



Python & C/C++/Java/.NET

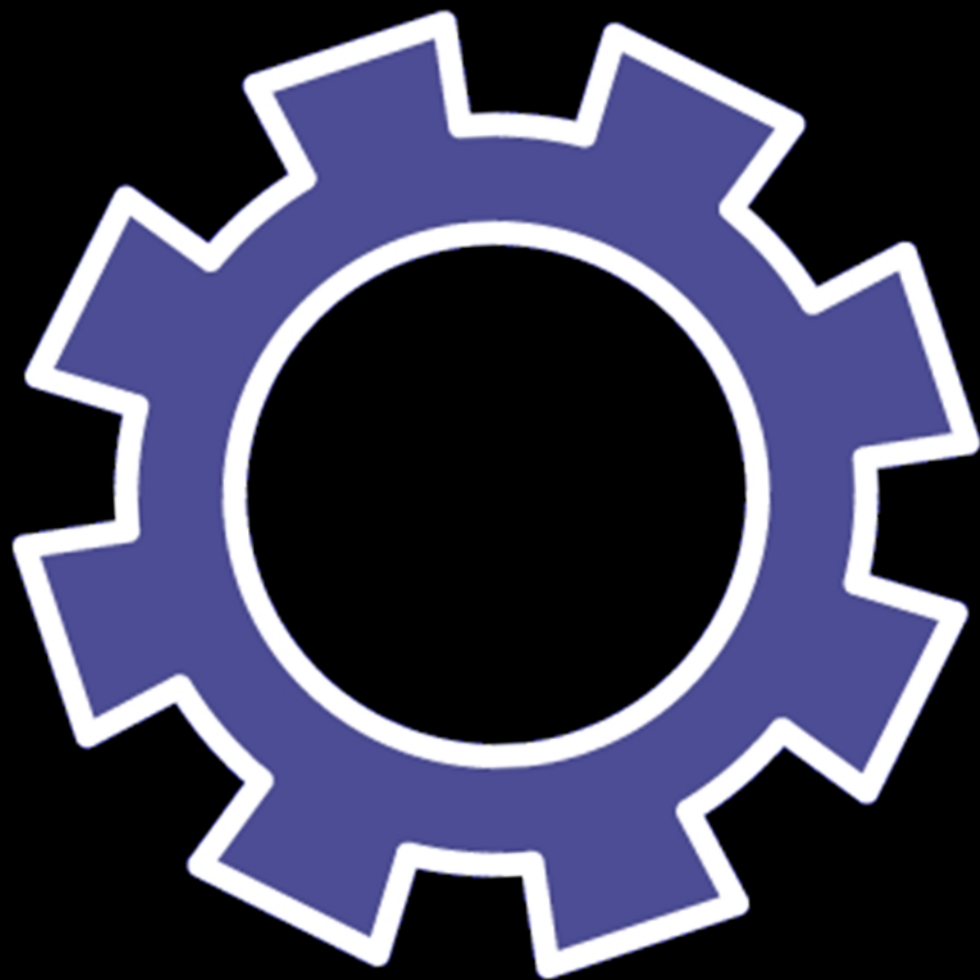
PyCon Italia - Firenze 09 – 06 – 2007



Obiettivi

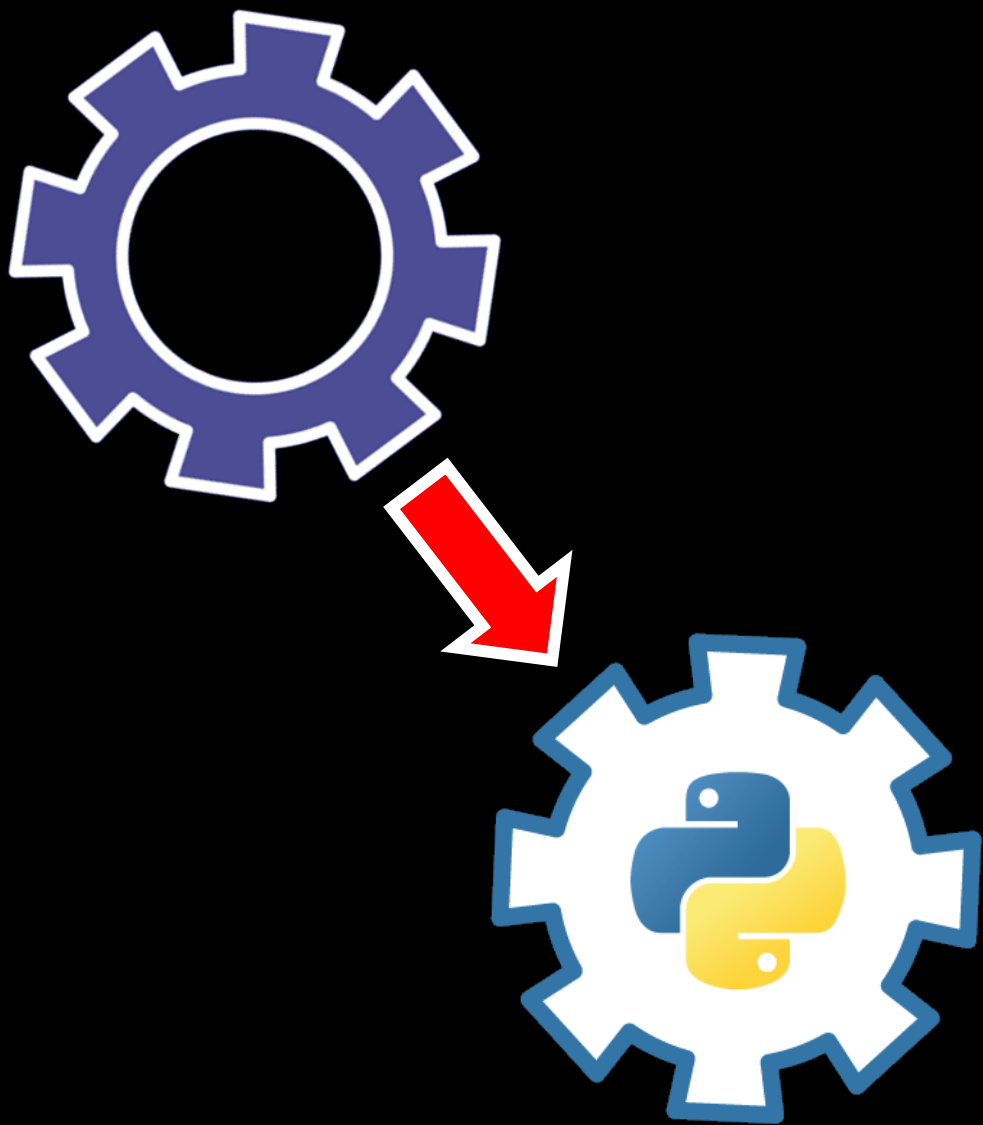


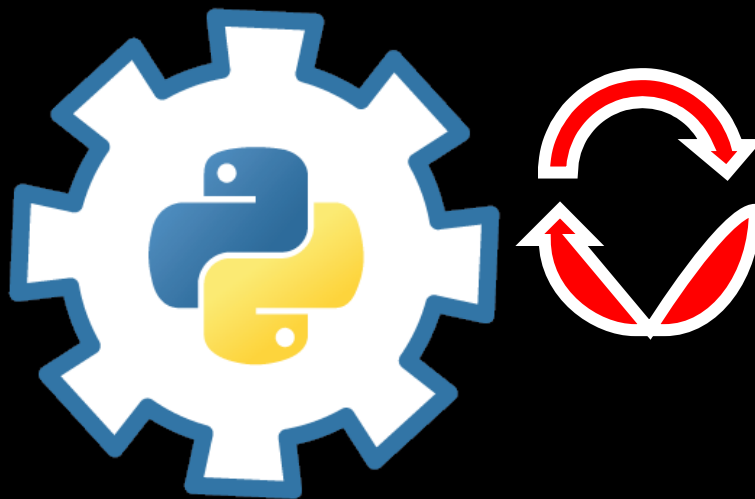
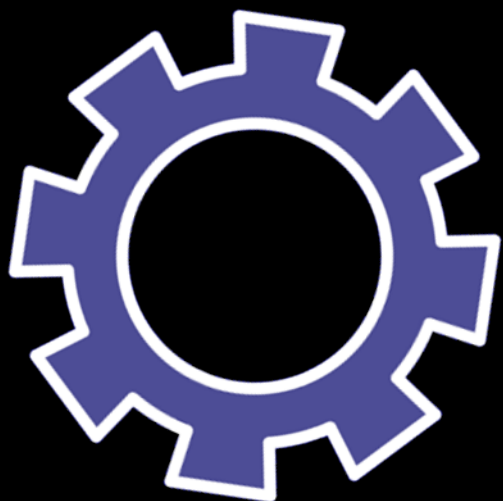
Scenari

