

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*†;46(;88*96*?;8)*†(;485);5*†2.*†(;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*†;46(;88*96*?;8)*†(;485);5*†2.*†(;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)
```



```
IDLE Shell 3.14.0
File Edit Shell Debug Options Window Help
Python 3.14.0 (tags/v3.14.0:ebf955d, Oct 7 2025, 10:15:03) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

>>> ===== RESTART: C:/Users/Maria/OneDrive/Documents/Ex7.py =====
Decrypted text:

etaaotneiisrhd Lusida.idaihlnsrhd lolcsniilehmlrhfarlolt
(1lierohds(hllr9srwhlira(hdleihroufra(hd9esru(erydilclr
hdns9uleihisolidaaahg(a9hdlnlghlflaghdlolehdidleoeullnsrlg (a9hdlh(1lhd(awtdhdldidagsgghfgllhawh

>>>
```