại thích cam.
```

Flowchart



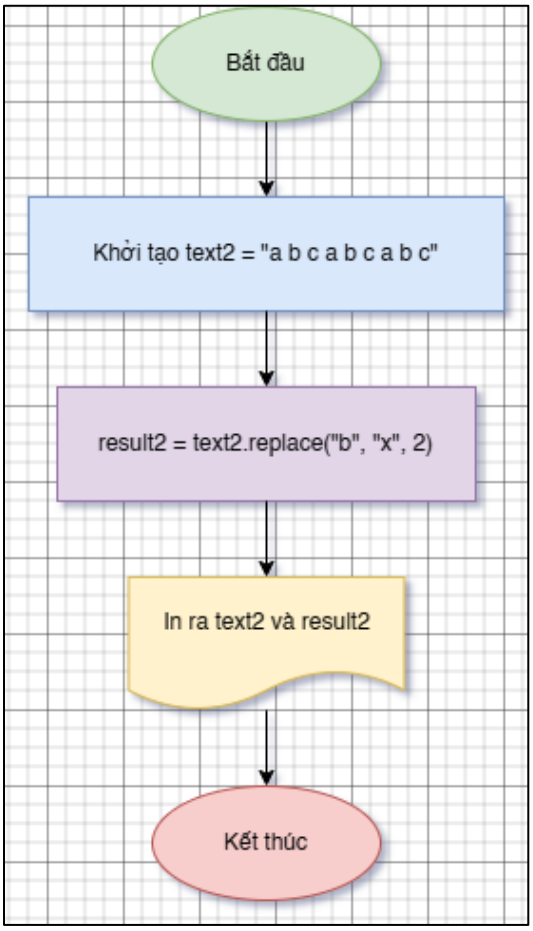
 # Ví dụ 2: Thay thế với giới hạn số lần (count)

```
# Ví dụ 2: Thay thế với giới hạn số lần (count)
text2 = "a b c a b c a b c"
# Thay thế 'b' bằng 'x' tối đa 2 lần
result2 = text2.replace("b", "x", 2)
print(f"\nChuỗi ban đầu: {text2}")
print(f"Chuỗi sau replace(..., 2): {result2}")
```

[14] ✓ 0.0s

```
...
Chuỗi ban đầu: a b c a b c a b c
Chuỗi sau replace(..., 2): a x c a x c a b c
```

Flowchart



Chương 7

Exercise 1: Write a program to read through a file and print the contents of the file (line by line) all in upper case. Executing the program will look as follows:

python shout.py
Enter a file name: mbox-short.txt
FROM STEPHEN.MARQUARD@UCT.AC.ZA SAT JAN 5 09:14:16 2008
RETURN-PATH: <POSTMASTER@COLLAB.SAKAIPROJECT.ORG>
RECEIVED: FROM MURDER (MAIL.UMICH.EDU [141.211.14.90])
BY FRANKENSTEIN.MAIL.UMICH.EDU (CYRUS V2.3.8) WITH LMTPA;
SAT, 05 JAN 2008 09:14:16 -0500

```python
#Exercise 1: Write a program to read through a file and print the contents of the
#file (line by line) all in upper case. Executing the program will look as follows:

