Exercise: Sequential Datatype

For all tasks: Write down (with pencil and paper (or electronically ;-)!):

What is the output of the cells when you start them (with the `run` -button or Ctrl+Enter).\ Use the enclosed Jupyter notebook only to check your answers!

Task 01

In [ ]:
```
first_name = "Henry"
last_name = "Miller"
age = 20
print (first_name + " " + last_name + ": " + str(age))
```

In [ ]:
```

```

Task02

In [ ]:
```
l = [3,5,4]
x = 4
x = 4.5
x = "One String"
print(type(l))
print(type(x))
```

In [ ]:
```

```

In [ ]:
```
x = (3,89,67)
print(isinstance(x, tuple))
```

In [ ]:
```

```

In [ ]:
```
x = 4
print(isinstance(x, int) or isinstance(x, float))
```

In [ ]:
```

```

In [ ]:
```
x = (89, 123, 898)
print(isinstance(x, (list, tuple)))
print(isinstance(x, (int, float)))
```

In [ ]:
```

```

Task03

In [ ]:
```
x = 24
y = 7
x == (x // y) * 3 + (x % y)     # If you have trouble ... jump!
print(x)
```

In [ ]:

Task04 (if you have trouble ... jump!)

In [ ]:
```
s = "I'm across several lines \
defined, to be precise \
four lines!"
print(s)
```

In [ ]:

In [ ]:
```
s = """First line
Second line
Third line \
and I'll say something too! """
print(s)



#Erste Zeile
#Zweite Zeile
# Dritte Zeile und ich sage auch noch was!
```

In [ ]:

In [ ]:
```
s = "\nOne line \nwhat does it say?"
print(s)
```

In [ ]:

Task05

In [ ]:
```
x = 3, 99, "A text"
print(x)
```

In [ ]:

In [ ]:
```
minimum, maximum, text = 3, 99, "a text"
print(minimum)
```

In [ ]:

Task06

In [ ]:
```
text = "Hallo HSLU"
print(text[7])
```

In [ ]:

In [ ]:
```
text = "A text!"
print(text[-1])
```

In [ ]:

In [ ]:
```
l = [42, 65 , [45, 89], 88]
print(l[3])
print(l[2][1])
```

In [ ]:
```

```

In [ ]:
```
l[0] = "A new value"
print(l)
```

In [ ]:
```

```

In [ ]:
```
t = (42, 65 , (45, 89), 88)    # t is a tuple!!
print(t[0])
print(t[2][0])
```

In [ ]:
```

```

In [ ]:
```
print(t)
t[0] = "@"
print(t)
```

In [ ]:
```

```

Task07

In [ ]:
```
txt = "Hello HSLU"
print(txt[0:5])
print(txt[0:-6])
print(txt[:5])
```

In [ ]:
```

```

In [ ]:
```
txt = "Python is really great"
print(txt[2:15:3])
print(txt[::3])
```

In [ ]:
```

```

In [ ]:
```
x = [3, 6, 9, 12, 7]
print(x[3:1:-1])
print(x[::-1])
```

In [ ]:
```

```

Task08

In [ ]:
```
hamlet = "to be or not to be"
print(len(hamlet))
```

In [ ]:
```

```

In [ ]:
```
mishmash = [(3,8,"Blabla"), "a string", [(3.8, 9), 19]]
print(len(mishmash))
```

In [ ]: