

Last login: Sun Oct 29 12:25:38 on ttys000
davidleturcq@MacBook-Pro-de-david-3 ~ % python3
Python 3.11.4 (main, Jun 20 2023, 17:23:00) [Clang 14.0.3
(clang-1403.0.22.14.1)] on darwin
Type "help", "copyright", "credits" or "license" for more
information.

```
>>> def position(x):
...     alphabet =
'ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJKLMNOPQRSTUVWXYZ'
...     x = x.upper()
...     i = 0
...     while x != alphabet[i] and i < 26 :
...         i+=1
...     return(i)
...
>>> def subst(mot, code, clair) :
...     for x in mot :
...
'''
File "<stdin>", line 3
```

IndentationError: expected an indented block after 'for' statement
on line 2

```
>>> def subst(mot, code, clair) :
...     res = mot
...     i = 0 :
File "<stdin>", line 3
    i = 0 :
    ^
```

SyntaxError: invalid syntax

```
>>> def subst(mot, code, clair) :
...     i = 0 :
File "<stdin>", line 2
    i = 0 :
    ^
```

SyntaxError: invalid syntax

```
>>> def subst(mot, code, clair) :
...     res = mot
...     i = 0
...     for x in mot :
...         if x = code :
File "<stdin>", line 5
    if x = code :
    ^^^^^^^
```

SyntaxError: invalid syntax. Maybe you meant '==' or ':=' instead of
'='?

```
>>> def subst(mot, code, clair) :
...     res = mot
...     i = 0
...     for x in mot :
...         if x = code :
File "<stdin>", line 5
    if x = code :
    ^^^^^^^
```

SyntaxError: invalid syntax. Maybe you meant '==' or ':=' instead of

```
'='?
>>> def subst(mot, code, clair) :
...     if x = code :
...         File "<stdin>", line 2
...             if x = code :
...                 ^^^^^^^
SyntaxError: invalid syntax. Maybe you meant '==' or ':=' instead of
'='?
```

```
>>>
>>> def substitution(m, code, lettre)
...     File "<stdin>", line 1
...     def substitution(m, code, lettre)
...         ^
```

```
SyntaxError: expected ':'
>>>     message = m
...     File "<stdin>", line 1
...     message = m
IndentationError: unexpected indent
>>>     i = 0
...     File "<stdin>", line 1
...     i = 0
IndentationError: unexpected indent
>>>     for x in m :
...     File "<stdin>", line 1
...     for x in m :
IndentationError: unexpected indent
>>>         if x == code :
...         File "<stdin>", line 1
...         if x == code :
IndentationError: unexpected indent
>>>             message[i] = lettre
...             File "<stdin>", line 1
...             message[i] = lettre
IndentationError: unexpected indent
>>>                 i+=1
...                 File "<stdin>", line 1
...                 i+=1
IndentationError: unexpected indent
>>>     return message
...     File "<stdin>", line 1
...     return message
IndentationError: unexpected indent
>>>
>>> def substitution(m, code, lettre)
...     File "<stdin>", line 1
...     def substitution(m, code, lettre)
...         ^
```

```
SyntaxError: expected ':'
>>>     message = m
...     File "<stdin>", line 1
...     message = m
IndentationError: unexpected indent
>>>     i = 0
...     File "<stdin>", line 1
```

```

    i = 0
IndentationError: unexpected indent
>>>     for x in m :
        File "<stdin>", line 1
            for x in m :
IndentationError: unexpected indent
>>>         if x == code :
            File "<stdin>", line 1
                if x == code :
IndentationError: unexpected indent
>>>             message[i] = lettre
            File "<stdin>", line 1
                message[i] = lettre
IndentationError: unexpected indent
>>>             i+=1
            File "<stdin>", line 1
                i+=1
IndentationError: unexpected indent
>>>     return message
    File "<stdin>", line 1
        return message
IndentationError: unexpected indent
>>>
>>>
>>>
>>> def substitution(m, code, lettre) :
...     message = m
...     i = 0
...     for x in m :
...         if x == code :
...             message[i] = lettre
...         i+=1
...     return message
...
>>> message =
BIDPVGXEIXQKIEWIFCDICBIDDPWPFCDPXDCIEIDPYVIFCIJPBIVIFCOPFDBIXEVXEIDP
YDGFBIIDLUPCDTXDDPFCDICOGXQGEJXIYBOIBPVYPDGFRXYLGVVIIIXQDGFCKEYBIXQIC
LGVVIIIXQDIOIFCPYEIDPVYDOIBPDLYIFLIICOIBPWGBXTCIYBDLUIELUIFCBIDYBIFLI
ICBUGEEIXEOIDCIFIMEIDBIEIMIBIDIXCTEYDTGXEDIDLGXEDYIEDKXFIMEIDDYBDTGX
WPYIFCPXDIWJPJIYFLBYFIEBIXEKYIECIYBDTEIFFIFCIFDGFJIPFCBIDFGMBIDPCCYC
XOIDOIDJEPFODDTUYFQPBGGFJIDPXKGF00IDDGBYCXOIDRXYDIVMBIFCDIF0GEVYEOPF
DXFEIWIDPFDKYFBIXEDEIYFDKILGFODDGFCTBIYFDOICYFLIBBIDVPJYRXIDICOIDTPE
LIBBIDOGEPYFDYRXXFDPMBIKYFICGYBIFCWPJXIVIFCBIXEDTEXFIBBIDVADCYRXID'
    File "<stdin>", line 1
        message =
BIDPVGXEIXQKIEWIFCDICBIDDPWPFCDPXDCIEIDPYVIFCIJPBIVIFCOPFDBIXEVXEIDP
YDGFBIIDLUPCDTXDDPFCDICOGXQGEJXIYBOIBPVYPDGFRXYLGVVIIIXQDGFCKEYBIXQIC
LGVVIIIXQDIOIFCPYEIDPVYDOIBPDLYIFLIICOIBPWGBXTCIYBDLUIELUIFCBIDYBIFLI
ICBUGEEIXEOIDCIFIMEIDBIEIMIBIDIXCTEYDTGXEDIDLGXEDYIEDKXFIMEIDDYBDTGX
WPYIFCPXDIWJPJIYFLBYFIEBIXEKYIECIYBDTEIFFIFCIFDGFJIPFCBIDFGMBIDPCCYC
XOIDOIDJEPFODDTUYFQPBGGFJIDPXKGF00IDDGBYCXOIDRXYDIVMBIFCDIF0GEVYEOPF
DXFEIWIDPFDKYFBIXEDEIYFDKILGFODDGFCTBIYFDOICYFLIBBIDVPJYRXIDICOIDTPE
LIBBIDOGEPYFDYRXXFDPMBIKYFICGYBIFCWPJXIVIFCBIXEDTEXFIBBIDVADCYRXID'

```

^

SyntaxError: unterminated string literal (detected at line 1)

```
>>> message =
```

```
"BIDPVGXEIXQKIEWIFCDICBIDDPWPFCDPXDCIEIDPYVIFCIJPBIVIFCOPFDBIXEVXEID
PYDGFBDLUPCDTXYDDPFCDICOGXQGEJXIYBOIBPVYPYDGRXYLGVVIIIXQDGFCKEYBIXQI
CLGVVIIIXQDIOIFCPYEIDPVYDOIBPDLYIFLIICOIBPWGBXTCIYBDLUIELUIFCBIDYBIFL
IICBUGEEIXE0IDCIFIEMEIDBIEIMIBIDIXCTEYDTGXEDIDLGXEDYIEDKXFIMEIDDYBDTG
XWPYIFCPXDIIEWPJIIYFLBYFIEBIXEKYIECIYBDTEIFFIFCIFDGFJIPFCBIDFGMBIDPCCY
CX0ID0IDJEPFODDTUYFQPBGGFJIDPXKGF00IDDGBYCX0IDRXYDIVMBIFCDIF0GEVYEOP
FDXFEIWIDPFDKYFBIXEDEIYFDKILGFODDGFCTBIYFDOICYFLIBBIDVPJYRXIDICOIDTP
ELIBBIDOGEPYFDYRXXFDPMBIKYFICGYBIFCWPJXIVIFCBIXEDTEXFIBBIDVADCYRXID'
```

File "<stdin>", line 1

```
message =
```

```
"BIDPVGXEIXQKIEWIFCDICBIDDPWPFCDPXDCIEIDPYVIFCIJPBIVIFCOPFDBIXEVXEID
PYDGFBDLUPCDTXYDDPFCDICOGXQGEJXIYBOIBPVYPYDGRXYLGVVIIIXQDGFCKEYBIXQI
CLGVVIIIXQDIOIFCPYEIDPVYDOIBPDLYIFLIICOIBPWGBXTCIYBDLUIELUIFCBIDYBIFL
IICBUGEEIXE0IDCIFIEMEIDBIEIMIBIDIXCTEYDTGXEDIDLGXEDYIEDKXFIMEIDDYBDTG
XWPYIFCPXDIIEWPJIIYFLBYFIEBIXEKYIECIYBDTEIFFIFCIFDGFJIPFCBIDFGMBIDPCCY
CX0ID0IDJEPFODDTUYFQPBGGFJIDPXKGF00IDDGBYCX0IDRXYDIVMBIFCDIF0GEVYEOP
FDXFEIWIDPFDKYFBIXEDEIYFDKILGFODDGFCTBIYFDOICYFLIBBIDVPJYRXIDICOIDTP
ELIBBIDOGEPYFDYRXXFDPMBIKYFICGYBIFCWPJXIVIFCBIXEDTEXFIBBIDVADCYRXID'
```

^

SyntaxError: unterminated string literal (detected at line 1)

```
>>> message =
```

```
'BIDPVGXEIXQKIEWIFCDICBIDDPWPFCDPXDCIEIDPYVIFCIJPBIVIFCOPFDBIXEVXEID
PYDGFBDLUPCDTXYDDPFCDICOGXQGEJXIYBOIBPVYPYDGRXYLGVVIIIXQDGFCKEYBIXQI
CLGVVIIIXQDIOIFCPYEIDPVYDOIBPDLYIFLIICOIBPWGBXTCIYBDLUIELUIFCBIDYBIFL
IICBUGEEIXE0IDCIFIEMEIDBIEIMIBIDIXCTEYDTGXEDIDLGXEDYIEDKXFIMEIDDYBDTG
XWPYIFCPXDIIEWPJIIYFLBYFIEBIXEKYIECIYBDTEIFFIFCIFDGFJIPFCBIDFGMBIDPCCY
CX0ID0IDJEPFODDTUYFQPBGGFJIDPXKGF00IDDGBYCX0IDRXYDIVMBIFCDIF0GEVYEOP
FDXFEIWIDPFDKYFBIXEDEIYFDKILGFODDGFCTBIYFDOICYFLIBBIDVPJYRXIDICOIDTP
ELIBBIDOGEPYFDYRXXFDPMBIKYFICGYBIFCWPJXIVIFCBIXEDTEXFIBBIDVADCYRXID'
```

```
>>>
```