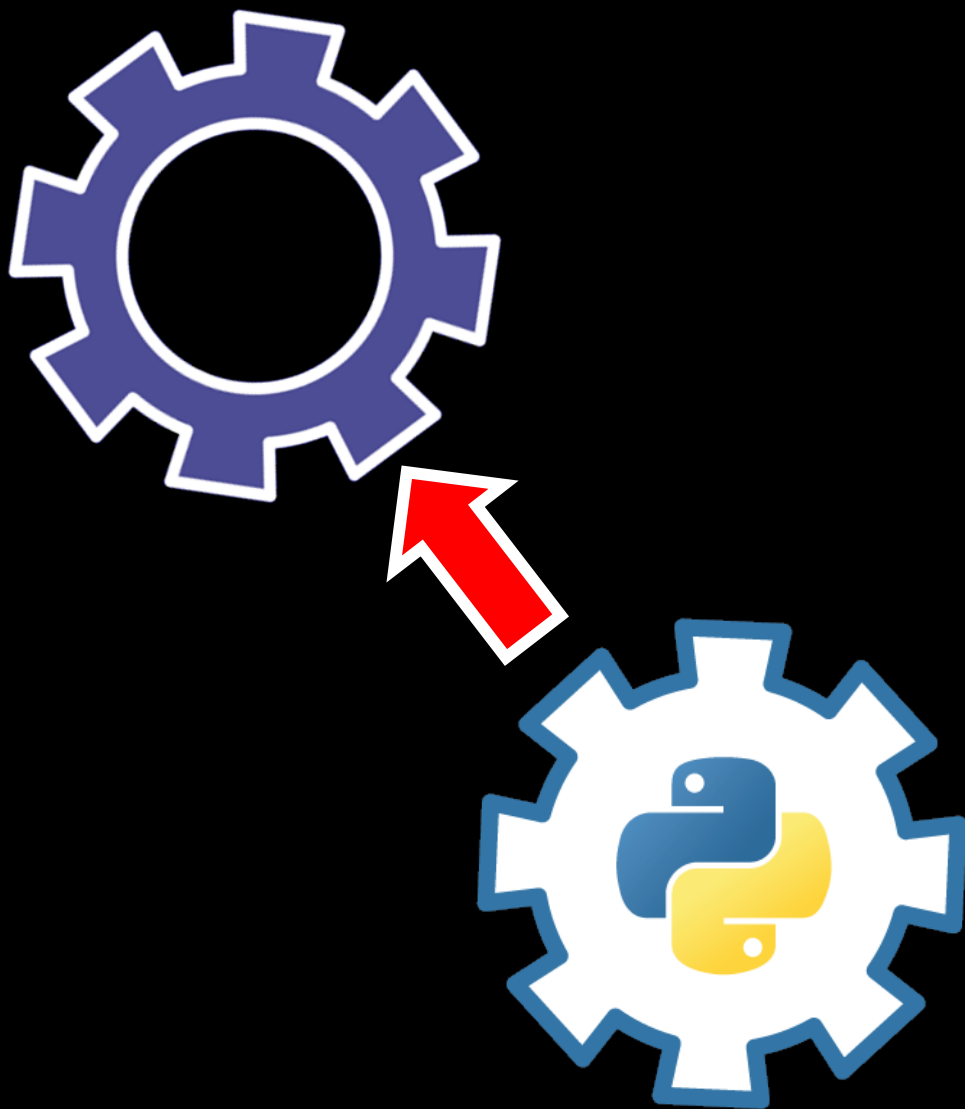


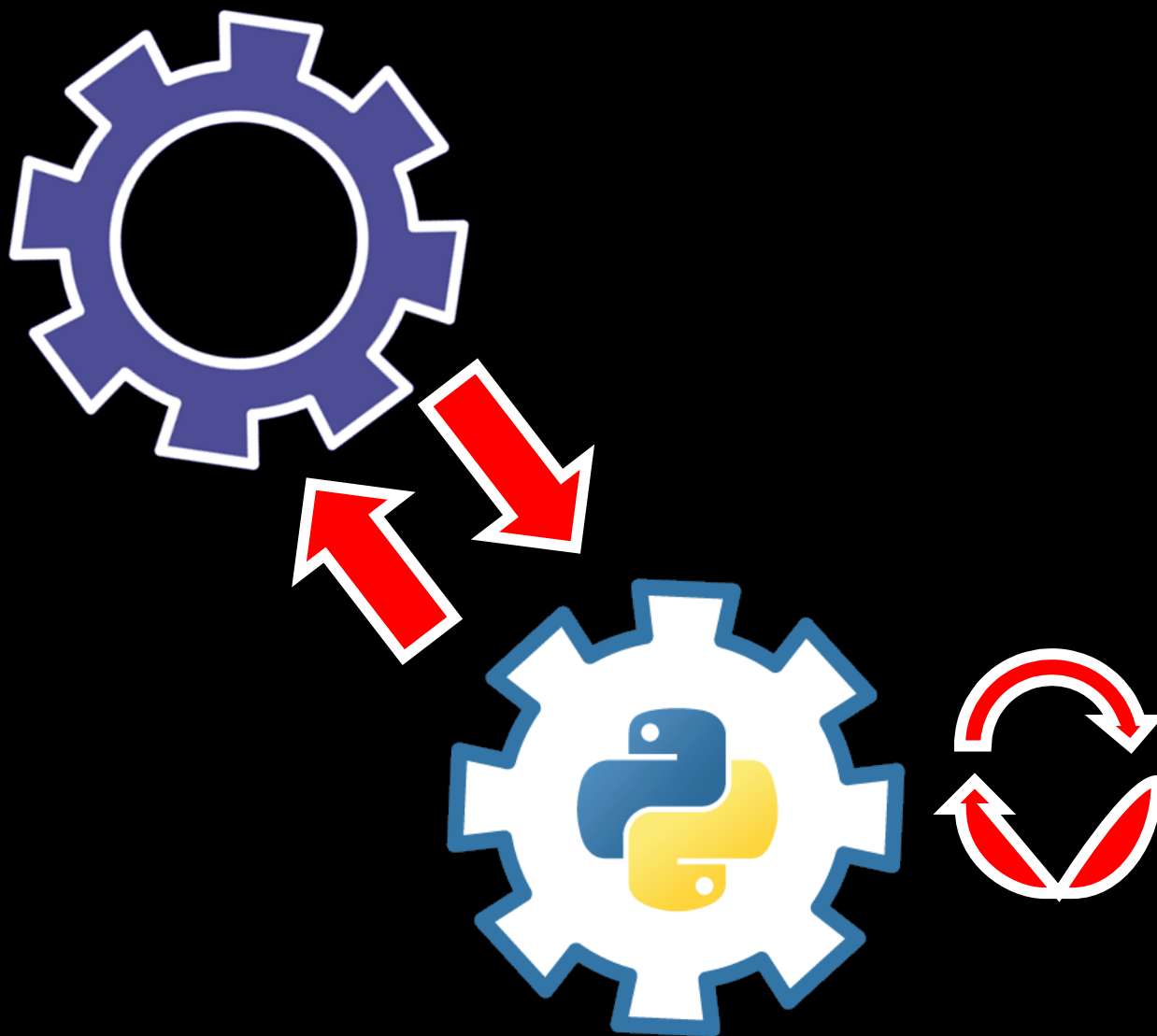


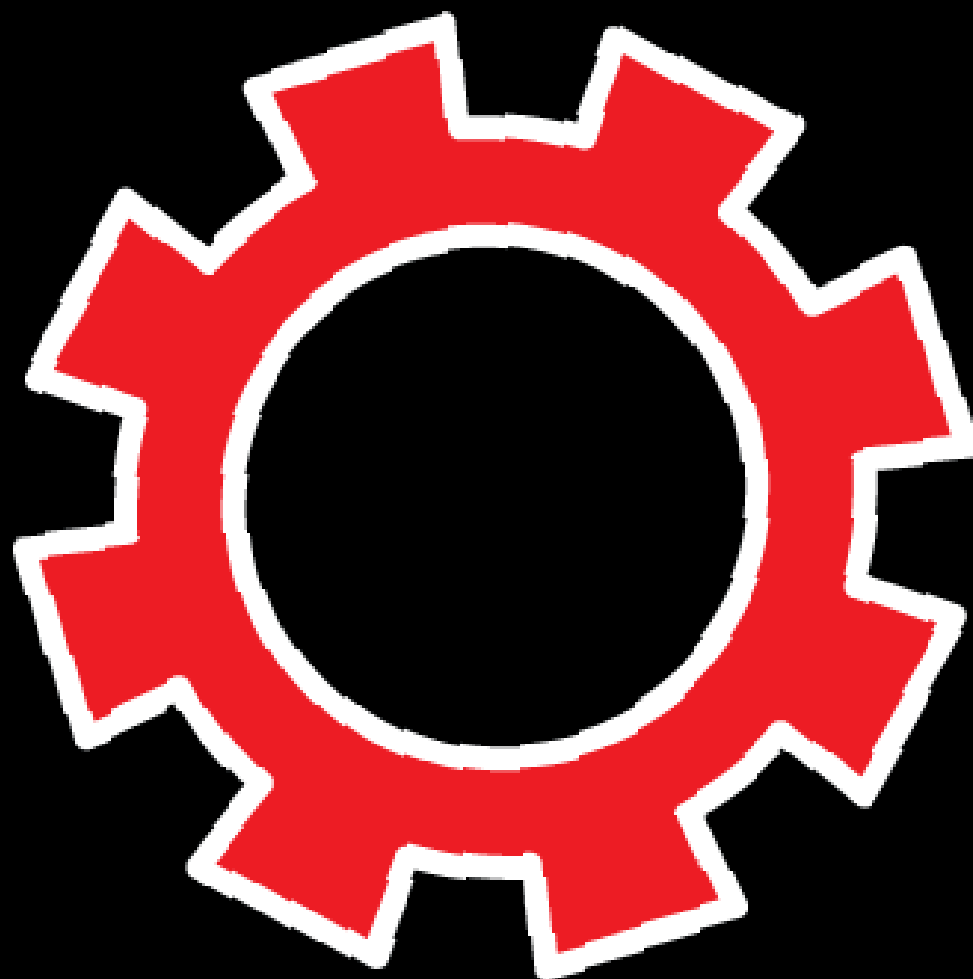
Estendere

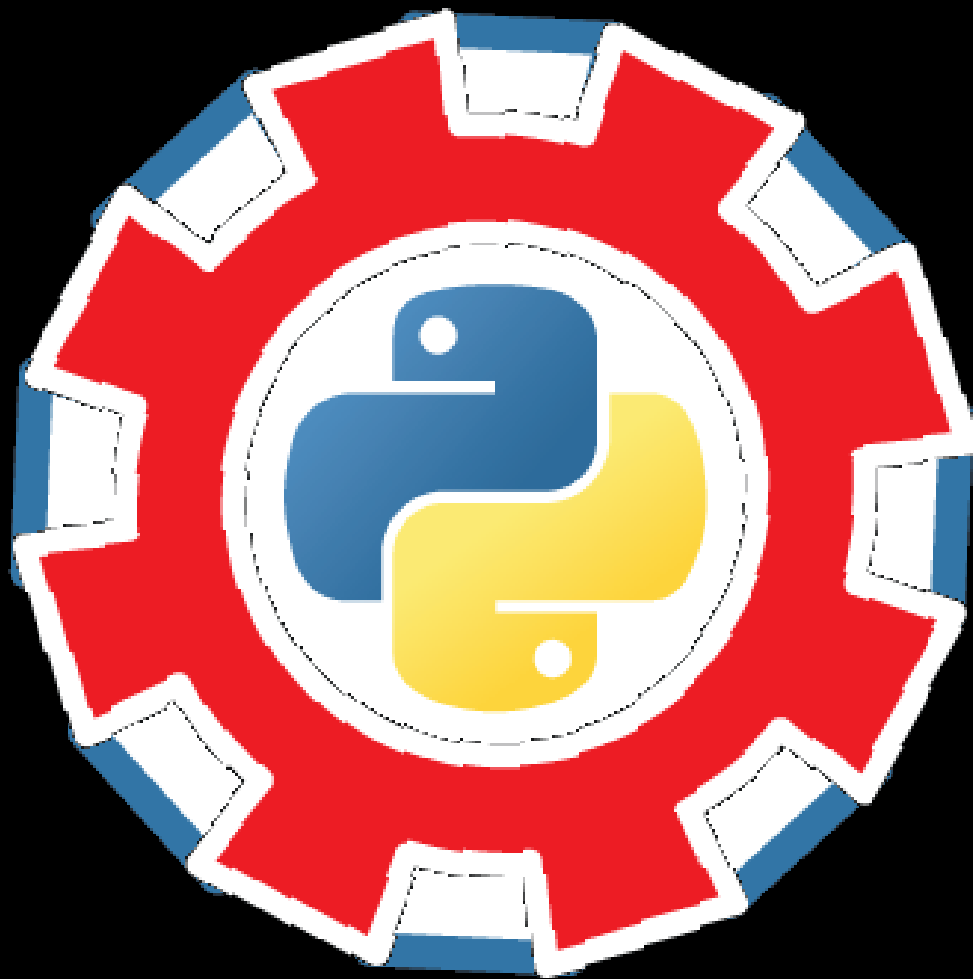




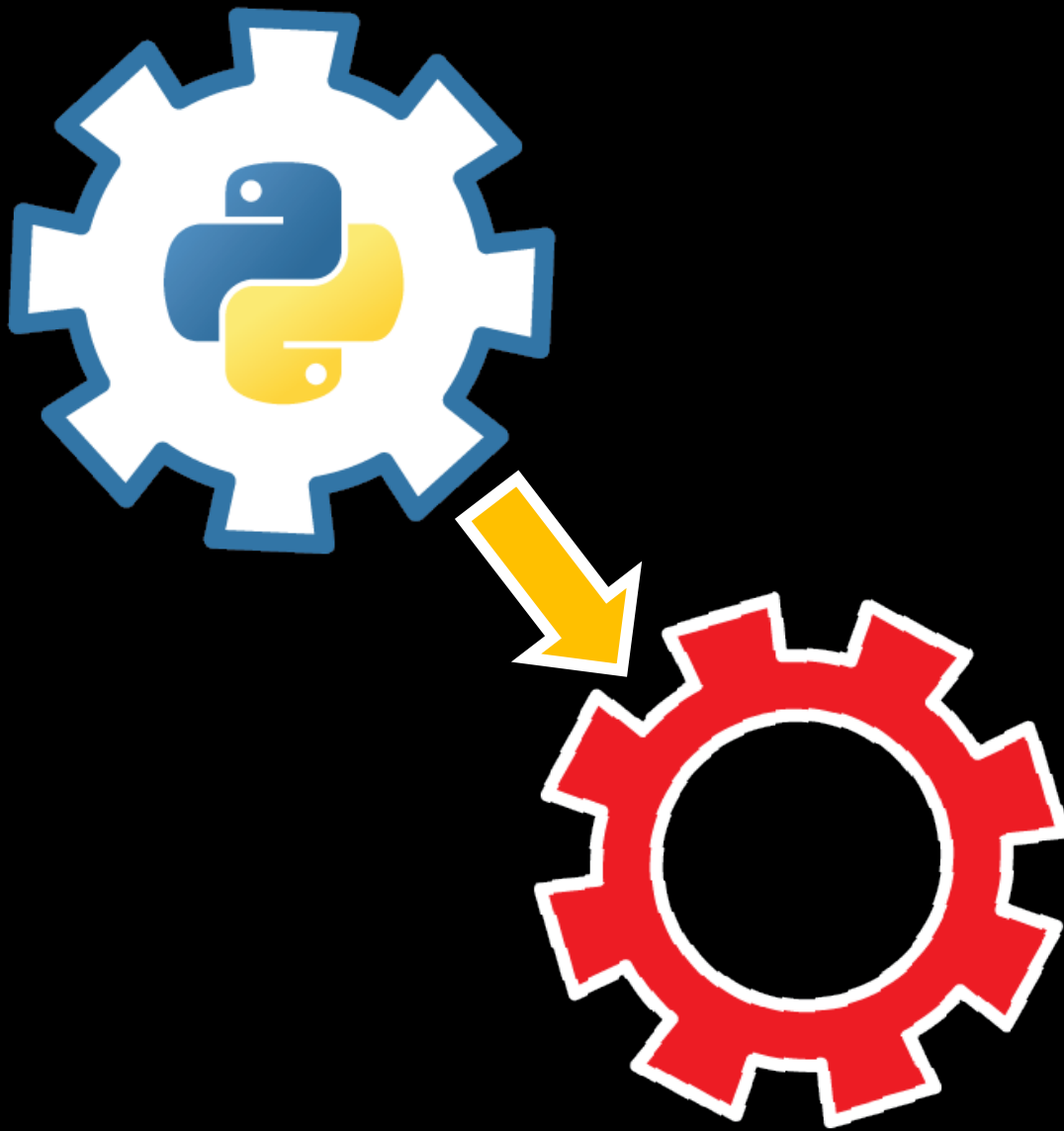


