

VIT - Vellore

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BCSE102P_Structured and Object Oriented Programming Lab_VL2024250502365

VIT V_Structured and OOP_Lab 4_COD_Hard_Array of Structure

Attempt : 1

Total Mark : 10

Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Rashmika manages a group of customers with data plans and needs to calculate additional charges when they exceed their plan limits. Each customer has a unique ID, their data usage, and a plan limit, all stored in a struct named CustomerData. If a customer exceeds their limit, a function calculateFee calculates the additional charges at Rs. 2.00 per GB.

Your task is to write a program that processes the number of customers, and their usage data and calculates any additional charges using this function. Display each customer's ID and fee if applicable, along with the total data used and total plan limit across all customers.

Answer

```

// You are using GCC
#include<stdio.h>
float calculatefee(float a, float b){
    return 2*(a - b);
}

struct CustomerData{
    int id;
    float data;
    float limit;
};
int main(){
    int n;
    scanf("%d",&n);
    struct CustomerData c[10];
    for(int i = 0; i < n; i++){
        scanf("%d %f %f",&c[i].id,&c[i].data,&c[i].limit);
    }
    float data1;
    int check = 0;
    float limit1 = 1;
    float totallimit = 0;
    float totaldata = 0;
    for(int i = 0; i < n; i++){
        if(c[i].data > c[i].limit){
            data1 = c[i].data;
            limit1 = c[i].limit;
            printf("%d %.2f\n",c[i].id,calculatefee(data1,limit1));
            check = 1;
        }
        totaldata+=c[i].data;
        totallimit += c[i].limit;
    }
    if(check == 0){
        printf("No Charges\n");
    }
    printf("Total Data Used: %.2f GB\n",totaldata);
    printf("Total Plan Limit: %.2f GB\n",totallimit);
}

```

Status : Correct

Marks : 10/10