file_name = input("Enter file name: ")
try:
    with open(file_name, 'r') as file:
        for line in file:
            print(line.strip().upper())
except FileNotFoundError:
    print(f"File '{file_name}' not found.")
except Exception as e:
    print(f"An error occurred: {e}")
```

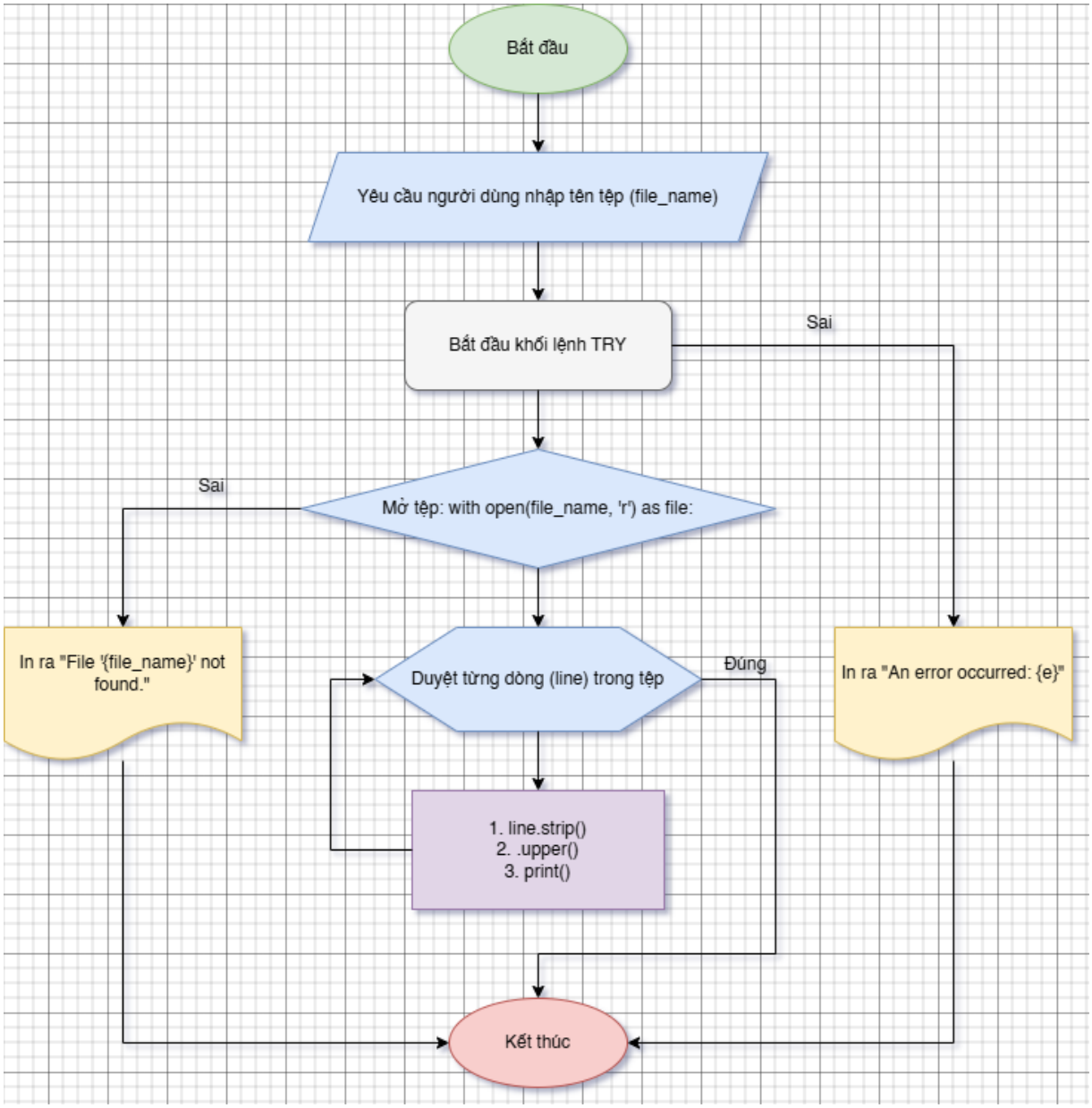
[1] ✓ 3.9s

```
FROM STEPHEN.MARQUARD@UCT.AC.ZA SAT JAN  5 09:14:16 2008
RETURN-PATH: <POSTMASTER@COLLAB.SAKAIPROJECT.ORG>
RECEIVED: FROM MURDER (MAIL.UMICH.EDU [141.211.14.90])
BY FRANKENSTEIN.MAIL.UMICH.EDU (CYRUS V2.3.8) WITH LMTPA;
SAT, 05 JAN 2008 09:14:16 -0500
X-SIEVE: CMU SIEVE 2.3
RECEIVED: FROM MURDER ([UNIX SOCKET])
BY MAIL.UMICH.EDU (CYRUS V2.2.12) WITH LMTPA;
SAT, 05 JAN 2008 09:14:16 -0500
RECEIVED: FROM HOLES.MR.ITD.UMICH.EDU (HOLES.MR.ITD.UMICH.EDU [141.211.14.79])
BY FLAWLESS.MAIL.UMICH.EDU () WITH ESMTP ID M05EEFR1013674;
SAT, 5 JAN 2008 09:14:15 -0500
RECEIVED: FROM PAPLOO.UHI.AC.UK (APP1.PROD.COLLAB.UHI.AC.UK [194.35.219.184])
BY HOLES.MR.ITD.UMICH.EDU ID 477F90B0.2DB2F.12494 ;
5 JAN 2008 09:14:10 -0500
RECEIVED: FROM PAPLOO.UHI.AC.UK (LOCALHOST [127.0.0.1])
BY PAPLOO.UHI.AC.UK (POSTFIX) WITH ESMTP ID 5F919BC2F2;
SAT,  5 JAN 2008 14:10:05 +0000 (GMT)
MESSAGE-ID: <200801051412.M05ECIAH010327@NAKAMURA.UITS.IUPUI.EDU>
MIME-VERSION: 1.0
CONTENT-TRANSFER-ENCODING: 7BIT
RECEIVED: FROM PROD.COLLAB.UHI.AC.UK ([194.35.219.182])
BY PAPLOO.UHI.AC.UK (JAMES SMTP SERVER 2.1.3) WITH SMTP ID 899
FOR <SOURCE@COLLAB.SAKAIPROJECT.ORG>;
SAT, 5 JAN 2008 14:09:50 +0000 (GMT)
...

