



Leibniz-Rechenzentrum  
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# Introduction Python 2021

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## Zen of python (20.2.1991-?)

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- Beautiful is better than ugly
- Explicit is better than implicit
- Simple is better than complex
- Complex is better than complicated
- Readability counts

**“There should be one (and only one) obvious way to do it“**

Current version python 3.10

```
for x in range(10):  
    y=2*x  
    match y:  
        case 0:  
            print("the beginning!")  
        case 18:  
            print("the end!")  
        case _:  
            print("In between")
```

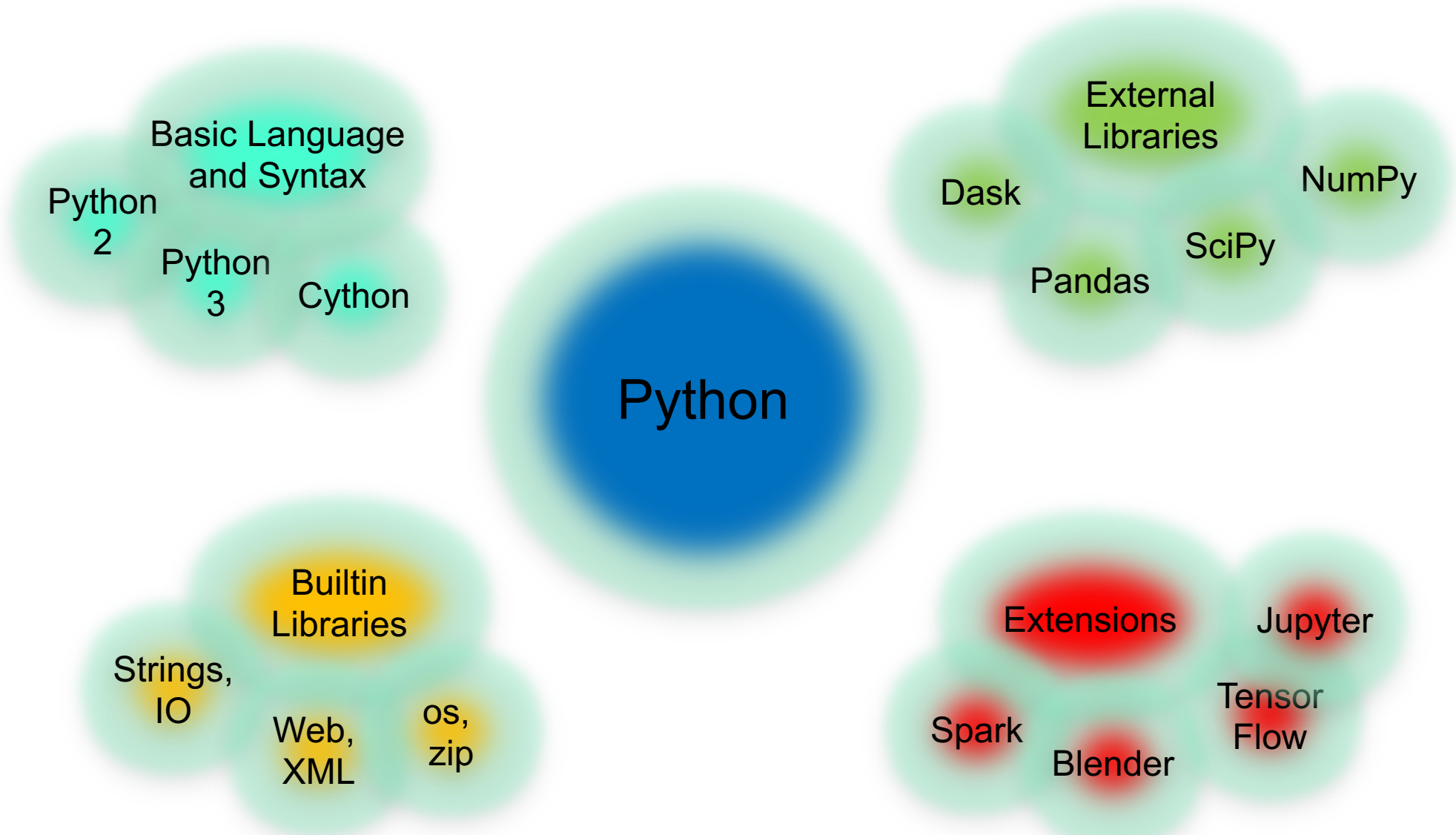
*“Python is executable pseudocode. Perl is executable line noise.” (– Old Klingon Proverb)*





# python as seen from the orbit

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## Keywords (more than 90% of python code)

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```
import lib as name  
from lib import n as n
```

```
if condition:  
elif condition:  
else:
```

```
while condition:  
for iterator in list:  
    pass  
    break  
    continue
```

```
def function(args):  
    '''doc string'''  
    return value
```

```
try:  
except name:  
finally:
```

```
class name:  
    '''doc string'''  
    def __init__(self):  
    def method(self,args):
```

**raise** name

**with** expression **as** var:

**global** variable

**nonlocal** variable

**lambda** var: expression

@decorator

**async def** fun(args) -> ann:

**assert** condition



**yield** value

**yield from** generator

**await** expression

**match** subject:



**case** pattern:

action

[expr **for** it **in** list **if** cond]

(expr **for** it **in** list **if** cond)

{expr1:expr2 **for** (k,v) **in** dict **if** cond}

[i **async for** i **in** aiter() **if** cond]



res = (var := expr)



f"string"



res **if** cond **else** res2