

```
1  from sys import argv
2  from cs50 import get_string
3
4  def encrypt(p, key):
5      c = []
6      j = 0
7      for i in range(0, len(p)):
8          if p[i].isalpha() == True:
9              # get key
10             k = ord(key[j])
11             if (k >= 97 and k <= 122): # uppercase letters
12                 k -= 97
13             elif (k >= 65 and k <= 90): # lowercase letters
14                 k -= 65
15             j += 1
16             if (j == len(key)):
17                 j = 0
18
19             out = ord(p[i]) + k
20
21             # check that they are still letters and in the right case
22             if (out > 122):
23                 while(out > 122):
24                     out -= 26
25             elif (out < 97 and out > 90):
26                 while(out > 90):
27                     out -= 26
28
29             # append encrypted character to the list
30             c.append(chr(out))
31         else:
32             # append non alphabetic character to the list
33             c.append(p[i])
34     ct = "".join(c)
35     return ct
36
37
38 if len(argv) < 2:
39     print("Your command line must include a key")
40     exit()
41
42 key = list(argv[1])
```

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43
44 for i in key:
45     if i.isalpha() == False:
46         print("Your key may only include alphabetic charcters")
47         exit()
48
49 plaintext = get_string("Enter plaintext: ")
50 ciphertext = encrypt(plaintext, key)
51
52 print("Ciphertext:", ciphertext)
```