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1  /*
2  COS 220
3  Assignment 2
4  Feb. 28, 2018
5
6  Mathew Schaefer
7  -----
8  This program produces a bill to the customer from the Caswell Catering
9  Company. This bill includes; meals, gratuity, room reservation, and state
10 tax.
11 -----
12 */
13
14 #include <iostream>
15 #include <iomanip>
16
17 using namespace std;
18
19 int main()
20 {
21     const double STATE_TAX = 0.065;
22     const double GRATUITY = 0.18;
23
24     double meal_beef = 12.95;
25     double meal_chicken = 10.95;
26     double meal_vegan = 8.95;
27
28     int num_beef, num_chicken, num_vegan, num_meals = 0;
29
30     int room_1 = 250;
31     int room_2 = 200;
32     int room_3 = 100;
33     int room_4 = 50;
34
35     int cost_room = 0;
36     int num_people = 0;
37
38     cout<<"Enter the number of beef meals: ";
39     cin>>num_beef;
40     cout<<endl;
41     if(num_beef < 0){
42         cout<<"Error invalid number of meals."<<endl;
43         return(0);
44     }
45     cout<<"Enter the number of chicken meals: ";
46     cin>>num_chicken;
47     cout<<endl;
48     if(num_meals < 0){
49         cout<<"Error invalid number of meals."<<endl;
50         return(0);
51     }
52     cout<<"Enter the number of vegan meals: ";
53     cin>>num_vegan;
54     cout<<endl;
55     if(num_vegan < 0){
56         cout<<"Error invalid number of meals."<<endl;
57         return(0);
58     }
59     num_people = num_beef + num_chicken + num_vegan;
60     if(num_people <= 200 && num_people > 150){
61         cost_room = 250;
62     }else if (num_people <= 150 && num_people > 100){
63         cost_room = 200;
64     }else if (num_beef <= 100 && num_people > 30){
65         cost_room = 100;
66     }else cost_room = 50;

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67
68     cout<<left<<fixed<<"\nCastwell Caterers by Matthew Schaefer\n\n";
69     cout<<setw(30)<<"Number in party"<<setw(10)<<right<<num_people<<endl;
70     cout<<left<<setw(30)<<"Room Cost: "<<setw(20)<<right<<setprecision(2)<<"$"<<
cost_room<<endl;
71     cout<<left<<setw(30)<<"Room Tax: "<<setw(20)<<right<<setprecision(2)<<"$"<<
cost_room*STATE_TAX<<endl;
72     cout<<left<<setw(30)<<"Number of beef diners"<<setw(10)<<right<<num_beef<<endl;
73     cout<<left<<setw(30)<<"Cost of beef diners "<<setw(20)<<right<<setprecision(2)<<
"$"<<num_beef*meal_beef<<endl;
74     cout<<left<<setw(30)<<"Number of chicken diners"<<setw(10)<<right<<num_chicken<<
endl;
75     cout<<left<<setw(30)<<"Cost of chicken diners "<<setw(20)<<right<<setprecision(2)
)<<"$"<<num_chicken*meal_chicken<<endl;
76     cout<<left<<setw(30)<<"Number of vegan diners"<<setw(10)<<right<<num_vegan<<endl;
77     cout<<left<<setw(30)<<"Cost of vegan diners "<<setw(20)<<right<<setprecision(2)<<
"$"<<num_vegan*meal_vegan<<endl;
78     cout<<left<<setw(30)<<"Food Gratuity: "<<setw(20)<<right<<setprecision(2)<<"$"
<<((num_beef*meal_beef)+(num_chicken*meal_chicken)
79     +(num_vegan*meal_vegan))*GRATUITY<<endl;
80     cout<<left<<
"-----"<<endl;
81     cout<<setw(30)<<"Total:"<<setw(20)<<right<<setprecision(2)<<"$"<<cost_room+
cost_room*STATE_TAX+(((num_beef*meal_beef)+(num_chicken*meal_chicken)
82     +(num_vegan*meal_vegan))*(1+GRATUITY))<<endl;
83
84     return 0;
85 }

```