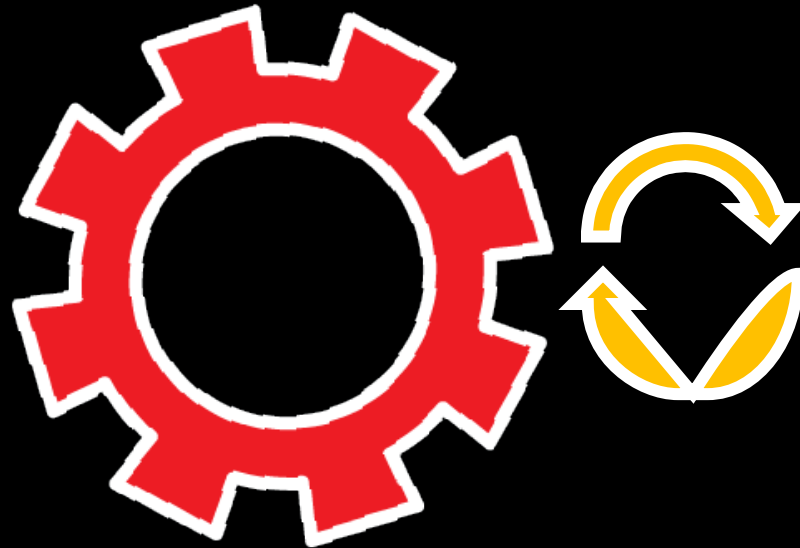


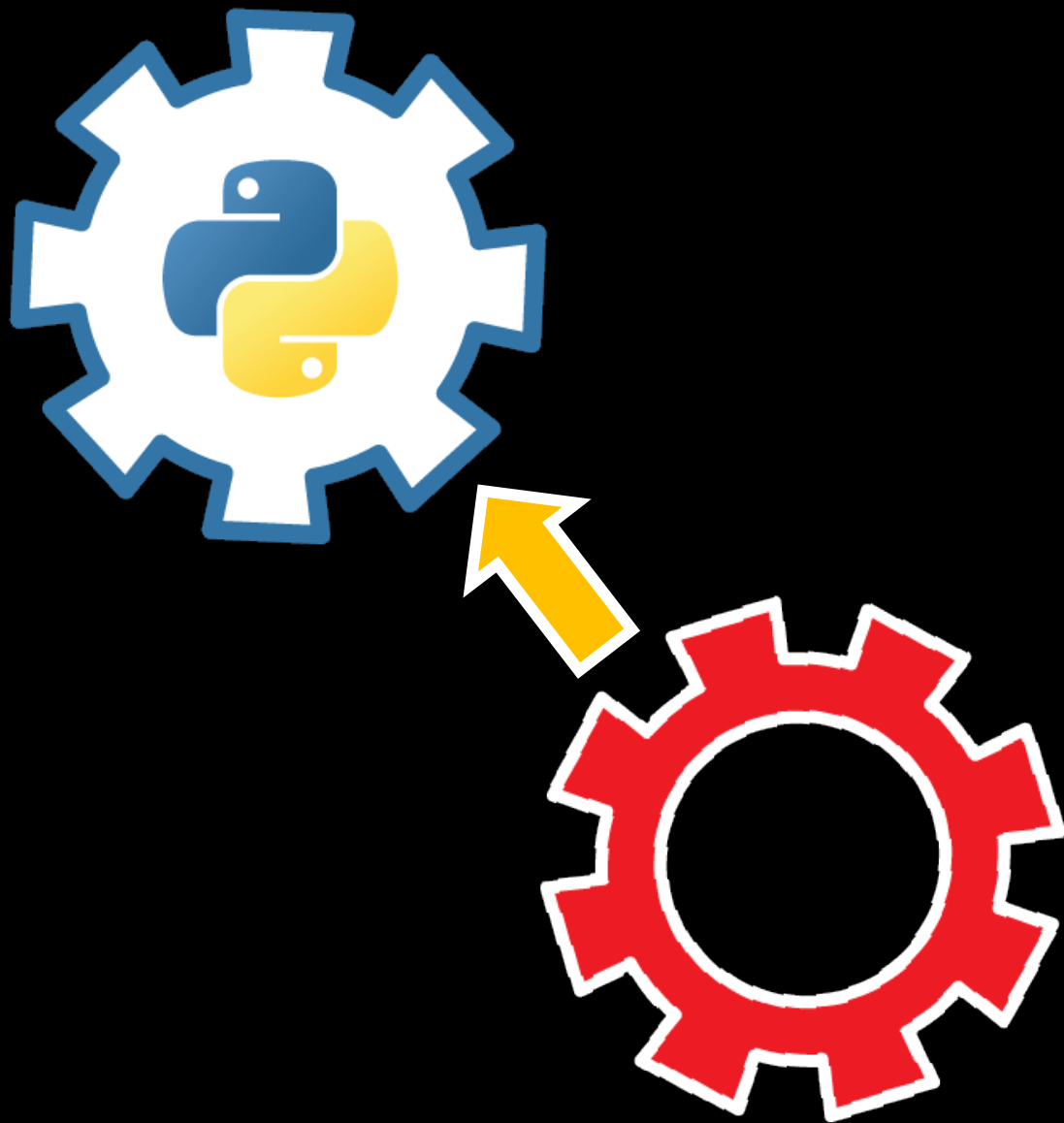




Integrare



