STRINGS
Tetake of test

• Two possibilities: April 4 at 14:15 and April 4 at 16:15
• Room Liivi 2-206
• Format is the same as in the main test
• Best attempt counts
Project

• Register your team
• Submit project description
• Schedule
  • Form a team and select topic: **March 28**
  • Alpha version: **April 25**
  • Beta version: **May 23**
String data type

```python
>>> type("mg5#X4")
<class 'str'>
>>> type('mg5#X4')
<class 'str'>
```

Single or double quotes
Conversion to numeric type and back

```
int('12') -> 12
float('34.5') -> 34.5
str(12) -> '12'
str(34.5) -> '34.5'
```
Indices

characters
indices

word = "Cedar"
letter = word[1] → e
print(letter)

print(word[5]) →
Traceback (most recent call last):
  print(word[5])
IndexError: string index out of range
Length

characters → Cedar
indices → 0 1 2 3 4

word = "Cedar"
length = len(word) → 5
print(length)
Looping through strings

• Loop over indices

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

• Loop over characters

```python
word = 'Flick'
for letter in word:
    print(letter)
```
Slicing

<table>
<thead>
<tr>
<th>characters</th>
<th>Clear cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>indices</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
</tr>
</tbody>
</table>

```python
>>> text = 'Clear cache'
>>> text[:9]
'Clear cac'
>>> text[3:8]
'ar ca'
>>> text[4:]
'r cache'
>>> text[:]
'Clear cache'
>>> text[::]
'Clear cache'
>>> text[::-2]
'Clear cac'
```
Operations with strings

• Concatenation +

```python
>>> space = " 

>>> "Talk" + space + "show"
'Talk show'
```

• Multiplication *

```python
>>> ("Talk" + space) * 3
'Talk Talk Talk '
```
Logical expressions using strings

• Substring

```python
>>> "lo" in "Hello"
True
>>> "a" in "Hello"
False
```

• Equality

```python
>>> "hello" != "Hello"
True
>>> "hello" == "Hello"
False
```

• Inequality

```python
>>> "world" > "Hello"
True
>>> "world" < "Hello"
False
```
# Functions

- capitalize
- casefold
- center
- count
- encode
- endswith
- expandtabs
- find
- format
- format_map
- index
- isalnum
- isalpha
- isdecimal
- isdigit
- isidentifier
- islower
- isnumeric
- isprintable
- isspace
- istitle
- isupper
- join
- ljust
- lower
- lstrip
- maketrans
- partition
- replace
- rfind
- rindex
- rjust
- rpartition
- rsplit
- rstrip
- split
- splitlines
-startswith
- strip
- swapcase
- title
- translate
- upper
- zfill

[https://docs.python.org/3/library/stdtypes.html#string-methods](https://docs.python.org/3/library/stdtypes.html#string-methods)