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#include <iostream>

using namespace std;

// this function reads integer value and re-read until it's 0 or positive.
int readNotNegative() {
    int x;
    cin >> x;

    while (x < 0) {
        cout << "Please enter not negative data: ";
        cin >> x;
    }
    return x;
}

// for out-patient total charges amount is sum of services and medication.
int computeTotalCharges(int hospitalServices, int hospitalMedication) {
    return hospitalMedication + hospitalServices;
}

// for in-patient total charges amount is number of days multiplied by daily rate plus sum of services and medication.
int computeTotalCharges(int numberOfDays, int dailyRate, int hospitalServices, int hospitalMedication) {
    return numberOfDays * dailyRate + hospitalMedication + hospitalServices;
}

int main() {

    // get patient type.
    int patientType;
    cout << "Enter 0 for in-patient or 1 for out-patient: ";
    cin >> patientType;
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// re-read patient type until valid
while ((patientType != 0) && (patientType != 1)) {
    cout << "Incorect data! Enter 0 for in-patient or 1 for out-patient: ";
    cin >> patientType;
}

int numberOfDays = 0;
int dailyRate = 0;
int hospitalServices = 0;
int hospitalMedication = 0;

// we read this data only for in-patient
if (patientType == 0) {
    cout << "Enter number of days spent in the hospital: ";
    numberOfDays = readNotNegative();

    cout << "Enter daily rate: ";
    dailyRate = readNotNegative();
}

// we read this data for both in-patient and out-patient
cout << "Enter charges for hospital services: ";
hospitalServices = readNotNegative();

cout << "Enter hospital medication charges: ";
hospitalMedication = readNotNegative();

// compute total charges depending on patient type
int totalCharges;
if (patientType == 0) {
    totalCharges = computeTotalCharges(numberOfDays, dailyRate, hospitalServices,
hospitalMedication);
} else {
    totalCharges = computeTotalCharges(hospitalServices, hospitalMedication);
}

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}
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cout << "Total charges: " << totalCharges << endl;
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// this is to keep console window to let user read the answer.
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system("pause");
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}
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