Example of SCSCP client in Python3 connecting to GAP server

In [1]:

```python
from scscp import SCSCPCLI
```

- Establishing connection

In [2]:

```python
c = SCSCPCLI('scscp.gap-system.org')
```

- Ask for the list of supported procedures

In [3]:

```python
c.heads
```

Out[3]:

```
{'scscp_transient_1': ['IdGroup512ByCode', 'IO_UnpickleStringAndPick
leItBack', 'IdGroup', 'ConwayPolynomial', 'Factorial', 'GroupIdentif
ication', 'Multiplication', 'Determinant', 'Phi', 'SCSCPStopTracin
g', 'AlternatingGroup', 'TransitiveGroup', 'Size', 'Identity', 'Auto
morphismGroup', 'SCSCPStartTracing', 'SymmetricGroup', 'MathieuGrou
p', 'Length', 'GnuExplained', 'NextUnknownGnu', 'Addition', 'GnuWish
list', 'IsPrimeInt', 'PrimitiveGroup', 'LatticeSubgroups', 'SmallGro
up', 'MatrixMultiplication', 'NrConjugacyClasses', 'SylowSubgroup',
 'Gnu']}
```

- A simplest test

In [4]:

```python
c.heads.scscp_transient_1.Identity([1])
```

Out[4]:

```
1
```

- Determinant of a matrix

In [5]:

```python
c.heads.scscp_transient_1.Determinant([ [ [ 1,2 ],[ 3,4] ] ])
```

Out[5]:

```
-2
```

- Number of groups of order 10000

In [6]:

```
c.heads.scscp_transient_1.Gnu([10000])
```

Out[6]:

4728

- What is the catalogue number of the group generated by matrices a and b

In [7]:

```
a = [ [ 0,-1], [1,-1] ]
```

In [8]:

```
b = [ [-1, 1], [0,1 ] ]
```

In [9]:

```
c.heads.scscp_transient_1.GroupIdentification([[a,b]])
```

Out[9]:

[6, 1]

- Close the connection

In [10]:

```
c.quit()
```