DIGITAL ASSIGNMENT 2

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QUESTION:

1) Write a C program that accepts a string as input, print the length of the string and display the word frequency, then use pointers to find the first repeated and non-repeated character in the string, and print the output:

POSSIBLE TEST CASES:

INPUT:
SUJITHRA
OUTPUT:
Length of the string is: 8
Word frequency is: 8
No repeated characters found in the string.
First non-repeated character is: S
#2 INPUT:
ASSDFG
OUTPUT:

Length of the string is: 6

Word frequency is: 5
First repeated character is: S
First non-repeated character is: A
#3 INPUT:
RUDRESH

OUTPUT:

Length of the string is: 7

Word frequency is: 6

First repeated character is: R

First non-repeated character is: U

Answer:

```
#include <stdio.h>
#include <string.h>
#define MAX_LENGTH 100
int main() {
    char str[MAX_LENGTH];
    int len, freq[256] = {0}, i;
    char *p, *rep = NULL, *nonrep = NULL;
printf("Enter a string: ");
fgets(str, MAX_LENGTH, stdin);
 len = strlen(str) - 1;
    for (p = str; *p != '\0'; p++) {
        freq[(int)*p]++;
    }
printf("Length of the string is: %d\n", len);
printf("Word frequency is: ");
    for (i = 0; i < 256; i++) {
        if (freq[i] > 0) {
            printf("%c:%d ", i, freq[i]);
        }
    }
    printf("\n");
    for (p = str; *p != '\0'; p++) {
```

```
        if (freq[(int)*p] == 1 && nonrep == NULL) {
            nonrep = p;
        } else if (freq[(int)*p] > 1 && rep == NULL) {
            rep = p;
        }
        if (nonrep != NULL && rep != NULL) {
            break;
        }
    }

    if (rep == NULL) {
        printf("No repeated characters found in the
string.\n");
    } else {
        printf("First repeated character is: %c\n", *rep);
    }

    if (nonrep == NULL) {
        printf("No non-repeated characters found in the
string.\n");
    } else {
        printf("First non-repeated character is:
%c\n",*nonrep);
    }

    return 0;}
```