```cpp
1  // question_3.cpp : This file contains the 'main' function. Program
     execution begins and ends there.
2  //
3  //
4  //
5  // /
   ----------------------------------------------------------------------------
   ------------------------------------------------
6  //Name                          Sai Chaitanya Kilambi
7  //Course                        CPSC 131 Data Structures, Fall, 2022
8  //Assignment                    No.2 question:3
9  //Due date                      09/07/2022
10 // Purpose:
11 // This program takes an input of a string and prints the frequency of each
     alphabet that appears in the string
12 // considering the uppercase and lower case the same
13 //----------------------------------------------------------------------------
   ------------------------------------------------
14 // list of libraries
15 //
16 //importing the required libraries
17
18 #include <iostream>
19 #include <string>
20 #include <iomanip>
21
22 int main()
23 {
24     int i = 0;
25     int j = 0;
26     std::string sentence;
27     int frequency[59] = {};
28
29     //printing the input prompt
30     std::cout << "Enter a sentence: ";
31
32     //take in the input sentence
33     std::getline(std::cin, sentence);
34
35     //using while loop to read the string
36     while (sentence[i] != '\0') {
37         if (sentence[i] >= 'A' && sentence[i] <= 'z') {
38
39             //j stores the value of each alphabet namely a=0,b=1....z=25;
40             j = sentence[i] - 'A';
41
42             //if the alphabets entered is a lower case then the ascii
                 subtraction will ber greater than or equal to 32
43             if (j >= 32) {
```

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44                   j -= 32;
45               }
46
47               //frequency of the corresponding alphabets are noted
48               ++frequency[j];
49           }
50           //moving to the next charecter
51           ++i;
52       }
53
54       //printing out the header
55       std::cout << ("Letters\t\t  Frequencies\n..........................   ⏎
            \n");
56
57
58       //loop to check if the charecter has a frequency >0 or not and printing ⏎
            the frequency of charecters with frequency >= 1
59       for (int i = 0; i < 59; i++) {
60
61           if (frequency[i] != 0) {
62               std::cout<<"     " << char(i + 'A') <<"\t"<<"\t     " <<        ⏎
                  frequency[i] << std::endl;
63
64           }
65
66       }
67
68       return 0;
69
70  }
71
72
73
```