

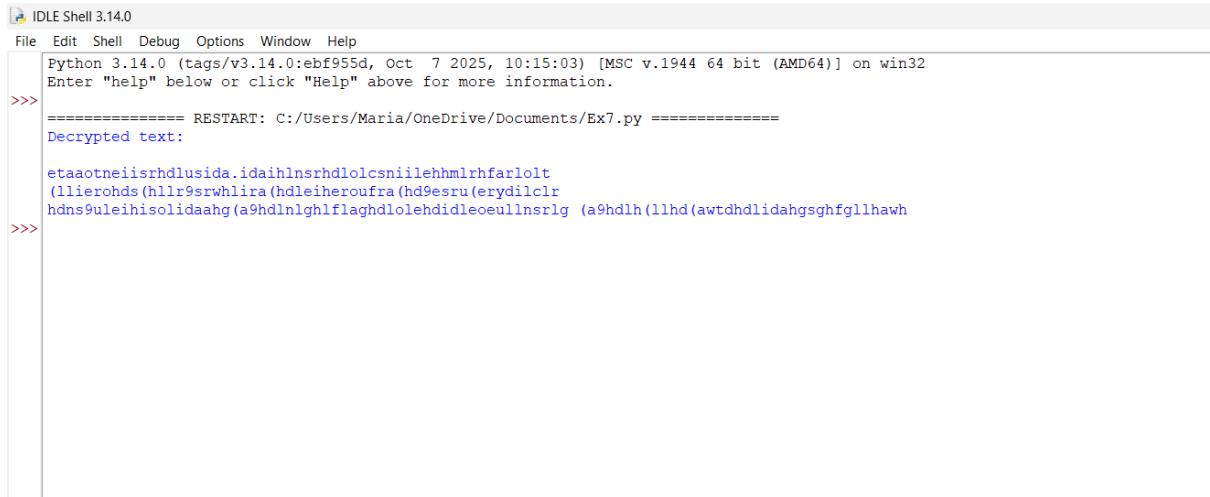
7. Write a python program for the following ciphertext was generated using a simple substitution algorithm.

```
53##305))6*;4826)4#.4#);806*;48+8¶60))85;;]8*;:#*8+83  
(88)5*t;46(;88*96*?;8)*#;(485);5*t2:#*(4956*2(5*-4)8¶8*  
;4069285);)6+8)4##;1(#9;48081;8:8#1;48+85;4)485+528806*81  
(#9;48;(88;4(#?34;48)4#;161;:188;#?;
```

Decrypt this message. 1. As you know, the most frequently occurring letter in English is e. Therefore, the first or second (or perhaps third?) most common character in the message is likely to stand for e. Also, e is often seen in pairs (e.g., meet, fleet, speed, seen, been, agree, etc.). Try to find a character in the ciphertext that decodes to e. 2. The most common word in English is “the.” Use this fact to guess the characters that stand for t and h. 3. Decipher the rest of the message by deducing additional words.

```
# Ciphertext  
  
ciphertext = """53##305))6*;4826)4#.4#);806*;48+8¶60))85;;]8*;:#*8+83  
(88)5*t;46(;88*96*?;8)*#;(485);5*t2:#*(4956*2(5*-4)8¶8*  
;4069285);)6+8)4##;1(#9;48081;8:8#1;48+85;4)485+528806*81  
(#9;48;(88;4(#?34;48)4#;161;:188;#?;"""  
  
# Define the substitution mapping here (example)  
  
cipher_map = {  
    '5':'e', '3':'t', '#':'a', '+':'o', '0':'n', ':':'i', '6':'s', '*':'r', ';':'h',  
    '4':'d', '8':'l', '2':'u', '¶':'c', ']':'m', ':':'f', '?':'w', '1':'g', '-':'y'  
    # Continue mapping all symbols to letters...  
}  
  
# Decryption  
  
plaintext = ""  
  
for char in ciphertext:  
    if char in cipher_map:  
        plaintext += cipher_map[char]  
    else:
```

```
plaintext += char # Keep unknown symbols as-is
print("Decrypted text:\n")
print(plaintext)
```



The screenshot shows the Python IDLE Shell interface. The title bar reads "IDLE Shell 3.14.0". The menu bar includes File, Edit, Shell, Debug, Options, Window, and Help. A status bar at the bottom displays "Python 3.14.0 (tags/v3.14.0:ebf955d, Oct 7 2025, 10:15:03) [MSC v.1944 64 bit (AMD64)] on win32" and "Enter "help" below or click "Help" above for more information." The main window shows the following text:

```
>>> ===== RESTART: C:/Users/Maria/OneDrive/Documents/Ex7.py =====
Decrypted text:
etaaotneiisrhdlusida.idaihlnsrhdlolcsniilehhmlrhfarolt
(llicerohds(hllr9srwhlira(hdleiheroufra(hd9esru(erydilclr
hdns9uleihisolidaaahg(a9hndlghlfaghdlolehdidleoellnsrlg (a9hdlh(l1hd(atwdhdlidahgsghfgllhawh
>>>
```