Standard Python Modules and Their Usage

## os

Provides functions to interact with the operating system, such as file and directory operations.

## sys

Provides access to system-specific parameters and functions.

## math

Provides mathematical functions like sqrt, sin, cos, and constants like pi.

## datetime

Supplies classes for manipulating dates and times.

## random

Generates pseudo-random numbers for various distributions.

## json

Enables parsing and writing JSON data.

## re

Supports regular expressions for string matching and manipulation.

## time

Provides functions for working with time and timing operations.

## collections

Implements specialized container datatypes like namedtuple, deque, and defaultdict.

## itertools

Provides functions for creating iterators for efficient looping.

## functools

Higher-order functions for functional programming, like reduce, partial, and lru\_cache.

## subprocess

Allows spawning new processes, connecting to their input/output/error pipes.

## shutil

Provides a higher-level interface for file operations like copying and archiving.

## logging

Provides a flexible framework for emitting log messages from Python programs.

## threading

Supports threads and concurrency.