

# Multithreading Quiz

4 out of 6 correct

1. What is multithreading in Python?

- ☒ A process of running multiple threads simultaneously within a single process.
- ☐ A process of running multiple processes simultaneously within a single thread.
- ☐ A process of running multiple processes simultaneously within multiple threads.
- ☐ A process of running a single process within multiple threads.

**Explanation:** A is the correct answer, as multithreading in Python is the process of running multiple threads simultaneously within a single process.

2. What is the purpose of multithreading in Python?

- ☒ To improve the performance of a program by using multiple CPUs or CPU cores.
- ☐ To improve the memory utilization of a program by using multiple CPUs or CPU cores.
- ☐ To improve the overall efficiency of a program by using multiple CPUs or CPU cores.
- ☐ To improve the input/output operations of a program by using multiple CPUs or CPU cores.

**Explanation:** A is the correct answer, as the primary purpose of multithreading in Python is to improve the performance of a program by using multiple CPUs or CPU cores.

3. Which module is used to create and manage threads in Python?

- ☒ threading
- ☐ multiprocessing
- ☐ concurrent.futures
- ☐ queue

**Explanation:** A is the correct answer, as the threading module is used to create and manage threads in Python.

4. What is a mutex in multithreading?

- ☐ A type of thread that performs a specific task.
- ☐ A type of thread that runs in the background to handle incoming requests.



- ☒ A synchronization primitive used to protect shared resources from being accessed by multiple threads at the same time.
- ☐ A built-in function in Python that is used to release the Global Interpreter Lock.

**Explanation:** C is the correct answer, as a mutex is a synchronization primitive used to protect shared resources from being accessed by multiple threads at the same time.

5. Which method is used to start a new thread in Python?

- ☒ `start()`
- ☐ `run()`
- ☐ `create()`
- ☐ `begin()`

**Explanation:** A is the correct answer, as the `start()` method is used to start a new thread in Python.

6. What is the Global Interpreter Lock (GIL) in Python?

- ☒ A lock used to protect shared resources from being accessed by multiple threads at the same time.
- ☐ A mechanism used by Python to ensure that only one thread executes Python bytecode at a time.
- ☐ A thread that runs in the background to handle incoming requests.
- ☐ A type of thread that performs a specific task.

**Explanation:** B is the correct answer, as the Global Interpreter Lock (GIL) is a mechanism used by Python to ensure that only one thread executes Python bytecode at a time.

Submit