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```
>>> message
```

```
'BIDPVGXEIXQKIEWIFCDICBIDDPWPFCDPXDCIEIDPYVIFCIJPBIVIFCOPFDBIXEVXEID
PYDGFBDLUPCDTXYDDPFCDICOGXQGEJXIYBOIBPVYPYDGRXYLGVVIIIXQDGFCKEYBIXQI
CLGVVIIIXQDIOIFCPYEIDPVYDOIBPDLYIFLIICOIBPWGBXTCIYBDLUIELUIFCBIDYBIFL
IICBUGEEIXE0IDCIFIEMEIDBIEIMIBIDIXCTEYDTGXEDIDLGXEDYIEDKXFIMEIDDYBDTG
XWPYIFCPXDIIEWPJIIYFLBYFIEBIXEKYIECIYBDTEIFFIFCIFDGFJIPFCBIDFGMBIDPCCY
CX0ID0IDJEPFODDTUYFQPBGGFJIDPXKGF00IDDGBYCX0IDRXYDIVMBIFCDIF0GEVYEOP
FDXFEIWIDPFDKYFBIXEDEIYFDKILGFODDGFCTBIYFDOICYFLIBBIDVPJYRXIDICOIDTP
ELIBBIDOGEPYFDYRXXFDPMBIKYFICGYBIFCWPJXIVIFCBIXEDTEXFIBBIDVADCYRXID'
```

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```
>>> def freq(m, lettre) :
```

```
...     n = 0
```

```
...     i=0
```

```
...     for x in m :
```

```
...         i+=1
```

```
...         if x = lettre :
```

```

File "<stdin>", line 6
    if x = lettre :
        ^^^^^^^^^
SyntaxError: invalid syntax. Maybe you meant '==' or ':=' instead of
'='?
>>>                                     n+=1
    File "<stdin>", line 1
        n+=1
IndentationError: unexpected indent
>>>     return 100*n//i
    File "<stdin>", line 1
        return 100*n//i
IndentationError: unexpected indent
>>>
>>> def freq(m, lettre) :
...     n = 0
...     i=0
...     for x in m :
...         i+=1
...         if x = lettre :
    File "<stdin>", line 6
        if x = lettre :
            ^^^^^^^^^
SyntaxError: invalid syntax. Maybe you meant '==' or ':=' instead of
'='?
>>>                                     n+=1
    File "<stdin>", line 1
        n+=1
IndentationError: unexpected indent
>>>     return (100*n//i)
    File "<stdin>", line 1
        return (100*n//i)
IndentationError: unexpected indent
>>>
>>>
>>>
>>> def freq(m, lettre) :
...     n = 0
...     i = 0
...     for x in m :
...         i+=1
...         if x == lettre :
...             n+=1
...     return (100*n//i)
...
>>> freq(m, A)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'm' is not defined
>>> freq(message, A)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'A' is not defined
>>> freq(message, "A")

```

```

0
>>> freq(message, "B")
7
>>> freq(message, "C")
6
>>> freq(message, "D")
12
>>> freq(message, "E")
6
>>> freq(message, "F")
8
>>> for x in "ABCDEFGHIJKLMNOPQRSTUVWXYZ" :
...     print(x, freq(message, x) )
...
A 0
B 7
C 6
D 12
E 6
F 8
G 4
H 0
I 17
J 1
K 1
L 2
M 1
N 0
O 3
P 5
Q 1
R 0
S 0
T 1
U 0
V 2
W 1
X 6
Y 6
Z 0
>>> message
'BIDPVGXEIXQKIEWIFCDICBIDDPWPFCDPXDCIEIDPYVIFCIJPBIVIFCOPFDBIXEVXEID
PYDGFBIIDLUPCDTXYYDDPFCDICOGXQGEJXIYB0IBPVYPYDGFRXYLGVVIIIXQDGFCKEYBIXQI
CLGVVIIIXQDIOIFCPYEIDPVYD0IBPDLYIFLIICOIBPWGBXTCIYBDLUIELUIFCBIDYBIFL
IICBUGEEIXE0IDCIFI MEIDBIEIMIBIDIXCTEYDTGXEDIDLGXEDYIEDKXFIMEIDDYBDTG
XWPYIFCPXDI EW PJIYFLBYFIEBIXEKYIECIYBDTEIFFIFCIFDGFJIPFCBIDFGMBIDPCCY
CX0ID0IDJEPFODDTUYFQPBGFJIDPXKGF00IDDGBYCX0IDRXYDIVMBIFCDIF0GEVYEOP
FDXFEIWIDPFDKYFBIXEDEIYFDKILGFODDGFCTBIYFD0ICYFLIBBIDVPJYRXIDIC0IDTP
ELIBBIDOGEPYFDYRXXFDPMBIKYFICGYBIFCWPJXIVIFCBIXEDTEXFIBBIDVADCYRXID'
>>> for x in "ABCDEFGHIJKLMNOPQRSTUVWXYZ" :
...     print(x, freq(message, x) )
...
A 0
B 7

```

```

C 6
D 12
E 6
F 8
G 4
H 0
I 17
J 1
K 1
L 2
M 1
N 0
O 3
P 5
Q 1
R 0
S 0
T 1
U 0
V 2
W 1
X 6
Y 6
Z 0
>>>
>>> def freq2(m, l, l2) :
...     n = 0
...     i = 0
...     while i +1 < len(m) :
...         if m[i]== l & m[i+1] == l2 :
...             n+=1
...             i+=1
...     return(100*n//i)
...
>>> freq2(m, "A", "B")
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'm' is not defined
>>> freq2(message, "A", "B")
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
  File "<stdin>", line 5, in freq2
TypeError: unsupported operand type(s) for &: 'str' and 'str'
>>> def freq2(m, l, l2) :
...     n = 0
...     i = 0
...     while i +1 < len(m) :
...         if m[i]== l and m[i+1] == l2 :
...             n+=1
...             i+=1
...     return(100*n//i)
...
>>> freq2(m, "A", "B")
Traceback (most recent call last):

