Preparation questions:

1.

$3.5 + 4$	7.5	Floating point
$015 + 0x255$	610	Integer
999999999	9999999990	Integer
$(1 + 2j) * 2$	$2 + 4j$	Complex
$1 + 2j * 2$	$1 + 4j$	Complex

2.

a. TypeError: 'str' object does not support item assignment
b. grain
c. we access the string at the mentioned index from its end

3. IndexError: list assignment index out of range

4.

```
ybettan python_experiment (devel) $ python
Python 2.7.10 (default, Feb 22 2019, 21:55:15)
[GCC 4.2.1 Compatible Apple LLVM 10.0.1 (clang-1001.0.37.14)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>>
>>>
>>>
>>>
>>>
>>> m = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
>>> m
[[1, 2, 3], [4, 5, 6], [7, 8, 9]]
>>> m[1][1] = "Robin"
>>> m
[[1, 2, 3], [4, 'Robin', 6], [7, 8, 9]]
>>>
```

5.

```
>>> car1 = {'Model': 'Fabia', 'Maker': 'Skoda', 'Year': 2006}
>>> car2 = {'Model': '3', 'Maker': 'Mazda', 'Year': 2010}
>>> car_list = [car1, car2]
>>> car_list
[{'Model': 'Fabia', 'Maker': 'Skoda', 'Year': 2006}, {'Model': '3', 'Maker': 'Mazda', 'Year': 2010}]
>>>
```

6. TypeError: 'tuple' object does not support item assignment

7.
   mmm…
   Maybe x is not so small

   Changing x to 100 will result in printing:
   x is large!

8.
   a. Done
   b. All values are not greater than 4.
      Done.
   c. Same as section b
   d. In python 2 range(start, end) returns the list [start, …, end-1]
      In python 3 range(start, end) returns a sequence (lazy evaluated) from start to end-1

9.
   1 is odd
   2 is even
   …
   7 is odd

10.
   The upStam.txt file contain the upper-case version of the stam.txt file

```
txt = open("stam.txt")                  # open the file for reading
lines = txt.readlines()                 # read file lines to an array
lines = [line.upper() for line in lines] # cast all string to Upper case
txt.close()                             # close the file
txt = open("upStam.txt", "w")           # open a new file for writing
txt.writelines(lines)                   # write the Upper case verion of stam.txt to it
txt.close()                             # close the new file
```

11.

an	This is **an** isl**an**d
\ban	This is **an** island
\Ban	This is an isl**an**d

12.

a. $(\backslash d\{2\} -)?\backslash d\{7\}$

b. $http:\backslash/\backslash/(\backslash w +\backslash.) +\backslash w +$

13.

a. $< (\backslash w) >.+?<\backslash/\backslash 1 >$

b.

i) $\big((\backslash w+.?\backslash w +) +\big)@\backslash 1$

ii) $(\backslash w+)\ \backslash 1\ \backslash 1$

iii) $(\backslash w+)\ (\backslash w+)\ [\backslash 1\backslash 2]$