TASK 1:

1.Write a function of gematria that sums the numerical values of the letters of a word according to the letter value in lv dictionary.

In [1]:

```python
# Define the letter value dictionary
lv = {'a': 100, 'b': 200, 'c': 339, 'd': 93, 'e': 600, 'f': 69, 'g': 77,
      'h': 86, 'i': 98, 'j': 128, 'k': 11, 'l': 12, 'm': 162, 'n': 50,
      'o': 28, 'p': 80, 'q': 60, 'r': 111, 's': 37, 't': 21, 'u': 34,
      'v': 48, 'w': 66, 'x': 63, 'y': 36, 'z': 83}
```

In [2]:

```python
class gematria():
    def __init__(self,lv):
        self.lv = lv

    def calculate_gematria(self, word):
        total = 0
        for i in word:
            if i in self.lv:
                total += self.lv[i]
        return total
```

In [3]:

```python
gem = gematria(lv)
```

In [11]:

```python
word = input("Enter text ")
gematria_value = gem.calculate_gematria(word.lower())
print(f"The gematria value of '{word}' is {gematria_value}")
```

```
Enter text global
The gematria value of 'global' is 429
```

TASK 2:

2.Process a corpus collection and for each document count how many of its word has 666?

In [5]:

```
corpus = ["""Natural Language Processing (NLP) is a rapidly growing field of study
        that aims to enable computers to understand, interpret, and generate human l
        One interesting application of NLP is in the field of Gematria,
        a traditional Jewish system of assigning numerical values to letters in the
        Gematria has been used to study the hidden meanings and relationships betwee
        religious texts, and NLP techniques can be applied to analyze and extract in
        By combining NLP and Gematria we ,
        we can explore new ways of understanding and interpreting ancient religious
        as we we ll as uncovering new insights about language and meaning more broad
```

In [6]:

```python
def count_words_with_value(word_list, value):
    count = 0
    for word in word_list:
        word_value = sum([lv.get(letter.lower(), 0) for letter in word])
        if word_value == value:
            count += 1
    return count
```

In [7]:

```python
for doc in corpus:
    words = doc.split()
    count = count_words_with_value(words, 666)
    print(f"Document has {count} words with the numerical value of 666.")
```

Document has 4 words with the numerical value of 666.

Task 3:

3. Write a func decode to process a text randomly replacing words with their gematria equivalence in order to discover hidden meaning of the text.

In [13]:

```python
import random

def encrypt(text):
    words = text.split()
    new_words = []
    for word in words:
        if random.random() < 0.5:
            gematria_value = sum([lv.get(letter.lower(), 0) for letter in word])
            new_word = str(gematria_value)
        else:
            new_word = word
        new_words.append(new_word)
    return " ".join(new_words)
```

In [14]:

```python
text = input("Enter your message ")
print(encrypt(text))
```

```
Enter your message this is a secret message
this 135 100 secret 1613
```