```

```

File "<stdin>", line 1, in <module>
NameError: name 'm' is not defined
>>> freq2(message, "A", "B")
0
>>> freq2(message, "B","B")
0
>>> freq2(message, "F","F")
0
>>> def freq2(m, l, l2) :
...     n = 0
...     i = 0
...     while i +1 < len(m) :
...         if m[i]== l and m[i+1] == l2 :
...             n+=1
...             i+=1
...     return(1000*n//i)
...
>>> def freq2(m, l, l2) :
'''
File "<stdin>", line 2
    ^
IndentationError: expected an indented block after function
definition on line 1
>>> freq2(message, "F","F")
1
>>> freq2(message, "B","B")
7
>>> for i in "ABCDEFGHIJKLMNOPQRSTUVWXYZ":
...     print(i, freq2(message, i, i))
...
A 0
B 7
C 1
D 11
E 1
F 1
G 0
H 0
I 7
J 0
K 0
L 0
M 0
N 0
O 1
P 0
Q 0
R 0
S 0
T 0
U 0
V 3
W 0

```



```

X 1
Y 0
Z 0
>>> substitution(message, "I", "e")
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
  File "<stdin>", line 6, in substitution
TypeError: 'str' object does not support item assignment
>>> def substitution(m, code, lettre) :
...     message = ""
...     i = 0
...     for x in m :
...         if x == code :
...             message = message + "lettre"
...         else :
...             message = message + x
...         i+=1
...     return message
...
>>>
>>> substitution(message, "I", "e")
'BlettreDPVGXEletrreXQKlettreEWlettreFCDlettreCBlettreDDPWPFCDPXDCle
ttreElettreDPYVlettreFClettreJPBlettreVlettreFCOPFDBlettreXEVXEletrr
eDPYDGFbletrreDLUPCDTXYDDPFCDlettreCOGXQGEJXlettreYB0lettreBPVPYDGF
RXYLGVVlettreletrreXQDGFCKEYBlettreXQlettreCLGVVlettreletrreXQDlettre
0lettreFCPYEletrreDPVYD0lettreBPDLYlettreFLlettreletrreC0lettreBPWGB
XTClettreYBDLUlettreELUlettreFCBlettreDYBlettreFLlettreletrreCBUGEEl
ettrreXE0lettreDClettreFlettreMElettreDBlettreElettreMlettreBlettreDl
ettrreXCTEYDTGXEDlettreDLGXEDYlettreEDKXFllettreMElettreDDYBDTGXWPYlet
treFCPXDelettreEWPJlettreYFLBYFllettreEBlettreXEKYlettreEClettreYBDTEl
ettrreFFlettreFClettreFDGFJlettrePFCBlettreDFGMBlettreDPCCYCX0lettreD
0lettreDJEPFODDTUYFQPBGFJlettreDPXKGF00lettreDDGBYCX0lettreDRXYDlet
treVMBlettreFCDlettreFOGEVYEOPFDXFElettreWlettreDPFDKYFBlettreXEDEle
ttreYFDKlettreLGFODDGFCTBlettreYFD0lettreCYFLlettreBBlettreDVPJYRXle
ttreDlettreC0lettreDTPELlettreBBlettreDOGEPYFDYRXXFDPMBlettreKYFllett
reCGYBlettreFCWPJXlettreVlettreFCBlettreXEDTEXFllettreBBlettreDVADCYR
XlettreD'
>>> def substitution(m, code, lettre) :
...     message = ""
...     i = 0
...     for x in m :
...         if x == code :
...             message = message + lettre
...         else :
...             message = message + x
...         i+=1
...     return message
...
>>> substitution(message, "I", "e")
'BeDPVGXEEeXQKeEWeFCDeCBEDDPWPFCDPXDCeEeDPYVeFCeJPBeVeFCOPFDBeXEVXEE
DPYDGFBeDLUPCDTXYDDPFCDDeCOGXQGEJXeYB0eBPVPYDGFRRXYLGVVeeXQDGFCKEYBeXQe
CLGVVeeXQDe0eFCPYEeDPVYD0eBPDLYeFLeeC0eBPWGBXTCeYBDLUeELUeFCBeDYBeFL
eeCBUGEEeXE0eDCeFeMEeDBeEeMeBeDeXCTEYDTGXEDeDLGXEDYeEDKXFeMEeDDYBDTG
XWPYeFCPXDeEWPJeYFLBYFeEBeXEKYeECeYBDTEeFFeFCeFDGFJePFCBeDFGMBBeDPCCY

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```
CX0eD0eDJEPFODDTUYFQPBBGFJeDPXKGF00eDDGBYCX0eDRXYDeVMBeFCDeF0GEVYEOP
FDXFEeWeDPFDKYFBeXEDeEYFDKeLGFODDGFCTBeYFD0eCYFLeBBBeDVPJYRXeDeC0eDTP
ELeBBBeDOGEPYFDYRXXFDPMBeKYFeCGYBeFCWPJXeVeFCBeXEDTEXFeBBBeDVADCYRXeD '
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```
>>> message = substitution(message,"I","e")
```

