Python Programming Exercises

1. In this question you are going to write a Client-Server program:
   a. Write a **TCP server** that manages the request from the clients such that it broadcasts all the messages coming from the clients with adding sender **user IP** to the beginning of the sender's message.
   b. Write the client side of this program which just sends a message to the server.

NOTE: You must know which ports can be usable in the localhost.

2. In this question you will deal with database operations.
   a. Write a python script that creates a database with name **Records** in mysql system.
   b. Insert a table into **Records** database with name **Exam** and the table has following columns **(StudentID, CourseID, Grade) StudentID and CourseID** is sequence of character with max length 11, and Grade is an Integer)
   c. Insert three records into the **Exam** table.

3. **Go to following URL: https://www.hurriyet.com.tr/**

Using beautiful soup, scrap the **urls** of the news and **alt_text** of the images under the slider and store them into a list.

4. You are given simple python function:
   def divide(a, b):
        print(a/b)

   Write a decorator function for divide() function which with a name **smart_divide, such that it checks that if b=0 it prints "Whoops! cannot divide"** otherwise, it prints the division results**.**

5. This problem is related to the threading concept in python.
   a. Define two functions whose names are **meow()** and **havvv()**
   meow() function prints **"MEOWWWW!!!"** on the screen and stops for 2 seconds and prints the message again.

havvv(**) function prints **"Havv Havvv!!" the screen and stops for 3 seconds and print **"Hırrr!!"** on the screen at the second time.

b. Create two threads such that the first thread uses function **meow()** other one uses function **havvv()** and runs these threads.

c. Arrange the flow of the working queue of threads such that the first thread works firstly.