

```
1  #include <iostream>
2  #include <string>
3  using namespace std;
4
5  class Numbers
6  {
7  private:
8      int number;
9      static string lessThan20[20];
10     static string tens[10];
11     static string hundred;
12     static string thousand;
13 public:
14     Numbers(int x){ number = x;}
15     void print();
16 };
17 string Numbers::lessThan20[20] =
18     { "zero", "one", "two", "three", "four", "five",
19       "six", "seven", "eight", "nine", "ten",
20       "eleven", "twelve", "thirteen", "fourteen",
21       "fifteen", "sixteen", "seventeen", "eighteen",
22       "nineteen",
23     };
24
25 string Numbers::tens[10] =
26     { " ", "ten", "twenty", "thirty", "forty",
27       "fifty", "sixty", "seventy", "eighty", "ninety",
28     };
29 //string Numbers::hundred = "hundred";
30 string Numbers::thousand = "thousand";
31
32 void Numbers::print()
33 {
34     int remainder = number;
35     if (remainder < 0 || remainder > 9999)
36     {
37         cout << "invalid input.";
38     }
39     else
40     {
41         cout << "The English description is:";
42
43         if (number == 0)
44         {
45             cout << " zero";
46         }
47         int n_thousands = remainder / 1000;
48         remainder %= 1000;
49     }
```

```
50     if (n_thousands > 0)
51     {
52         cout << " " << lessThan20[n_thousands];
53         cout << " " << thousand;
54     }
55
56     int n_hundreds = remainder / 100;
57     remainder %= 100;
58
59     if (n_hundreds > 0)
60     {
61         cout << " " << lessThan20[n_hundreds];
62         cout << " " << hundred;
63     }
64     if (remainder >= 20)
65     {
66         int n_tens = remainder / 10;
67         remainder %= 10;
68
69         if (n_tens > 0)
70             cout << " " << tens[n_tens];
71     }
72
73     if (remainder > 0)
74     {
75         cout << " " << lessThan20[remainder];
76     }
77 }
78 cout << endl << endl;
79 }
80
81 int main()
82 {
83     int number;
84
85     cout << "Enter a whole dollar amount: ";
86     cin >> number;
87
88     Numbers n(number);
89     n.print();
90
91     return 0;
92 }
```