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>>> message
```

```
'BeDPVGXEEeXQKeEWeFCDeCBEDDPWPFCDPXDCeEeDPYVeFCeJPBeVeFCOPFDBeXEVXEEeD
PYDGFBeDLUPCDTXYYDDPFCDDeCOGXQGEJXeYB0eBPVPYDGFRXYLGVVeeXQDGFCKEYBeXQe
CLGVVeeXQDe0eFCPYEeDPVYD0eBPDLYeFLeeC0eBPWGBXTCeYBDLUeELUeFCBeDYBeFL
eeCBUGEEeXE0eDCeFeMEeDBeEeMeBeDeXCTEYDTGXEDeDLGXEDYeEDKXFeMEeDDYBDTG
XWPYFeFCPXDeEWPJJeYFLBYFeEBEXEKYeECeYBDTEeFFeFCeFDGFJePFCBeDFGMBBeDPCCY
CX0eD0eDJEPFODDTUYFQPBBGFJeDPXKGF00eDDGBYCX0eDRXYDeVMBeFCDeF0GEVYEOP
FDXFEeWeDPFDKYFBeXEDeEYFDKeLGFODDGFCTBeYFD0eCYFLeBBBeDVPJYRXeDeC0eDTP
ELeBBBeDOGEPYFDYRXXFDPMBeKYFeCGYBeFCWPJXeVeFCBeXEDTEXFeBBBeDVADCYRXeD '
```

```
>>> message = substitution(message,"B","l")
```

```
>>> message = substitution(message,"D","s")
```

```
>>> message
```

```
'lesPVGXEEeXQKeEWeFCseClessPWPFCsPXsCeEesPYVeFCeJPleVeFCOPFsleXEVXEes
PYsGFlesLUPCsTXYssPFCseCOGXQGEJXeYl0elPVPYsGFRXYLGVVeeXQsGFCKEYleXQe
CLGVVeeXQse0eFCPYEesPVYs0elPsLYeFLeeC0elPWGLXTCeYlsLUeELUeFClesYleFL
eeClUGEEeXE0esCeFeMEesleEeMeleseXCTEYsTGXEsEsLGXEsYeEsKXFeMEessYlsTG
XWPYFeFCPXseEWPJJeYFLlYFeEleXEKYeECeYlsTEeFFeFCeFsGFJePFClesFGMlesPCCY
CX0es0esJEPF0ssTUYFQPlLGfJesPXKGF00essGLYCX0esRXYseVMleFCseF0GEVYEOP
FsXFEeWesPFsKYFleXEsEeYFsKeLGF0ssGFCTleYFs0eCYFLellesVPJYRXeseC0esTP
ELellesOGEPYFsYRXXFsPmlKeKYFeCGYleFCWPJXeVeFCleXEsTEXFellesVAsCYRXes '
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```
>>> substitution(message, "F", "t")
```

```
'lesPVGXEEeXQKeEWetCseClessWPtCsPXsCeEesPYVetCeJPleVetCOPtsleXEVXEes
PYsGtlesLUPCsTXYssPtCseCOGXQGEJXeYl0elPVPYsGtRXYLGVVeeXQsGtCKEYleXQe
CLGVVeeXQse0etCPYEesPVYs0elPsLYetLeeC0elPWGLXTCeYlsLUeELUetClesYletL
eeClUGEEeXE0esCeteMEesleEeMeleseXCTEYsTGXEsEsLGXEsYeEsKXteMEessYlsTG
```

