Haptik Assignment

You can answer the questions below in any language of your choice. There are 3 questions in total. We would like to see actual code for the questions which require you writing code and please write UNIT TESTS for the functions you write. Good luck!

Question 1

You can find a file called chats.txt here, the file contains a group conversation among a group of people.. Write a function that reads from the file and returns the 3 most active users in the conversation.

Chats.txt = https://s3.ap-south-1.amazonaws.com/haptikinterview/chats.txt

Question 2

Twitter is a micro blogging platform where users post "tweets" which are ristricted to 140 characters. In this question we want you to build twitter as a platform. Below are the functionalities of twitter that we want to build out

- A user should be able to sign up / login
- Users should be able to follow each other
- User should be able to tweet about anything they like
- When a user comes on their homepage, they should see all the tweets of people they are following sorted by latest tweet on top

Below are the details we would like to know

1. What technologies would you use to build out this platform? Please tell us the languages, databases, tools / servers you would use to build out the above platform.
2. Write the schema of your database that is going to store the data. We want to see this in detail to see where the all the different information will be stored
3. Write a function/API that will return all the tweets to show on the dashboard of a particular user. Please make sure to return the data in json.
4. How much can the system you have built scale up to? What are the limiting factors of your system and when will it start failing?
5. BONUS: write the frontend code for the textbox where you can type your tweet and the submit button that will send the request to publish this tweet.

Question 3

Write a function that given a list of strings and an input string will return True if you can create the input string from the list of strings and will return False if you cannot create the string from the list.

Example:

Function: *can_create(list_of_strings, input_string)*

List_of_strings = ['back', 'end', 'front', 'tree']

Input_string = 'backend' ---> Function returns True

Input_string = 'frontyard' ----> function returns False

Input_string = 'frontend' ---> function returns True