1, Python theory question

1. *A program is a set of instructions which can be intereprete and execute by the computer*
2. *a process is a program in execution*
3. *cache is a hardware or a software which can store data*
4. *a thread is a unit/sequence in the process, A multithreading is when several threads are executing at the same time*
5. *GIL stands for Global Interepreter lock which is a type of process lock. It stops several threads to be exxectued at the same time, it prevents multi threading basically*
6. *Concurrence and parallelism*

   parallelism   Concurrence

   process   process

   thread1 thread2   thread
   *   subthread1 subthread2*

7. *DRY= Don't Repeat Yourself , Keep it StupId Simple, BDUF stands for Big Data Up Front*
8. *Garbage collector is a a memory release when data are not used anymore*
9. *deadlock livelock*
10. *Flask*

2,Discuss the difference between python 2 and python 3

The syntax coding are different. You will use more parentheses in python 3
for example : python2 print 'Hello'
*   python3 print('Hello')*

Python 3 is using Unicode while Python 2 is using ASCII
Python 2 is not forward compatible, python 3 is backward compatible whihc makes python 3 easier to transfer data from a machine to another machine

4,Write tests for the newly created Palindrome function. Provide a brief explanation for your test case options

I decided t create three different unit tests to test each feature of my program :
1. *if length of the word is is inferior at 1, an error message should appear. I want to check that this condition works*
2. *if the word enters is a palindrome, return True*
3. *if the word enters is NOT a palindrome, return False*

5. Agile methodology, Scrum: name at least 3 types of meetings that are exercised by Agile teams and describe the objective of each meeting.

Definition of the project : *Define the main goal, the context, the stalkholders of the project*
Plan of the project : *Definition of the steps and the timeline of each step to achieve the project with specific deliverables at each step*
Stakeholders definition : it is a meeting to define the rôle and responsabilities of each stakeholder

6,Exception handling in Python, explain what each of the following blocks means in the program flow:
Try is where you will code the set of instructions for the program
Except is the exception to the set of instructions written in Try
Else and finally are a additional part of set of instructions that can be executed after the successful completion of Try. Else will be executed before Finally

7,How can we connect a Python program (process) with a database? Explain how it works and how do we fetch / insert data into DB tables from a python program.
You will need to connect python and mysql
You have get the permission from mysqlserver client to use their database in Pycharm