Exercise 1

```
7**4
```

```
2401
```

Exercise 2

```
s = "Hi there Sam!"
s = s.split()
s[2]="dad"
print(s)
```

```
['Hi', 'there', 'dad']
```

Exercise 3

```
planet = "Earth"
diameter = 12742
print("The diameter of Earth is {} kilometers.".format(diameter))
```

```
The diameter of Earth is 12742 kilometers.
```

Exercise 4

```
lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
grabbed = lst[3][1][2]
print(grabbed)
```

```
['hello']
```

Exercise 5

```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
grabbed=d.get('k1')[3].get('tricky')[3].get('target')[3]
print(grabbed)
```

```
hello
```

Exercise 6

```
#list are mutable, tuples not
myList=['a', 'b', 'c']
myList[1]='x'
myTuple=('a', 'b', 'c')
myTuple[1]='x' #here we get error
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-31-bf0c53fdde35> in <module>()
      2 myList[1]='x'
      3 myTuple=('a', 'b', 'c')
----> 4 myTuple[1]='x'
```

Exercise 7

```
example = 'super_user@ee.pw.edu.pl'
def get_domain(adress):
  return adress.split('@')[1]

print(get_domain(example))
```

```
ee.pw.edu.pl
```

Exercise 8

```
def check(s):
  if 'car' in s.split():
    return True
  elif 'Car' in split():
    return True
  else:
    return False
```

Exercise 9

```
def countCar(string_to_count):
  s=string_to_count.split()
  counter=0
  for word in s:
    if word =='car':
      counter+=1
  return counter

countCar('This car runs faster than the other car dude!')
```

```
2
```

Exercise 10

```
seq = ['soup','dog','salad','cat','great']
list(filter(lambda x: x[0]=='s', seq))
```

```
['soup', 'salad']
```

Exercise 11

```
def caught_speeding(speed, is_birthday):
  low_lim = 60
  high_lim =80
  if is_birthday==True:
      low_lim += 5
      high_lim += 5
  if speed<=low_lim:
```

```
        return "No ticket"
      elif low_lim < speed <=high_lim:
        return "Small ticket"
      elif speed>high_lim:
        return "Big ticket"

print(caught_speeding(81,True))
print(caught_speeding(81,False))
```

```
Small ticket
Big ticket
```