```

XWPYEtCPXseEWPJeYtLLYteEleXEKYeECeYlsTEettetCetsGtJePtClestGMlesPCCY
CX0es0esJEpt0ssTUYtQPlGtJesPXKGt00essGLYCX0esRXYseVMletCset0GEVYEOP
tsXtEeWesPtsKYtleXEsEeYtsKeLGt0ssGtCTleYts0eCYtLellesVPJYRXeseC0esTP
ELelles0GEPYtsYRXXtsPMleKYteCGYletCWPJXeVetCleXEsTEXtellesVAsCYRXes '
>>> substitution(message, "F", "r")
'lesPVGXEEeXQKeEWeFCseClessaWaFCsaXsCeEesaYVeFCeJaleVeFC0aFsleXEVXEes
PYsGrlesLUPCstXYssaFCseC0GXQGEJXeYl0elaVaYsGrRXYLGVVeeXQsGrCKEYleXQe
CLGVVeeXQse0erCPYEesPVYs0elPsLYerLeeC0elPWGLXTCeYlsLUeELUerClesYlerL
eeClUGEEeXE0esCereMEesleEeMeleseXCTEYsTGXEsesLGXEsYeEsKXreMEessYlsTG
XWPYerCPXseEWPJeYrLLYreEleXEKYeECeYlsTEerrercersGrJePrClesrGMlesPCCY
CX0es0esJEPr0ssTUYrQPlGrJesPXKGt00essGLYCX0esRXYseVMlerCser0GEVYEOP
rsXrEeWesPrsKYrleXEsEeYrsKeLGr0ssGrCTleYrs0eCYrLellesVPJYRXeseC0esTP
ELelles0GEPYrsYRXXrsPMleKYreCGYlerCWPJXeVerCleXEsTEXrellesVAsCYRXes '
>>> substitution(message, "P", "a")
'lesaVGXEEeXQKeEWeFCseClessaWaFCsaXsCeEesaYVeFCeJaleVeFC0aFsleXEVXEes
aYsGFlesLUaCstXYssaFCseC0GXQGEJXeYl0elaVaYsGrRXYLGVVeeXQsGrCKEYleXQe
CLGVVeeXQse0eFCaYEesaVYs0elasLYeFLeeC0elaWGLXTCeYlsLUeELUeFClesYleFL
eeClUGEEeXE0esCeFeMEesleEeMeleseXCTEYsTGXEsesLGXEsYeEsKXFeMEessYlsTG
XWaYeFCaXseEWaJeYFLLYFeEleXEKYeECeYlsTEeFFeFCeFsGFJeaFClesFGMlesACCY
CX0es0esJEaF0ssTUYFQallGFJesaXKGF00essGLYCX0esRXYseVMleFCseF0GEVYE0a
FsXFEeWesaFsKYFleXEsEeYFsKeLGF0ssGFCTleYFs0eCYFLellesVaJYRXeseC0esTa
ELelles0GEaYFsYRXXFsaMleKYFeCGYleFCWaJXeVeFCleXEsTEXfellesVAsCYRXes '
>>> )

```

File "<stdin>", line 1

)

^

SyntaxError: unmatched ')'

>>>

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```
WaYeFCaXseEWaJeYFLlYFeEleXEKYEeCeYlsTEeFFeFCeFsGFJeaFClesFGMlesaCCYC
X0es0esJEaF0ssTUYFQallGFJesaXKGF00essGLYCX0esRXYseVMleFCseF0GEVYE0aF
sXFEeWesaFsKYFleXEsEeYFsKeLGF0ssGFCTleYFs0eCYFLellesVaJYRXeseC0esTaE
Lelles0GEaYFsYRXXFsaMleKYFeCGYleFCWaJXeVeFCleXEsTEXFellesVAsCYRXes
```

```
Traceback (most recent call last):
```

```
File "<stdin>", line 1, in <module>
```

```
NameError: name
```

```
'lesaVGXEeXQKeEWeFCseClessaWaFCsaXsCeEesaYVeFCeJaleVeFC0aFsleXEVXEes
aYsGFlesLUaCsTXYssaFCseCOGXQGEJXeYl0elaVaYsGFRXYLGVVeeXQsGFCKEYleXQe
CLGVVeeXQse0eFCaYEesaVYs0elasLYeFLeet0elaWGLXTCeYlsLUeELUeFClesYl'
```

```
is not defined
```

```
>>> m =
```

```
"lesaVGXEeXQKeEWeFCseClessaWaFCsaXsCeEesaYVeFCeJaleVeFC0aFsleXEVXEes
aYsGFlesLUaCsTXYssaFCseCOGXQGEJXeYl0elaVaYsGFRXYLGVVeeXQsGFCKEYleXQe
CLGVVeeXQse0eFCaYEesaVYs0elasLYeFLeet0elaWGLXTCeYlsLUeELUeFClesYleFL
eeCLUGEEeXE0esCeFeMEesleEeMeleseXCTEYsTGXEsesLGXEsYeEsKXFeMEessYlsTG
XWaYeFCaXseEWaJeYFLlYFeEleXEKYEeCeYlsTEeFFeFCeFsGFJeaFClesFGMlesaCCY
CX0es0esJEaF0ssTUYFQallGFJesaXKGF00essGLYCX0esRXYseVMleFCseF0GEVYE0a
FsXFEeWesaFsKYFleXEsEeYFsKeLGF0ssGFCTleYFs0eCYFLellesVaJYRXeseC0esTa
ELelles0GEaYFsYRXXFsaMleKYFeCGYleFCWaJXeVeFCleXEsTEXFellesVAsCYRXes"
```

```
>>> m= substitution(m, "C", "t")
```

```
>>> m
```

```
'lesaVGXEeXQKeEWeFtsetlessaWaFtsaXsteEesaYVeFteJaleVeFt0aFsleXEVXEes
aYsGFlesLUatsTXYssaFtset0GXQGEJXeYl0elaVaYsGFRXYLGVVeeXQsGFtKEYleXQe
tLGVVeeXQse0eFtaYEesaVYs0elasLYeFLeet0elaWGLXTteYlsLUeELUeFtlesYleFL
eetLUGEEeXE0esteFeMEesleEeMeleseXtTEYsTGXEsesLGXEsYeEsKXFeMEessYlsTG
XWaYeFtaXseEWaJeYFLlYFeEleXEKYEeteYlsTEeFFeFteFsGFJeaFtlesFGMlesattY
tX0es0esJEaF0ssTUYFQallGFJesaXKGF00essGLYtX0esRXYseVMleFtseF0GEVYE0a
FsXFEeWesaFsKYFleXEsEeYFsKeLGF0ssGFtTleYFs0etYFLellesVaJYRXeset0esTa
ELelles0GEaYFsYRXXFsaMleKYFetGYleFtWaJXeVeFtleXEsTEXFellesVAsYRXes'
```

```
>>> m = substitution(m, "W", "v")
```

```
>>> m = substitution(m, "F", "n")
```

```
>>> m
```

```
'lesaVGXEeXQKeEventsetlessavantsaXsteEesaYVenteJaleVent0ansleXEVXEes
aYsGnlesLUatsTXYssantset0GXQGEJXeYl0elaVaYsGnRXYLGVVeeXQsGntKEYleXQe
tLGVVeeXQse0entaYEesaVYs0elasLYenLeet0elavGLXTteYlsLUeELUentlesYlenL
eetLUGEEeXE0esteneMEesleEeMeleseXtTEYsTGXEsesLGXEsYeEsKXneMEessYlsTG
XvaYentaXseEvaJeYnLlYneEleXEKYEeteYlsTEennentensGnJeantlesnGMlesattY
tX0es0esJEan0ssTUYnQallGnJesaXKGn00essGLYtX0esRXYseVMlentsen0GEVYE0a
