```cpp
1  #include "equation.h"
2  using namespace std;
3
4  equation::equation()
5  {
6      begin = last;
7      last = NULL;
8      length = 0;
9
10 }
11
12 void equation::insertitem(nodetype x)
13 {
14     int i = 0;
15     nodetype* t;
16     t = new nodetype;
17     *t = x;
18     t->next = NULL;
19     if (begin == NULL)
20     {
21         begin = t;
22     }
23     else
24     {
25         t->next = last;
26         begin = t;
27     }
28
29 }
30
31 void equation::printlist(ofstream& outputfile)
32 {
33     nodetype* t = begin;
34     while (t != NULL)
35     {
36         outputfile << t->coeff << "x" << t->exp << " ";
37         t = t->next;
38     }
39
40 }
41
42
43
```