

```

1  #include <iostream>
2
3  using namespace std;
4
5  void tipSetter(const string& a, double b);
6
7  int main() {
8      string tip_percent;
9      string person_name;
10     string answer;
11     string manager_answer;
12     double amount_total;
13
14     cout << "Hello, my name is Fred and my reason for existence is to tell you how much to tip your
server.\n"
15     "Please enter your first name to continue:\n...";
16     cin >> person_name;
17     person_name[0] = char(toupper(person_name[0]));
18     cout << "Hello " << person_name << ".\nWhat is your total??\n...$";
19     cin >> amount_total;
20     cout << "How was your service?\n"
21     "Hint: Try either bad, ok, good, or great\n...";
22     cin >> tip_percent;
23
24     for (int i = 0; i < person_name.size(); i++){
25         tip_percent[i] = char(tolower(tip_percent[i]));
26     }
27
28     if(tip_percent == "ok" || tip_percent == "good" || tip_percent == "great"){
29         tipSetter(tip_percent, amount_total);
30         cout << "Thanks for using me! Have a great day " << person_name << "!!" << endl;
31         return 0;
32     } else if ("bad" == tip_percent) {
33         cout << "I am set to give 15% for bad service\n"
34         "Is this acceptable or would you like to set your own?" << endl;
35         cin >> answer;
36         if ("yes" == answer) {
37             tipSetter(person_name, amount_total);
38             return 0;
39         } else if ("no" == answer) {
40             double custom_tip_percentage;
41             cout << "What percentage would you like to tip?\n"
42             "...";
43             cin >> custom_tip_percentage;
44             double q = 100;
45             double custom_tip;
46             custom_tip = (custom_tip_percentage / 100) * amount_total;
47             double custom_tip_total = custom_tip + amount_total;
48             cout << "Tip amount: $ " << custom_tip << endl;
49             cout << "Total amount: $ " << custom_tip_total << endl;
50             cout << "Would you like to speak to the manager? " << endl;
51             cin >> manager_answer;
52             if ("yes" == manager_answer) {
53                 cout << "I am the manager " + person_name + "! A 30% service charge has now
been added to your total!"
54                 << endl;
55                 double service_charge = (amount_total * 0.3) + amount_total;
56                 cout << "Amount Due: $ " << service_charge << endl;
57                 cout << "Have a great day " << person_name << "!!" << endl;
58                 return 0;
59             } else if ("no" == manager_answer) {
60                 tipSetter(tip_percent, amount_total);
61                 return 0;
62             }
63         }
64     } else {
65         cout << "Wrong entry " + person_name + ". Try again using the following words: bad, ok,
good, great.\n"
66         "Thanks " + person_name + "!"
67         << endl;
68         return 0;
69     }
}

```

```
70
71
72 void tipSetter(const string& a, double b) {
73     double good_t = .20;
74     double ok_t = .18;
75     double great_t = .25;
76     double tip_p;
77     string string_1 = "Tip Total: $";
78     string string_2 = "Total $";
79
80     if (a == "ok") {
81         tip_p = ok_t;
82     } else if (a == "good") {
83         tip_p = good_t;
84     } else {
85         tip_p = great_t;
86     }
87
88     double i = b * tip_p;
89     double j = b + i;
90     cout << "Tip Percent: " << tip_p * 100 << "%" << endl;
91     cout << string_1 << i << endl;
92     cout << string_2 << j << endl;
93 }
94
```