nsXnEevesansKYnleXEsEeYnsKeLGn0ssGntTleYns0etYnLellesVaJYRXeset0esTa
ELelles0GEaYnsYRXXnsaMleKYnetGYlentvaJXeVentleXEsTEXnellesVAsYRXes'
```

```
>>> >>> m = substitution(m, "Y", "i")
```

```
>>> m = substitution(m, "X", "u")
```

```
>>> m
```

```
'lesaVGueeuQKeEventsetlessavantsausteEesaiVenteJaleVent0ansleuEVuEes
aisGnlesLUatsTuissantset0GuQGEJueil0elaVaisGnRuiLGVVeeuQsGntKEileuQe
tLGVVeeuQse0entaiEesaVis0elasLienLeet0elavGluTteilsLUeELUentlesilenL
eetLUGEEeuE0esteneMEesleEeMeleseutTEisTGuEsesLGuEsieEsKuneMEessilsTG
uvaientauseEvaJeinLlineEleuEKieEteilsTEennentensGnJeantlesnGMlesatti
tu0es0esJEan0ssTUiinQallGnJesauKGn00essGlitu0esRuisseVMlentsen0GEViE0a
nsunEevesansKinleuEsEeinsKeLGn0ssGntTleins0etinLellesVaJiRueset0esTa
ELelles0GEainsiRuunsaMleKinetGilentvaJueVentleuEsTEunellesVAsiRues'
```

```
>>> m = substitution(m, "0", "d")
```

```
>>>
```

```

>>> m
'lesaVGueuQKeEventsetlessavantsausteEesaiVenteJaleVentdansleuEVuEes
aisGnlesLUatsTuissantsetdGuQGEJueildelaVaisGnRuiLGVVeeuQsGntKEileuQe
tLGVVeeuQsedentaiEesaVisdelasLienLeetdelavGluTteilsLUeLUentlesilenL
eetlUGEEeuEdesteneMEesleEeMeleseutTEisTGuEsesLGuEsieEsKuneMEessilsTG
uvaientauseEvaJeinLlineEleuEKieEteilsTEennentensGnJeantlesnGMlesatti
tudesdesJEandssTUinQallGnJesauKGnddessGlitudesRuisseVMlentsendGEViEda
nsunEevesansKinleuEsEeinsKeLGndssGntTleinsdetinLellesVaJiRuesetdesTa
ELellesdGEainsiRuunsaMleKinetGilentvaJueVentleuEsTEunellesVAstiRues'
>>> m = substitution(m, "E", "r")
>>> m
'lesaVGureuQKerventsetlessavantsausteresaiVenteJaleVentdansleurVures
aisGnlesLUatsTuissantsetdGuQGrJueildelaVaisGnRuiLGVVeeuQsGntKrileuQe
tLGVVeeuQsedentairesaVisdelasLienLeetdelavGluTteilsLUerLUentlesilenL
eetlUGrreurdesteneMreslereMeleseutTrisTGursesLGursiersKuneMressilsTG
uvaientauservaJeinLlinerleurKierteilsTrennentensGnJeantlesnGMlesatti
tudesdesJrandssTUinQallGnJesauKGnddessGlitudesRuisseVMlentsendGrVirda
nsunrevesansKinleursreinsKeLGndssGntTleinsdetinLellesVaJiRuesetdesTa
rLellesdGrainsiRuunsaMleKinetGilentvaJueVentleursTrunellesVAstiRues'
>>> m = substitution(m, "V", "m")
>>> m
'lesamGureuQKerventsetlessavantsausteresaimenteJalementdansleurmures
aisGnlesLUatsTuissantsetdGuQGrJueildelamaisGnRuiLGmmeeuQsGntKrileuQe
tLGmmeeuQsedentairesamisdelasLienLeetdelavGluTteilsLUerLUentlesilenL
eetlUGrreurdesteneMreslereMeleseutTrisTGursesLGursiersKuneMressilsTG
uvaientauservaJeinLlinerleurKierteilsTrennentensGnJeantlesnGMlesatti
tudesdesJrandssTUinQallGnJesauKGnddessGlitudesRuisemMlentsendGrmirda
nsunrevesansKinleursreinsKeLGndssGntTleinsdetinLellesmaJiRuesetdesTa
rLellesdGrainsiRuunsaMleKinetGilentvaJumentleursTrunellesmAstiRues'
>>> m = substitution(m, "G", "o")
>>> m = substitution(m, "Q", "x")
>>> m
'lesamoureuxKerventsetlessavantsausteresaimenteJalementdansleurmures
aionlesLUatsTuissantsetdouxorJueildelamaisonRuiLommeeuxsontKrileuxe
tLommeeuxsedentairesamisdelasLienLeetdelavoluTteilsLUerLUentlesilenL
eetlUorreurdesteneMreslereMeleseutTrisToursesLoursiersKuneMressilsTo
uvaientauservaJeinLlinerleurKierteilsTrennentensonJeantlesnoMlesatti
tudesdesJrandssTUinxallonJesauKonddessolitudesRuisemMlentsendormirda
nsunrevesansKinleursreinsKeLondssontTleinsdetinLellesmaJiRuesetdesTa
rLellesdorainsiRuunsaMleKinetoilentvaJumentleursTrunellesmAstiRues'
>>> m = substitution(m, "K", "f")
>>> m
'lesamoureuxferventsetlessavantsausteresaimenteJalementdansleurmures
aionlesLUatsTuissantsetdouxorJueildelamaisonRuiLommeeuxsontfrileuxe
tLommeeuxsedentairesamisdelasLienLeetdelavoluTteilsLUerLUentlesilenL
eetlUorreurdesteneMreslereMeleseutTrisToursesLoursiersfuneMressilsTo
uvaientauservaJeinLlinerleurfierteilsTrennentensonJeantlesnoMlesatti
tudesdesJrandssTUinxallonJesaufonddessolitudesRuisemMlentsendormirda
nsunrevesansfinleursreinsfeLondssontTleinsdetinLellesmaJiRuesetdesTa
rLellesdorainsiRuunsaMlefinetoilentvaJumentleursTrunellesmAstiRues'
>>> m = substitution(m, "J", "g")
>>> m
'lesamoureuxferventsetlessavantsausteresaimentegalementdansleurmures
aionlesLUatsTuissantsetdouxorgueil delamaisonRuiLommeeuxsontfrileuxe

