List of problem:

1. The data structure that must be used to implement MAP concept was not specified.
2. The data type of the keys and the data type of the values were not specified.
3. Length of the MAP that we need to work on.
4. The functional limitations of the MAP were not clear, what Level of functionalities of the MAP that must be implemented other than **put** and **get.**
5. The input is hard coded or passed by the user through console.
6. Handling wrong input or incorrect data.
7. How to present the data to the user and interaction and help then handle MAP easily?

Decisions on the list of items that need clarification

1. We chose to create a custom **Class** with **KEY** & **VALUE** variables and named the class Object and we used an Array list of Class Object to implement our MAP functionalities.
2. Since we did not have clear specific mention of data type requirement for KEY and VALUE we decided to go with **Int** data type for **KEY** and **String** datatype for **VALUE**.
3. Since we used an Array list of objects we did not initialize the length of the MAP, so there were no constraints on the length of the MAP.
4. We decide to implement put, get, remove, display functionalities of the MAP concept and restricted them to the above 4 functionalities.
5. Since its important to test the MAP in real time, we decided to give a console input and output functionality where user can display the entire MAP, PUT data using the key value pair, GET value based on the key and remove an element [key value pair].
6. We have conditional checks on the incorrect data and pass out a message acknowledging the incorrect command or the incorrect data type value passed to the map.
7. Since we have taken a console-based approach the user can input the key value pair and display all the elements in it and remove the items easily giving them greater control on the MAP.

We have made our MAP interactive with the console, where the user can easily interact with MAP implemented, functionalities that can be accessed by commands of the same name, like PUT, GET, REMOVE, DISPLAY, QUIT, SIZE. So, the user can add keys and values when prompted after the command and operate and display the current state of the MAP to valuate accordingly.

What you did well in developing the implementation that you could use as an

approach to coding a solution to another problem

We created a custom data type [Class pair] called Pair for storing key value pair and created an array list out of it, which helped us to understand the flexibility of the program to implement abstract concepts in the context of MAP and