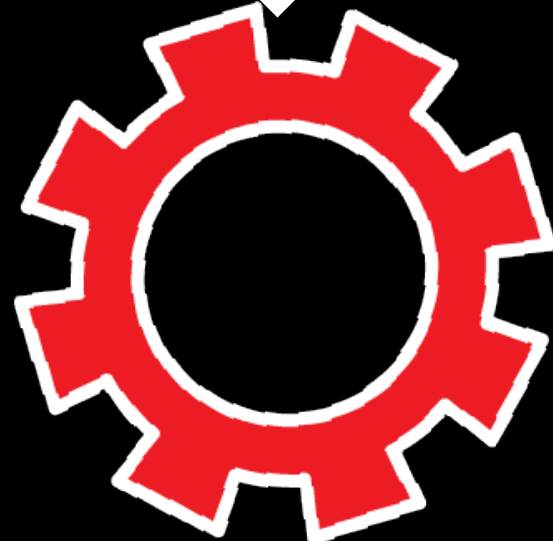
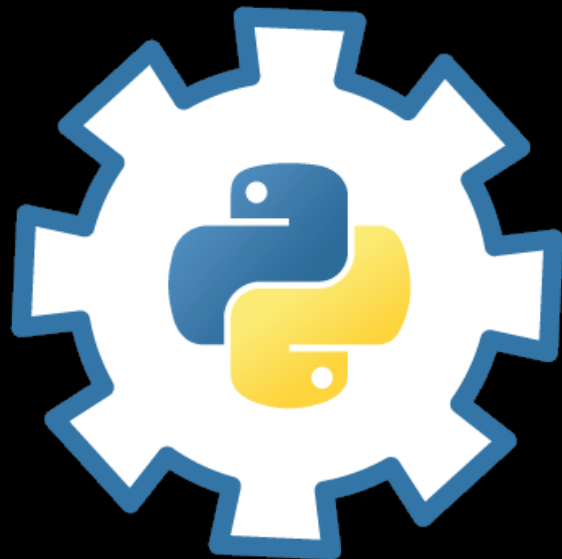
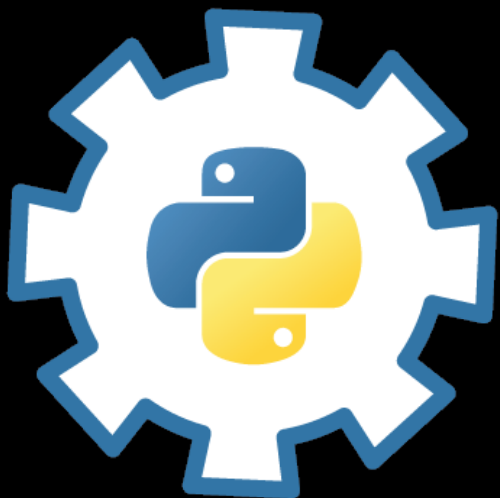
