Labo 1 - Taxi

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1 Informations

Nom du fichier source: repas.cpp

2 Code

```cpp
//------------------------------------------------------------
// Demo           : example
// Classe         : PRG1_E
// Fichier        : repas.cpp
// Auteur(s)      : ValentinRicard & TiagoDeOliveiraJorge
// But            : Commande de repas dans un restaurant
// Modifications  :
// Remarque(s)    :
// Compilation    : (WSL-based ubuntu 20.04)
//  - CXX standard  -> 20
//  - CMake         -> 3.16.3
//  - c++ / cc      -> 9.4.0
//------------------------------------------------------------

#include <iostream>  // cout & cin
#include <cstdlib>   // EXIT_SUCCESS
#include <limits>    // numeric_limits<streamsize>
#include <iomanip>   // setw(...) et setprecision(...)

/// Sets the widths of the next input for padding.
#define FMT_NUMBER setw(7)

/// Clears the buffer (waits for a \n before handling feedback)
#define CLEAR_BUF cin.ignore(numeric_limits<streamsize>::max(), '\n')

/// Indicates and ends the program by waiting until the user presses the enter key
/// (we get a \n in the buffer)
#define END cout << "presser ENTREE pour quitter"; CLEAR_BUF; return EXIT_SUCCESS

using namespace std; // Removes the need to use std:: before every call

// Constant variables declaration
const float ENTRY_PRICE = 4.30f;
const float MAIN_DISH_PRICE = 12.50f;
const float BEVERAGE_PRICE = 3.00f;
const float DESERT_PRICE = 6.00f;
const float COFFEE_PRICE = 2.80f;


int main() {
    //==================//
    //      GREET       //
```

```
43      //==================//
44      cout << "bonjour, ce programme..." << endl
45           << "voici le prix des éléments" << endl
46           << "==========================" << endl;
47
48
49      //======================//
50      //  DISPLAY CONDITIONS  //
51      //======================//
52      // Note: We set the display to limit the precision to 2 decimal places
53      cout << fixed << setprecision(2)
54           << " - entree  : " << FMT_NUMBER << ENTRY_PRICE << endl
55           << " - plat    : " << FMT_NUMBER << MAIN_DISH_PRICE << endl
56           << " - boisson : " << FMT_NUMBER << BEVERAGE_PRICE << endl
57           << " - dessert : " << FMT_NUMBER << DESERT_PRICE << endl
58           << " - cafe    : " << FMT_NUMBER << COFFEE_PRICE << endl
59           << "NB: limite de saisie [0-10]";
60
61      //==================//
62      //      INPUT       //
63      //==================//
64      cout << endl << endl
65           << "votre commande" << endl
66           << "===============" << endl;
67
68      int entryCount;
69      cout << " - nbre de entree :";
70      cin >> entryCount;
71      CLEAR_BUF;
72      // Validate the entry count
73      if (entryCount < 0 || entryCount > 10) {
74          cout << "Entrée invalide ! Merci de relancer le programme." << endl;
75          END;
76      }
77
78
79      int mainDishCount;
80      cout << " - nbre de plat    :";
81      cin >> mainDishCount;
82      CLEAR_BUF;
83      // Validate the main dish count
84      if (mainDishCount < 0 || mainDishCount > 10) {
85          cout << "Entrée invalide ! Merci de relancer le programme." << endl;
86          END;
87      }
88
89
90      int beverageCount;
91      cout << " - nbre de boisson :";
92      cin >> beverageCount;
93      CLEAR_BUF;
94      // Validate the beverage count
95      if (beverageCount < 0 || beverageCount > 10) {
96          cout << "Entrée invalide ! Merci de relancer le programme." << endl;
97          END;
98      }
99
100
101     int desertCount;
102     cout << " - nbre de dessert :";
103     cin >> desertCount;
```

```
104     CLEAR_BUF;
105     // Validate the desert count
106     if (desertCount < 0 || desertCount > 10) {
107         cout << "Entrée invalide ! Merci de relancer le programme." << endl;
108         END;
109     }
110 
111     int coffeeCount;
112     cout << " - nbre de cafe    :";
113     cin >> coffeeCount;
114     CLEAR_BUF;
115 
116     if (coffeeCount < 0 || coffeeCount > 10) {
117         cout << "Entrée invalide ! Merci de relancer le programme." << endl;
118         END;
119     }
120 
121     //==================//
122     //     PROCESS      //
123     //==================//
124     float entryTotalPrice = (float) entryCount * ENTRY_PRICE;
125     float mainDishTotalPrice = (float) mainDishCount * MAIN_DISH_PRICE;
126     float beverageTotalPrice = (float) beverageCount * BEVERAGE_PRICE;
127     float desertTotalPrice = (float) desertCount * DESERT_PRICE;
128     float coffeeTotalPrice = (float) coffeeCount * COFFEE_PRICE;
129 
130     float total = entryTotalPrice
131                   + mainDishTotalPrice
132                   + beverageTotalPrice
133                   + desertTotalPrice
134                   + coffeeTotalPrice;
135 
136     //==================//
137     //      OUTPUT      //
138     //==================//
139 
140     cout << "votre ticket" << endl << "============" << endl
141          << "- " << entryCount << " entrees  :" << FMT_NUMBER << entryTotalPrice << endl
142          << "- " << mainDishCount << " plats    :" << FMT_NUMBER << mainDishTotalPrice <<
    ↪ endl
143          << "- " << beverageCount << " boissons :" << FMT_NUMBER << beverageTotalPrice <<
    ↪ endl
144          << "- " << desertCount << " desserts :" << FMT_NUMBER << desertTotalPrice << endl
145          << "- " << coffeeCount << " cafes    :" << FMT_NUMBER << coffeeTotalPrice << endl
146          << "-      total :" << FMT_NUMBER << total << endl
147          << "merci de votre visite" << endl << endl;
148 
149 
150     END;
151 }
```