----------------------
THIS AUTOMATIC NOTIFICATION MESSAGE WAS SENT BY SAKAI COLLAB (HTTPS://COLLAB.SAKAIPROJECT.ORG/PORTAL) FROM THE SOURCE SITE.
YOU CAN MODIFY HOW YOU RECEIVE NOTIFICATIONS AT MY WORKSPACE > PREFERENCES.
```

Output is truncated. View as a scrollable element or open in a text editor. Adjust cell output settings...

Flowchart


Bắt đầu
Yêu cầu người dùng nhập tên tệp (file_name)
Bắt đầu khối lệnh TRY
Sai
Mở tệp: with open(file_name, 'r') as file:
Sai
In ra "File '{file_name}' not found."
Duyệt từng dòng (line) trong tệp
Đúng
In ra "An error occurred: {e}"
1. line.strip()
2. .upper()
3. print()
Kết thúc

Exercise 2: Write a program to prompt for a file name, and then read through the file and look for lines of the form:

X-DSPAM-Confidence:0.8475

When you encounter a line that starts with "X-DSPAM-Confidence:" pull apart the line to extract the floating-point number on the line. Count these lines and then compute the total of the spam confidence values from these lines. When you reach the end of the file, print out the average spam confidence.

```
#Exercise 2: Write a program to prompt for a file name, and then read through the
#file and look for lines of the form:
#X-DSPAM-Confidence:0.8475