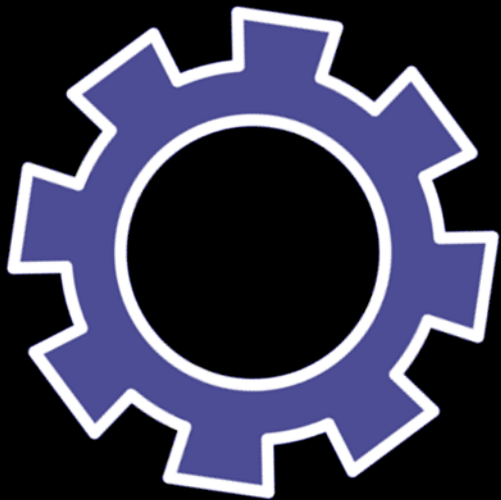


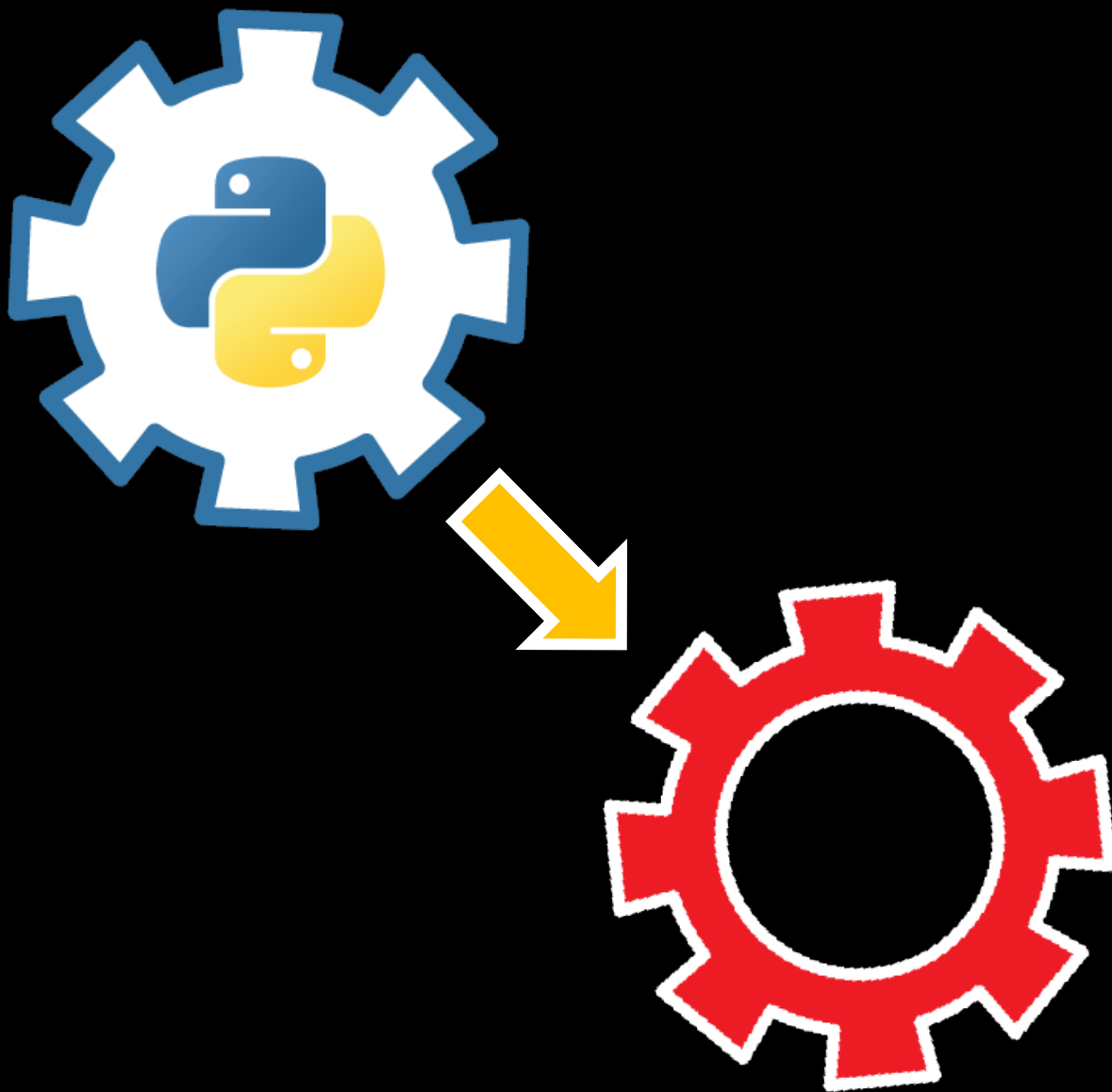




Python?

