**Concept of Library**

The “Python library” contains several different kinds of components.

* It contains data types that would normally be considered part of the “core” of a language, such as numbers and lists.
* For these types, the Python language core defines the form of literals and places some constraints on their semantics, but does not fully define the semantics. (On the other hand, the language core does define syntactic properties like the spelling and priorities of operators.)
* Python contains a large *library* of standard functions which can be used for common programming tasks (You can also create your own).
* The functions in the library are contained in separate *modules*, similar to the ones you have been writing and saving in the editor so far. In order to use a particular module, you must explicitly *import* it. This gives you access to the functions it contains.

we will be dealing with math, random . (required for 3rd week lab)

Math module

>>>import math

>>> dir(math)

['\_\_doc\_\_', '\_\_file\_\_', '\_\_loader\_\_', '\_\_name\_\_', '\_\_package\_\_', '\_\_spec\_\_', 'acos', 'acosh', 'asin', 'asinh', 'atan', 'atan2', 'atanh', 'ceil', 'copysign', 'cos', 'cosh', 'degrees', 'e', 'erf', 'erfc', 'exp', 'expm1', 'fabs', 'factorial', 'floor', 'fmod', 'frexp', 'fsum', 'gamma', 'gcd', 'hypot', 'inf', 'isclose', 'isfinite', 'isinf', 'isnan', 'ldexp', 'lgamma', 'log', 'log10', 'log1p', 'log2', 'modf', 'nan', 'pi', 'pow', 'radians', 'sin', 'sinh', 'sqrt', 'tan', 'tanh', 'tau', 'trunc']

We will demonstrate the following:

'ceil', 'degrees', 'e', 'exp','fabs', 'factorial', 'floor', 'fmod', 'gcd','pi', 'pow', 'radians', 'sin', 'sqrt', 'trunc'.

Random module

>>>import random

>>>dir(random)

['BPF', 'LOG4', 'NV\_MAGICCONST', 'RECIP\_BPF', 'Random', 'SG\_MAGICCONST', 'SystemRandom', 'TWOPI', '\_BuiltinMethodType', '\_MethodType', '\_Sequence', '\_Set', '\_\_all\_\_', '\_\_builtins\_\_', '\_\_cached\_\_', '\_\_doc\_\_', '\_\_file\_\_', '\_\_loader\_\_', '\_\_name\_\_', '\_\_package\_\_', '\_\_spec\_\_', '\_acos', '\_bisect', '\_ceil', '\_cos', '\_e', '\_exp', '\_inst', '\_itertools', '\_log', '\_pi', '\_random', '\_sha512', '\_sin', '\_sqrt', '\_test', '\_test\_generator', '\_urandom', '\_warn', 'betavariate', 'choice', 'choices', 'expovariate', 'gammavariate', 'gauss', 'getrandbits', 'getstate', 'lognormvariate', 'normalvariate', 'paretovariate', 'randint', 'random', 'randrange', 'sample', 'seed', 'setstate', 'shuffle', 'triangular', 'uniform', 'vonmisesvariate', 'weibullvariate']

**We will demonstrate the following:**

'choice','randint', 'random', 'randrange', 'sample', 'seed','shuffle', 'uniform'.

**You may also speek about the concept of builtins.**