file_name = input("Enter file name: ")
try:
    with open(file_name, 'r') as file:
        total = 0.0
        count = 0
        for line in file:
            if line.startswith("X-DSPAM-Confidence:"):
                colon_pos = line.find(':')
                number_str = line[colon_pos + 1:].strip()
                number = float(number_str)
                total += number
                count += 1
        if count > 0:
            average = total / count
            print(f"Average spam confidence: {average}")
        else:
            print("No lines found with X-DSPAM-Confidence.")
except FileNotFoundError:
    print(f"File '{file_name}' not found.")
```

[4] ✓ 9.2s

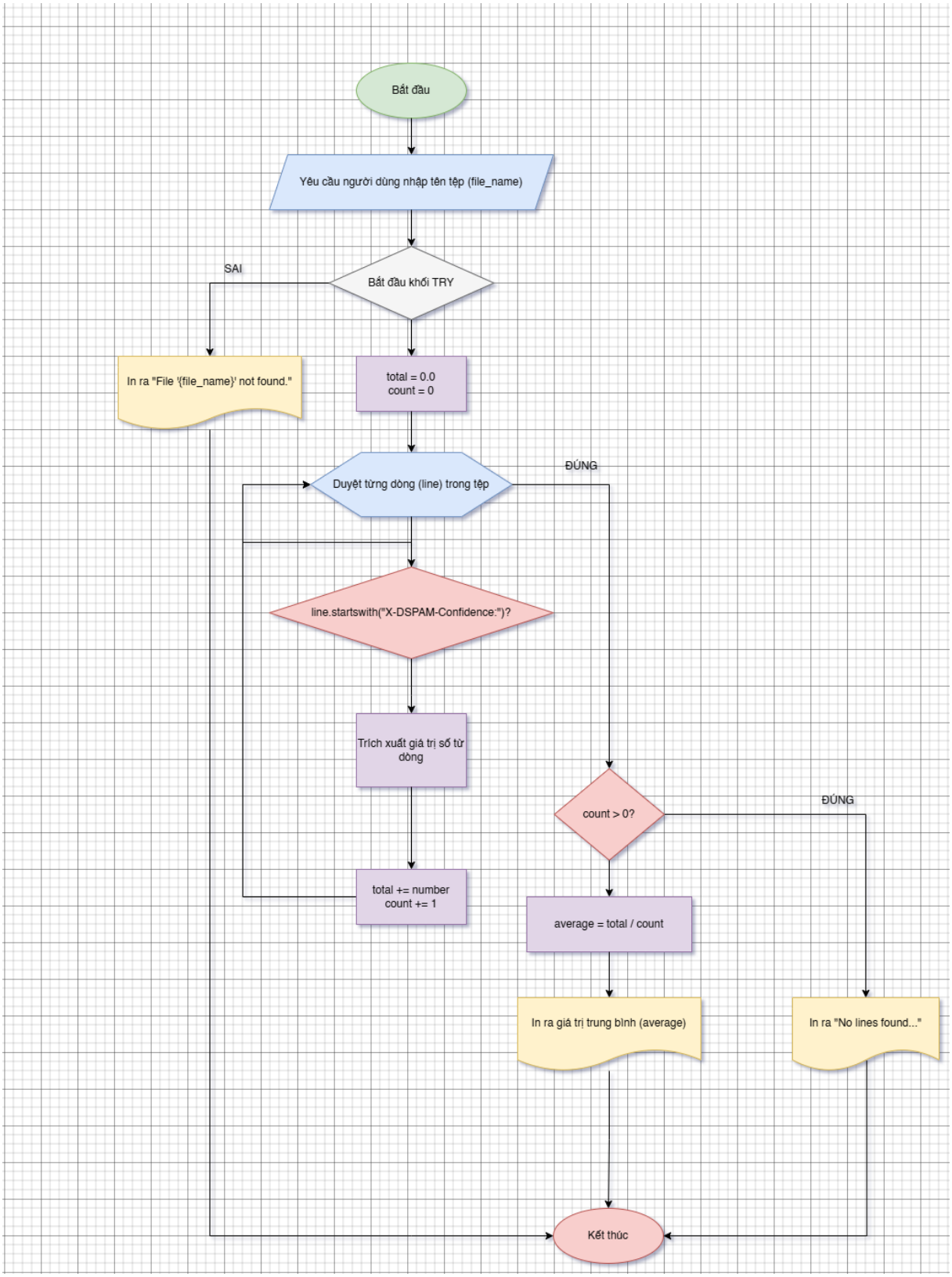
```
Average spam confidence: 0.8941280467445736
```

```
                number = float(number_str)
                total += number
                count += 1
        if count > 0:
            average = total / count
            print(f"Average spam confidence: {average}")
        else:
            print("No lines found with X-DSPAM-Confidence.")
except FileNotFoundError:
    print(f"File '{file_name}' not found.")
```

[5] ✓ 9.9s