Success Stories





```
libc = Dll ('libc')  
libc.printf ("Hello\n")
```

```
from ctypes import cdll
```

```
libc = cdll ('libc.so.6')
```

```
libc.printf ("Hello World\n")
```

Ctypes

App.py

Ctypes

Dlls

Python C

Os

DII

Ctypes



```
import ctypes
```

```
libc = ctypes.CDLL ('libc.so.6')
```

```
result = libc.printf ("Line of output\n")
```


Demo Time !



GccXml

DII

Ctypes



Eppur si muove



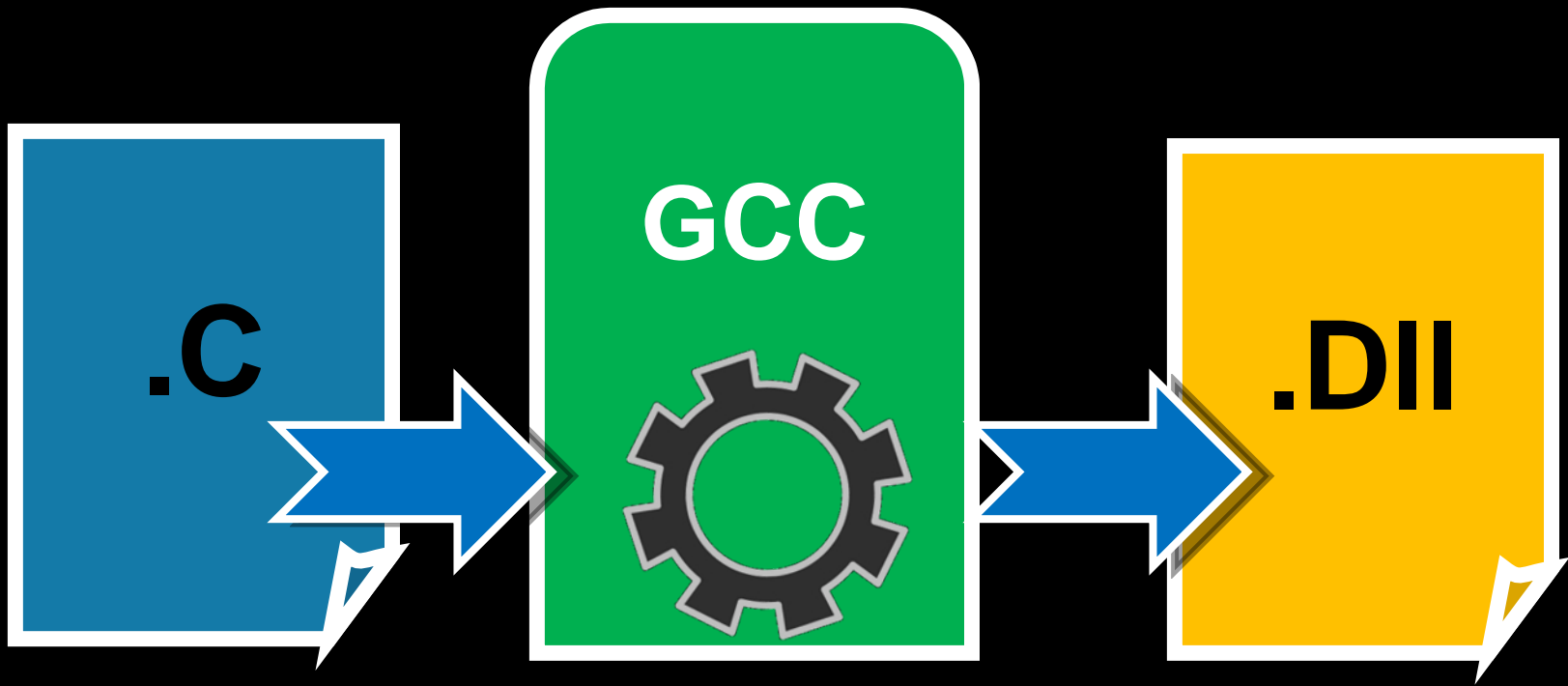
Python C API

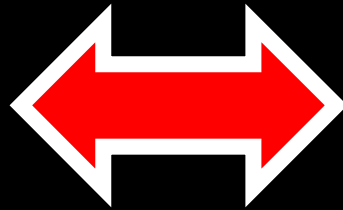
Module.pyd

File.py

Python C Api

Os





PyObjectName_PropertyOrMethod

PyObjectName_PropertyOrMethod



String

List

Dict

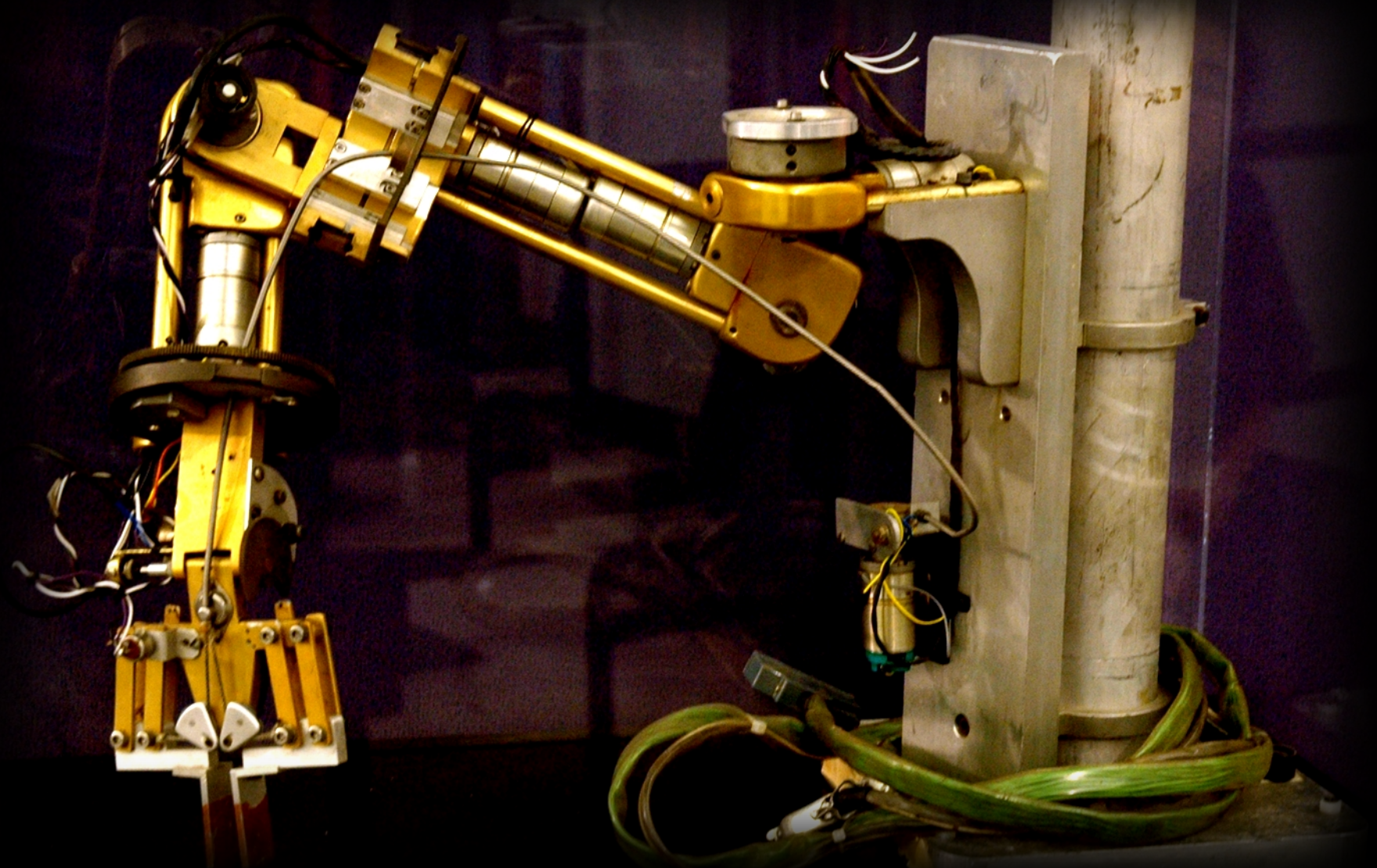
