Installation Pycharm

download at: https://www.jetbrains.com/pycharm/download/#section=windows (https://www.jetbrains.com/pycharm/download/#section=windows)

Pycharm environment:

- create new files
- run programs

Exercises

Errors handling

Entrée [1]:

```
name = 'David'

print(Name)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call
 last)
<ipython-input-1-def2aa1a6ac6> in <module>
      1 name = 'David'
      2
----> 3 print(Name)

NameError: name 'Name' is not defined
```

Entrée [2]:

```
name = 'David'

sentence = "hi i'm {}".format(name)
```

```
  File "<ipython-input-2-1f7797238514>", line 3
    sentence = 'hi i'm {}'.format(name)
                       ^
SyntaxError: invalid syntax
```

Entrée [25]:

```
number = 32

other_number = input('Enter number')

other_number= int(other_number)

print(number + other_number)
```

```
Enter number32

---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call
 last)
<ipython-input-25-132ce312f5d8> in <module>
      3 other_number = input('Enter number')
      4
----> 5 print(number + other_number)

TypeError: unsupported operand type(s) for +: 'int' and 'str'
```

Entrée [30]:

```
january = 300
combined = january + february
february = 200
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call
 last)
<ipython-input-30-e0a01a23537e> in <module>
      1 january = 300
----> 2 combined = january + february
      3 february = 200

NameError: name 'february' is not defined
```

Entrée [41]:

```
if number.isdigit():
number = int(number)
    print('You have chosen {}'.format(number))
```

```
  File "<ipython-input-41-d02e70f84b31>", line 2
    number = int(number)
         ^
IndentationError: expected an indented block
```

Play with types

Entrée [26]:

```
str_number = input('give a number : \n')
number = int(str_number)
print(number)
```

```
give a number :
32
32
```

Entrée [9]:

```
str_number = input('give a number : \n')
number = int(str_number)
number = number * 6.022*10**23
print(type(number))
```

```
give a number :
3
<class 'float'>
```

Entrée [15]:

```
sentence = 'hello'

# let's say that you want to write on multiple lines

sentence = """the best cities to visit to a healthy trip:
    - Chernobyl
    - fukushima
"""

print(sentence)
```

```
the best cities to visit to a healthy trip:
    - Chernobyl
    - fukushima
```

Entrée [18]:

```
hello = 'hello'

name = 'theo'

sentence = hello + name

print(sentence)
```

```
hellotheo
```

Entrée [19]:

```
sentence = ''

name = input('name ?')

sentence = sentence + name

name = input('other name')

sentence = sentence + name

print(sentence)
```

```
name ?heatz
other nameazeg
heatzazeg
```

Boolean

Entrée [33]:

```
is_it_true = False
is_it_false = True

print(is_it_false)
```

```
True
```

Entrée [38]:

```
is_equal = 3==3

# ==, >, <, >= ,<=, !=

print(is_equal)
```

```
True
```

Entrée [39]:

```
number = 44

is_pair = number%2 == 0

print(is_pair)
```

```
True
```

Your turn

tip

Entrée [29]:

```
# if I want to add + 1 to a variable the logical idea is that

number = 10

number = number + 1
print(number)
# You can do that instead

number += 1

print(number)

# btw you can do the same with strings
```

```
101
1011
```

Entrée [22]:

```
#other tip
name = 'david'

print('hello {}'.format(name))

#-->

print(f'hello {name}')
```

```
hello david
hello david
```

Entrée [12]:

```
january_incomes = 200 + 300 + 250 + 345
annual_incomes = january_incomes
print("""annual income up to january: {},
        january income: {}
""".format(annual_incomes, january_incomes))


february_incomes = 1340
annual_incomes = annual_incomes + february_incomes
print("""annual income up to february: {},
        february income: {}
""".format(annual_incomes, february_incomes))
march_incomes = 1120
april_incomes = 1432
may_incomes = 1873
june_incomes = 1356
july_incomes = 1211
```

- add all incomes gradually and print the annual incomes with the month

Solution

Entrée [32]:

```
january_incomes = 200 + 300 + 250 + 345
february_incomes = 1340
march_incomes = 1120
april_incomes = 1432
may_incomes = 1873
june_incomes = 1356
july_incomes = 1211

repeat = 'annual income up to'
annual_incomes = january_incomes
print("""annual income up to january: {},
        january income: {}
""".format(annual_incomes, january_incomes))


annual_incomes += february_incomes
print(f'{repeat} february: {annual_incomes} \n february income: {february_incomes}')


annual_incomes += march_incomes
print(f"{repeat} march: {annual_incomes} \n march income: {march_incomes}")
```

```
annual income up to january: 1095,
        january income: 1095

annual income up to february: 2435
 february income: 1340
annual income up to march: 3555
 march income: 1120
```

let's say for instance that the user wrote something else than a number

Entrée [ ]:

```
pizza = False
cheese = False

if pizza == cheeze:
    print('pizza is good with cheese')
```

Entrée [47]:

```
number = input('choose a number \n')
is_convertable =  number.isdigit()
# does True is equal to False
if is_convertable == False:
    number = input('Please enter a Number ! \n')

number = int(number)
print('you have chosen {}'.)
```

```
choose a number
a
Please enter a Number !
2
```

Entrée [7]:

```
number = input('pick a number')
hello = (number.isdigit() == True)
print(hello)
```

```
pick a numberE
False
```

Entrée [ ]:

Entrée [ ]: