

In [2]: `print(avanish)`

The image is a decorative ASCII art logo for the name 'Avanish'. It is composed of various symbols including forward slashes (/), backslashes (\), vertical bars (|), horizontal bars (\_), and parentheses (()). The letters are stylized and interconnected, with some parts resembling a grid or a series of connected lines.

In [3]: `d1 = "I am Sam "`  
`d2 = "Sam I am "`  
`d3 = "I do not like green eggs and ham "`  
`d4 = "I do not like them, Sam I am "`

In [4]: `def shingles_k1(text):`  
 `return (text.split())`

In [5]: `def shingles_k2(text):`  
 `l=[]`  
 `words = text.split()`  
 `pairs = [words[i]+' '+words[i+1] for i in range(len(words)-1)]`  
 `l.append(pairs)`  
 `return l`

In [17]: `def shingles_k3(text):`  
 `l=[]`  
 `words = text.split()`  
 `pairs = [words[i]+' '+words[i+1]+' '+words[i+2] for i in range(len(words)-2)]`  
 `l.append(pairs)`  
 `return l`

In [7]: `union_doc = d1+d2+d3+d4`

```
In [8]: shingles_k1(union_doc)
```

```
Out[8]: ['I',  
         'am',  
         'Sam',  
         'Sam',  
         'I',  
         'am',  
         'I',  
         'do',  
         'not',  
         'like',  
         'green',  
         'eggs',  
         'and',  
         'ham',  
         'I',  
         'do',  
         'not',  
         'like',  
         'them,',  
         'Sam',  
         'I',  
         'am']
```

```
In [9]: shingles_k2(union_doc)
```

```
Out[9]: [['I am',  
         'am Sam',  
         'Sam Sam',  
         'Sam I',  
         'I am',  
         'am I',  
         'I do',  
         'do not',  
         'not like',  
         'like green',  
         'green eggs',  
         'eggs and',  
         'and ham',  
         'ham I',  
         'I do',  
         'do not',  
         'not like',  
         'like them,',  
         'them, Sam',  
         'Sam I',  
         'I am']]
```

```
In [10]: shingles_k3(union_doc)
```

```
Out[10]: [['I am Sam',  
          'am Sam Sam',  
          'Sam Sam I',  
          'Sam I am',  
          'I am I',  
          'am I do',  
          'I do not',  
          'do not like',  
          'not like green',  
          'like green eggs',  
          'green eggs and',  
          'eggs and ham',  
          'and ham I',  
          'ham I do',  
          'I do not',  
          'do not like',  
          'not like them,',  
          'like them, Sam',  
          'them, Sam I',  
          'Sam I am']]
```

```
In [13]: def shingles_k4(text):  
          l=[]  
          words = text.split()  
  
          pairs = [words[i]+' '+words[i+1]+' '+words[i+2]+' '+words[i+3] for i in range(len(words)-3)]  
          l.append(pairs)  
          return l
```

```
In [14]: d1_U_d2 = d1+d2
```

```
In [15]: shingles_k4(d1_U_d2)
```

```
Out[15]: [['I am Sam Sam', 'am Sam Sam I', 'Sam Sam I am']]
```

```
In [18]: shingles_k3(d1_U_d2)
```

```
Out[18]: [['I am Sam', 'am Sam Sam', 'Sam Sam I', 'Sam I am']]
```

```
In [ ]:
```