```
Average spam confidence: 0.7507185185185187
```

Flowchart


Bắt đầu
Yêu cầu người dùng nhập tên tệp (file_name)
Bắt đầu khối TRY
SAI
In ra "File '{file_name}' not found."
total = 0.0
count = 0
Duyệt từng dòng (line) trong tệp
ĐÚNG
line.startswith("X-DSPAM-Confidence:")?
Trích xuất giá trị số từ dòng
total += number
count += 1
count > 0?
ĐÚNG
average = total / count
In ra giá trị trung bình (average)
In ra "No lines found..."
Kết thúc

Exercise 3: Sometimes when programmers get bored or want to have a bit of fun, they add a harmless *Easter Egg* to their program

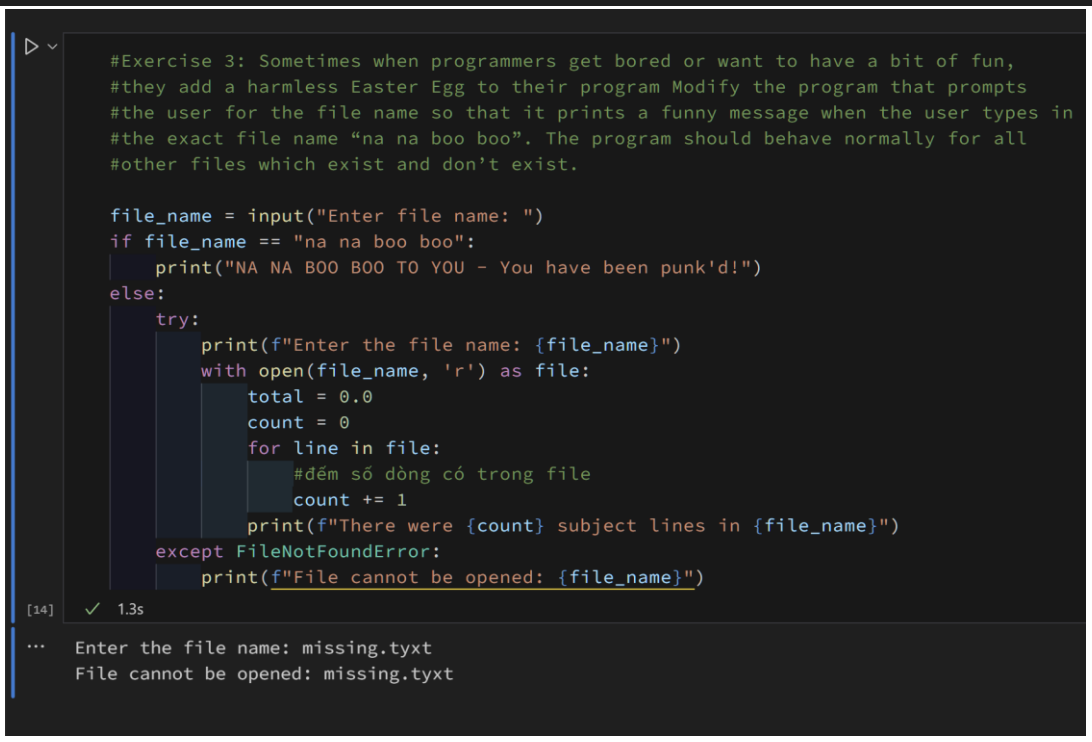
Modify the program that prompts the user for the file name so that it prints a funny message when the user types in the exact file name “na na boo boo”. The program should behave normally for all other files which exist and don’t exist.

```
#Exercise 3: Sometimes when programmers get bored or want to have a bit of fun,
#they add a harmless Easter Egg to their program Modify the program that prompts
#the user for the file name so that it prints a funny message when the user types in
#the exact file name “na na boo boo”. The program should behave normally for all
#other files which exist and don’t exist.

file_name = input("Enter file name: ")
if file_name == "na na boo boo":
    print("NA NA BOO BOO TO YOU - You have been punk'd!")
else:
    try:
        print(f"Enter the file name: {file_name}")
        with open(file_name, 'r') as file:
            total = 0.0
            count = 0
            for line in file:
                #đếm số dòng có trong file
                count += 1
            print(f"There were {count} subject lines in {file_name}")
    except FileNotFoundError:
        print(f"File '{file_name}' not found.")
```

[11] ✓ 6.9s

```
Enter the file name: mbox-short.txt
There were 1909 subject lines in mbox-short.txt
```



```python
#Exercise 3: Sometimes when programmers get bored or want to have a bit of fun,
#they add a harmless Easter Egg to their program Modify the program that prompts
#the user for the file name so that it prints a funny message when the user types in
#the exact file name “na na boo boo”. The program should behave normally for all
#other files which exist and don’t exist.

file_name = input("Enter file name: ")
if file_name == "na na boo boo":
    print(f"Enter the file name: {file_name}")
    print("NA NA BOO BOO TO YOU - You have been punk'd!")
else:
    try:
        print(f"Enter the file name: {file_name}")
        with open(file_name, 'r') as file:
            total = 0.0
            count = 0
            for line in file:
                #đếm số dòng có trong file
                count += 1
            print(f"There were {count} subject lines in {file_name}")
    except FileNotFoundError:
        print(f"File cannot be opened: {file_name}")
```

[17] ✓ 5.0s

```
Enter the file name: na na boo boo
NA NA BOO BOO TO YOU - You have been punk'd!
```

Flowchart


Bắt đầu
Yêu cầu người dùng nhập tên tệp (file_name)
file_name == "na na boo boo"?
ĐÚNG
In ra thông điệp "NA NA BOO BOO..."
SAI
Thử mở và xử lý tệp
In ra "File cannot be opened..."
count = 0
Duyệt từng dòng trong tệp
count += 1
In ra kết quả đếm dòng (count)
Kết thúc