

## C: For loops

Primary method for repeating a sequence of steps

- Two key parts: running variable and iterable
- Indented sequence of statements follows

Example:

```
list1 = [10, 20, 30]
```

```
for n in list1:  
    print( n**2 )
```

- Running variable is `n`
- Iterable is `list1`

Equivalent to:

Code	Action
<code>n = list[0]</code>	<code>n</code> is 10
<code>print( n**2 )</code>	prints 100
<code>n = list[1]</code>	<code>n</code> is 20
<code>print( n**2 )</code>	prints 400
<code>n = list[2]</code>	<code>n</code> is 30
<code>print( n**2 )</code>	prints 900

Compact form in *list comprehensions*:

```
squares = [ n**2 for n in list1 ]
```

squares will be: [ 100, 400, 900 ]

Detailed example: [demo.py](#) in g04