```

```

tLommeuxsedentairesamisdelasLienLeetdelavoluTteilsLUerLUentlesilenL
eetlUorreurdesteneMreslereMeleseutTrisToursesLoursiersfuneMressilsTo
uvaientauservageinLlinerleurfierteilsTrennentensongeantlesnoMlesatti
tudesdesgrandssTUinxallongesaufonddessolitudesRuisemMlentsendormirda
nsunrevesansfinleursreinsfeLondssontTleinsdetinLellesmagiRuesetdesTa
rLellesdorainsiRuunsaMlefinetoilentvaguementleursTrunellesmAstiRues'
>>> m = substitution(m, "T", "p")
>>> m
'lesamoureuxferventsetlessavantsausteresaimentegalementdansleurmures
aisionlesLUatspuissantsetdouxorgueildelamaisonRuiLommeuxsontfrileuxe
tLommeuxsedentairesamisdelasLienLeetdelavolupteilsLUerLUentlesilenL
eetlUorreurdesteneMreslereMeleseutprispoursesLoursiersfuneMressilspo
uvaientauservageinLlinerleurfierteilsprennentensongeantlesnoMlesatti
tudesdesgrandsspUinxallongesaufonddessolitudesRuisemMlentsendormirda
nsunrevesansfinleursreinsfeLondssontpleinsdetinLellesmagiRuesetdespa
rLellesdorainsiRuunsaMlefinetoilentvaguementleursprunellesmAstiRues'
>>> m = substitution(m, "L", "c")
>>> m
'lesamoureuxferventsetlessavantsausteresaimentegalementdansleurmures
aisionlescUatspuissantsetdouxorgueildelamaisonRuicommeeuxsontfrileuxe
tcommeeuxsedentairesamisdelascienceetdelavolupteilsUercUentlesilenc
eetlUorreurdesteneMreslereMeleseutprispoursescoursiersfuneMressilspo
uvaientauservageinclinerleurfierteilsprennentensongeantlesnoMlesatti
tudesdesgrandsspUinxallongesaufonddessolitudesRuisemMlentsendormirda
nsunrevesansfinleursreinsfecondssontpleinsdetincellesmagiRuesetdespa
rcellesdorainsiRuunsaMlefinetoilentvaguementleursprunellesmAstiRues'
>>> m = substitution(m, "R", "q")
>>> m
'lesamoureuxferventsetlessavantsausteresaimentegalementdansleurmures
aisionlescUatspuissantsetdouxorgueildelamaisonquicommeeuxsontfrileuxe
tcommeeuxsedentairesamisdelascienceetdelavolupteilsUercUentlesilenc
eetlUorreurdesteneMreslereMeleseutprispoursescoursiersfuneMressilspo
uvaientauservageinclinerleurfierteilsprennentensongeantlesnoMlesatti
tudesdesgrandsspUinxallongesaufonddessolitudesquisemMlentsendormirda
nsunrevesansfinleursreinsfecondssontpleinsdetincellesmagiquesetdespa
rcellesdorainsiquunsaMlefinetoilentvaguementleursprunellesmAstiques'
>>> m = substitution(m, "M", "b")
>>> m = substitution(m, "U", "h")
>>> m
'lesamoureuxferventsetlessavantsausteresaimentegalementdansleurmures
aisionleschatspuissantsetdouxorgueildelamaisonquicommeeuxsontfrileuxe
tcommeeuxsedentairesamisdelascienceetdelavolupteilscherchentlesilenc
eetlhorreurdestenebreslerebeleseutprispoursescoursiersfunebressilspo
uvaientauservageinclinerleurfierteilsprennentensongeantlesnoblesatti
tudesdesgrandssphinxallongesaufonddessolitudesquisemblentsendormirda
nsunrevesansfinleursreinsfecondssontpleinsdetincellesmagiquesetdespa
rcellesdorainsiquunsaMlefinetoilentvaguementleursprunellesmAstiques'
>>> m = substitution(m, "A", "y")
>>> m
'lesamoureuxferventsetlessavantsausteresaimentegalementdansleurmures
aisionleschatspuissantsetdouxorgueildelamaisonquicommeeuxsontfrileuxe
tcommeeuxsedentairesamisdelascienceetdelavolupteilscherchentlesilenc
eetlhorreurdestenebreslerebeleseutprispoursescoursiersfunebressilspo
uvaientauservageinclinerleurfierteilsprennentensongeantlesnoblesatti

```

tudesdesgrandssphinxallongesaufonddessolitudesquisemblentsendormirda
nsunrevesansfinleursreinsfecondssontpleinsdetincellesmagiquesetdespa
rcellesdorainsiquunsablefinetoilentvaguementleursprunellesmystiques'
>>>