

Indexing

In [72]:

```
foo = "python is object oriented"  
  
# left-to-right (starts with 0)  
# right-to-left (starts with -1)
```

accessing elements using index

In [1]:

```
foo = "prashant"  
foo[1]
```

Out[1]:

'r'

IndexError

When we try to access element beyond index limit of the string

len()

In [74]:

```
foo = "prashant"  
len(foo)
```

Out[74]:

8

in and not in operator

- used for membership check
- we can check if certain string is substring of given string

In [63]:

```
statement = "India is great"  
"India" in statement
```

Out[63]:

True

In [64]:

```
feature = "python is interpreted"  
"is" in feature
```

Out[64]:

True

In [65]:

```
feature2 = "python is oop and procedure oriented"  
"oop" not in feature2
```

Out[65]:

False

In [3]:

```
foo[3]
```

Out[3]:

'h'

In [4]:

```
bar = "indian"  
bar[-1]
```

Out[4]:

'n'

In [6]:

```
bar = "united states"  
bar[0]
```

Out[6]:

'u'

Slicing

[start: end: step]

- start index is inclusive
- end index is exclusive

In [49]:

```
foo = "prashant"  
      #01234567  
  
foo[1:5]
```

Out[49]:

'rash'

In [8]:

```
country = "india"  
country[1:4]
```

Out[8]:

'ndi'

In [13]:

```
lang = "golang"  
lang[-1:]
```

Out[13]:

'g'

In [11]:

```
example = "random string"  
example[:]
```

Out[11]:

'random string'

In [14]:

```
example2 = "velocity"  
example2[-4:-1]
```

Out[14]:

'cit'

In [15]:

```
example2 = "velocity"  
example2[-1:-4]
```

Out[15]:

''

In [18]:

```
random = "prashant"  
random[0:-1:2]
```

Out[18]:

'pahn'

In [19]:

```
random = "prashant"  
random[0::2]
```

Out[19]:

'pahn'

In [20]:

```
random = "prashant"  
random[:,2]
```

Out[20]:

'pahn'

In [21]:

```
random = "prashant"  
random[:,3]
```

Out[21]:

'psn'

how to reverse a string

In [22]:

```
random = "prashant"  
random[::-1]
```

Out[22]:

'tnahsarp'

In [23]:

```
random = "prashant"  
random[0:]
```

Out[23]:

..

In [27]:

```
random = "prashant"  
random[::-1]
```

Out[27]:

'tnahsarp'

In [48]:

```
random = "prashant"  
random[0:-4:-1]  
  
# [start : end : step]  
  
# end index should not be negative when `step` is specified
```

Out[48]:

''

In [51]:

```
random = "velocity"  
         #012345  
  
random[5:0:-1]
```

Out[51]:

'icole'

In [56]:

```
random = "velocity"  
         #012345  
  
random[4:0:-1]  # (right to left)
```

Out[56]:

'cole'

In [75]:

```
random = "velocity"  
         #012345  
  
last_index = len(random) - 1  
  
stop = last_index - 2  
  
random[last_index:stop:-1]
```

Out[75]:

'yt'

In [57]:

```
random = "velocity"  
        #012345  
  
random[4:0]    # (right to Left)
```

Out[57]:

..

In [66]:

```
feature = "object oriented"  
  
start = 0  
last = len(feature) - 1  
step = 2  
  
feature[start:last:step]
```

Out[66]:

'ojc ret'

palindrome

- mam
- nitin
- madam
- nayan
- dad
- malayalam

In [67]:

```
foo = "nitin"  
foo == foo[::-1]
```

Out[67]:

True

In [71]:

```
bar = "malayalam"  
bar == bar[::-1]
```

Out[71]:

True