PyObjectName_PropertyOrMethod



**Merge
Update
Sort**

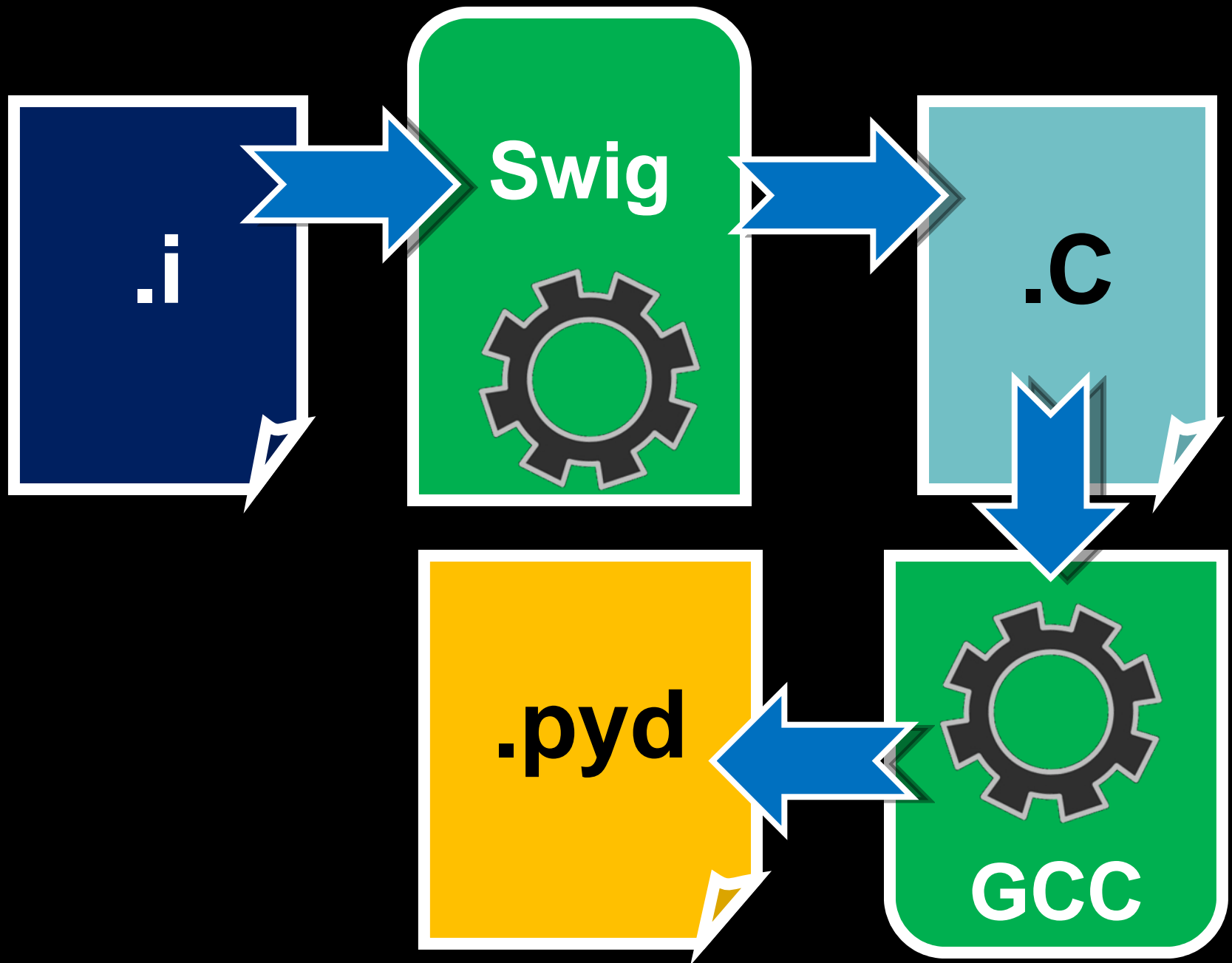
Esempi

```
int PyMapping_HasKey ( PyObject *o, PyObject *key)  
PyObject* PyIter_Next( PyObject *o)  
PyObject* PyString_FromString( const char *v)
```



Automatizzare ?

Swig



File.i

```
%module mymodule  
%{  
#include <mymod.h>  
%}  
#include <mymod.h>
```




PyRex

So Far ...

- Ctypes
- Python C Api
- Swig
- PyRex
- Boost



Java

Jython



File.py

Jython

Java Virtual Machine

Os

Jython - Esempio

```
from java.awt import Panel
```

```
P = Panel ()
```

```
Panel.show ()
```

IronPython



File.py

IronPython

.NET / Mono

Os

Cosa abbiamo visto ?

Cosa dovete ricordare ?



Thank You!