CSE6037 - DEEP LEARNING AND ITS APPLICATIONS
Lab Activity 1

Strings

Code 1: Strings in python can be represented by wrapping them in Single quotes, Double quotes and Triple quotes

```
In [1]: #Single Quotes
        str='Shakespeare was born and raised in Stratford-upon-Avon, Warwickshire.'
        print(str)

        Shakespeare was born and raised in Stratford-upon-Avon, Warwickshire.
```

```
In [2]: #Double Quotes
        str="Shakespeare was born and raised in Stratford-upon-Avon, Warwickshire."
        print(str)

        Shakespeare was born and raised in Stratford-upon-Avon, Warwickshire.
```

```
In [1]: #Triple Quotes
        str='''Shakespeare was born and raised in Stratford-upon-Avon, Warwickshire.'''
        print(str)

        Shakespeare was born and raised in Stratford-upon-Avon, Warwickshire.
```

Code 2: Multi Line String

```
In [4]: passage = "William Shakespeare (bapt. 26 April 1564 - 23 April 1616)[a] was an English poet, playwright, and actor, widely regar
        print(passage)

  File "<ipython-input-4-112b7d62f060>", line 1
    passage = "William Shakespeare (bapt. 26 April 1564 - 23 April 1616)[a] was an English poet, playwright, and actor, widely
regarded as the greatest writer in the English language and the world's greatest dramatist.[2][3][4] He is often called Englan
d's national poet and the "Bard of Avon" (or simply "the Bard").[5][b] His extant works, including collaborations, consist of s
ome 39 plays,[c] 154 sonnets, two long narrative poems, and a few other verses, some of uncertain authorship. His plays have be
en translated into every major living language and are performed more often than those of any other playwright.[7]"

                                                                                                                    ^
SyntaxError: invalid syntax
```

Code 3: Triple Quotes used to create Multi Line String. Enclose string with a pair of Triple quotes, one at the start and second in the end.

```
In [5]: #Triple Quotes used for Multiline String
        passage = '''William Shakespeare (bapt. 26 April 1564 - 23 April 1616)[a] was an English poet, playwright, and actor, widely reg
        print(passage)

        William Shakespeare (bapt. 26 April 1564 - 23 April 1616)[a] was an English poet, playwright, and actor, widely regarded as the
        greatest writer in the English language and the world's greatest dramatist.[2][3][4] He is often called England's national poet
        and the "Bard of Avon" (or simply "the Bard").[5][b] His extant works, including collaborations, consist of some 39 plays,[c] 1
        54 sonnets, two long narrative poems, and a few other verses, some of uncertain authorship. His plays have been translated into
        every major living language and are performed more often than those of any other playwright.[7]
```

Code 4: Using apostrophe inside the single quotes gives error as python consider apostrophe as single quote, that signifies the end of the string. Thus it gives invalid syntax error

```
In [6]: str='Many of Shakespeare's plays were published in editions of varying quality and accuracy in his lifetime.'
        print(str)

  File "<ipython-input-6-a50f8d877c5a>", line 1
    str='Many of Shakespeare's plays were published in editions of varying quality and accuracy in his lifetime.'
                              ^
SyntaxError: invalid syntax
```

Code 5: So, wrap the String with the Double quotes. It works perfectly

```
In [8]: str="Many of Shakespeare's plays were published in editions of varying quality and accuracy in his lifetime."
        print(str)

Many of Shakespeare's plays were published in editions of varying quality and accuracy in his lifetime.
```

List

List is a Compound Data types made up of collections of elements. Elements are enclosed with the [] brackets separated by commas. Elements comprised of different datatypes are enclosed in [] bracket. Each of the elements are index. List is Mutable, elements can be added even after creation of List using append method. Elements are deleted from the list using the del keyword or remove method

```
In [9]: #List
        # Visiting 10 Cities of Europe since I won a lottery of $2 million
        cities = ['Madrid','Monaco','Dublin','Vaduz','Paris','Berlin','Amsterdam','London','Riga','Berlin']
        print(cities)

['Madrid', 'Monaco', 'Dublin', 'Vaduz', 'Paris', 'Berlin', 'Amsterdam', 'London', 'Riga', 'Berlin']
```

```
In [10]: #List is Mutable
         cities.append('Rome')
         print(cities)

['Madrid', 'Monaco', 'Dublin', 'Vaduz', 'Paris', 'Berlin', 'Amsterdam', 'London', 'Riga', 'Berlin', 'Rome']
```

```
In [11]: #Deletion of element using del keyword
         del cities[9]
         print(cities)

['Madrid', 'Monaco', 'Dublin', 'Vaduz', 'Paris', 'Berlin', 'Amsterdam', 'London', 'Riga', 'Rome']
```

```
In [12]: #Deletion of element using remove method
         cities.remove('Dublin')
         print(cities)

['Madrid', 'Monaco', 'Vaduz', 'Paris', 'Berlin', 'Amsterdam', 'London', 'Riga', 'Rome']
```

Tuple

Tuples are similar to List. Elements are enclosed with the () brackets. It is immutable, as it will not allow elements re-assignment.

In [13]:
```
#Tuple
cities_tuple = ('Madrid','Monaco','Dublin','Vaduz','Paris','Berlin','Amsterdam','London','Riga','Berlin')
print(cities_tuple)
```

```
('Madrid', 'Monaco', 'Dublin', 'Vaduz', 'Paris', 'Berlin', 'Amsterdam', 'London', 'Riga', 'Berlin')
```

Dictionaries

Elements are in Key Value pairs enclosed in {} brackets. Each element are separated by comma. Keys are immutable datatype. Elements can be accessed randomly using Keys.

In [14]:
```
## RegisterNumber: Student Name
student_dic = {1001:'Sita', 1002:'Meera', 1003:'Priya', 1004:'Smita', 1005:'Maya'}
print(student_dic)
```

```
{1001: 'Sita', 1002: 'Meera', 1003: 'Priya', 1004: 'Smita', 1005: 'Maya'}
```