

TDSC Backend Developer Questions



Basic skill test for new candidates, please complete the following questions in a document and attached in reply email:

1. Process and Thread
 - A. Please brief the differences between process and thread.
 - B. How to achieve IPC (Inter-Process Communication), and why threads don't need it.
2. Database
 - A. Please list two different databases, each in SQL DB and NoSQL DB.
 - B. Please brief the differences between SQL DB and NoSQL DB.
 - C. How to normalize SQL DB, and why NoSQL DB usually not using normalization.
3. Linux & Bash
 - A. Please list two different ways to install a system package in a Linux-based OS?
 - B. Assume we have 10k files with a file name format [datetime].txt (20200101T000000.txt). How to rename every file except for this year with a particular prefix using one line bash command? (ex. 20190101.txt -> old-20190101.txt)
4. Django
 - A. Please explain how to achieve dynamic access control in every view accessed by different users without hard-coded. (ex. user1 cannot access api2, while user2 can)
5. Algorithm
 - A. Please complete at least three different medium or hard algorithm problems in leetcode.com, and attach the result screenshots along with your account id or profile URL.

Note.

Your personal information is confidential and for internal use only.

Please do the exercise by yourself.

Not every answer is required, except for the last question.