* Overview of Performance Tuning
* Multi Processing or Multi Threading Concepts
* Getting started with multiprocessing
* Creating Pool object
* Run basic jobs in parallel
* Using functions in multiprocessing
* Invoke custom functions using multiprocessing
* Real World Example - File Format Conversion
* Exercise and Solution

1. What is the advantage of multiprocessing over multithreading?

a. Better resource management

b. Faster execution

c. More efficient use of CPU

d. All of the above

Answer: d. All of the above

1. Which of the following is not a performance tuning technique?

a. Using multiprocessing

b. Using caching

c. Using recursion

d. Using generators

Answer: c

1. What is the difference between multiprocessing and multithreading?

a. Multiprocessing uses multiple processes while multithreading uses multiple threads

b. Multiprocessing uses multiple threads while multithreading uses multiple processes

c. Multiprocessing and multithreading are the same thing

d. None of the above

Answer: a

1. What is the difference between apply() and apply\_async() methods in multiprocessing?

a. apply() waits for the task to finish before returning, while apply\_async() returns immediately

b. apply() returns immediately, while apply\_async() waits for the task to finish before returning

c. apply() and apply\_async() are the same thing

d. None of the above

Answer: a

1. Which method is used to create a Pool object in multiprocessing?

a. multiprocessing.Pool()

b. multiprocessing.createPool()

c. multiprocessing.Pool.create()

d. None of the above

Answer: a

1. Which method can be used to get the result of a task submitted to a Pool object in multiprocessing?

a. get()

b. result()

c. return()

d. output()

Answer: a

1. Which method is used to start a Process object in multiprocessing?

a. start()

b. run()

c. execute()

d. submit()

Answer: a

1. Which method is used to specify a callback function in multiprocessing?

a. callback()

b. set\_callback()

c. apply\_async()

d. None of the above

Answer: c

1. What is the purpose of the os.listdir() method?

a. To list all the files in a directory

b. To create a new directory

c. To delete a directory

d. None of the above

Answer: a

1. Which method is used to add an item to a Queue object in multiprocessing?

a. add()

b. append()

c. put()

d. insert()

Answer: c