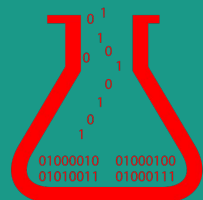

Intermediate Concepts



Libraries

--- Libraries



Modules and packages



Libraries two important forms.

Modules

Simply .py file with multiple functions

Importing a module imports the functions in the .py file

Packages

A package is a folder with relate modules inside it

The package must have a file called `__init__.py` to tell python that a folder is a package

Importing a package imports all the modules in the folder

Import Statement



Importing libraries is done with the “import” statement

Imports must be at the top of the script

Example:

```
import random
```

Objects within the library can be accessed with dot notation:

```
random.choose(mylist)
```

Objects can also be imported as an import from:

```
from random import choose
```

```
choose(mylist)
```

More on the Random library can be found here:

<https://docs.python.org/3/library/random.html>

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Other syntaxes for imports



```
Import numpy as np
    i.e. np.zeros([10,10])
from numpy import *
    zeros([10,10])
from numpy import zeros
    zeros([10,10])
from numpy import zeros as z
    z([10,10])
```

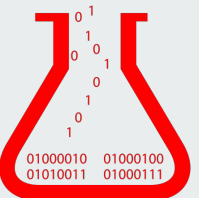
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Import Statement

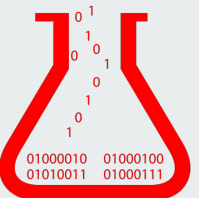
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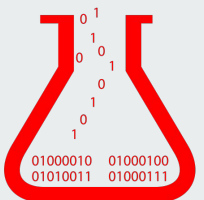
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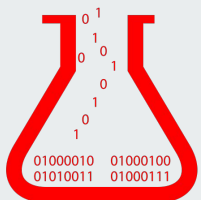
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choose(mylist)
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More on the Random library can be found here:

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Import with *

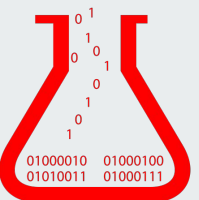
Importing with * is *never* advisable.

Importing with * imports all functions/classes/variables from the module, with unintended consequences.

Example:

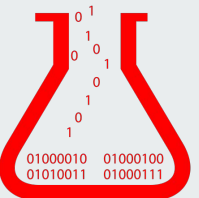
From numpy import *

help(sum), see the difference before and after import * overwrites sum()



Instead of Import with *

When using `from <libraryname> import <modulename/s>`, list out the specific modules you want to import



Questions?

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