Strings

a sequence of characters
String data type

>>> type("Hello")
<type 'str'>

>>> type('world')
<type 'str'>

Single or double quotes
Conversion to number and back

```python
int('123')
float('456.7')

str(123)
str(456.7)
```
Operations with strings

• Concatenation +
  >>> space = " "
  >>> "Hello" + space + "world"
  'Hello world'

• Multiplication *
  >>> ("Hello" + space) * 3
  'Hello Hello Hello '
Index

Hello

0 1 2 3 4

**string[index]**

```python
>>> string = "Hello"
>>> letter = string[1]
>>> print letter
e
```
Length

len(string)

>>> word = "Hello"
>>> len(word)
5
Looping through strings

word = 'Hello'
index = 0
while index < len(word):
    letter = word[index]
    print index, letter
    index = index + 1

word = 'Hello'
for letter in word:
    print letter
Slicing

```python
>>> string = "Hello world"
>>> print string[3:8]
lo wo
>>> print string[4::]
 o world
>>> print string[:9]
Hello wor
>>> print string[:]
Hello world
```

<table>
<thead>
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<th>o</th>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>
Logical expressions with strings

```python
>>> "a" in "Hello"
False
>>> "lo" in "Hello"
True
>>> "hello" == "Hello"
False
>>> "hello" != "Hello"
True
>>> "world" < "Hello"
False
>>> "world" > "Hello"
True
```
## Functions

<table>
<thead>
<tr>
<th>capitalize</th>
<th>isalnum</th>
<th>lstrip</th>
<th>splitlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>center</td>
<td>isalpha</td>
<td>partition</td>
<td>startswith</td>
</tr>
<tr>
<td>count</td>
<td>isdigit</td>
<td>replace</td>
<td>strip</td>
</tr>
<tr>
<td>decode</td>
<td>islower</td>
<td>rfind</td>
<td>swapcase</td>
</tr>
<tr>
<td>encode</td>
<td>isspace</td>
<td>rindex</td>
<td>title</td>
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<tr>
<td>endswith</td>
<td>istitle</td>
<td>rjust</td>
<td>translate</td>
</tr>
<tr>
<td>expandtabs</td>
<td>isupper</td>
<td>rpartition</td>
<td>upper</td>
</tr>
<tr>
<td>find</td>
<td>join</td>
<td>rsplit</td>
<td>zfill</td>
</tr>
<tr>
<td>format</td>
<td>ljust</td>
<td>rstrip</td>
<td></td>
</tr>
<tr>
<td>index</td>
<td>lower</td>
<td>split</td>
<td></td>
</tr>
</tbody>
</table>

[https://docs.python.org/2/library/stdtypes.html#string-methods](https://docs.python.org/2/library/stdtypes.html#string-methods)
Test 5

Questions?
Homework (name and grades, username from url)

Questions?