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1  #include<stdio.h>
2  #include<stdlib.h>
3  typedef struct list {
4      int coe;
5      int exp;
6      struct list *link;
7  }eqn;
8  eqn *eqn1,*eqn2,*eqn3,*disp,*new;
9  int x,c,y=1,z;
10
11 void create(){
12     new=(eqn*)malloc(sizeof(eqn));
13     new->link=NULL;
14     puts("which equation u wnt 2 create:[ 1 / 2 ]");
15     scanf("%d",&z);
16     switch(z){
17         case 1: eqn1=new;break;
18         case 2: eqn2=new;break;
19         default: puts("\nWrong selection");
20     }
21     do{
22         puts("Enter the coefficient:");
23         scanf("%d",&new->coe);
24         puts("Enter the exponent:");
25         scanf("%d",&new->exp);
26         puts("Do u wnt 2 add mor elmnts[1-yes][0-no]");
27         scanf("%d",&x);
28         if(x){
29             new->link=(eqn*)malloc(sizeof(eqn));
30             new=new->link;
31             new->link=NULL;
32         }
33     }while(x);
34 }
35
36 void add(){
37     new=(eqn *)malloc(sizeof(eqn));
38     new->link=NULL;
39     eqn3=new;
40     while(eqn1 && eqn2) {
41         if(eqn1->exp>eqn2->exp) {
42             new->coe=eqn1->coe;
43             new->exp=eqn1->exp;
44             eqn1=eqn1->link;
45         }
46         else if(eqn1->exp<eqn2->exp) {
47             new->coe=eqn2->coe;
48             new->exp=eqn2->exp;
49             eqn2=eqn2->link;
50         }
51         else {
52             new->coe=eqn1->coe+eqn2->coe;
53             new->exp=eqn1->exp;
54             eqn1=eqn1->link;
55             eqn2=eqn2->link;
56         }
57         if(eqn1 && eqn2) {
58             new->link=(eqn *)malloc(sizeof(eqn));
59             new=new->link;
60             new->link = NULL;
61         }
62     }
63     while(eqn1 || eqn2) {
64         new->link=(eqn *)malloc(sizeof(eqn));
65         new=new->link;
66         new->link=NULL;
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67         if(eqn1) {
68             new->coe=eqn1->coe;
69             new->exp=eqn1->exp;
70             eqn1=eqn1->link;
71         }
72         if(eqn2) {
73             new->coe=eqn2->coe;
74             new->exp=eqn2->exp;
75             eqn2=eqn2->link;
76         }
77     }
78 }
79
80 void display() {
81     puts("which equation u wnt 2 display:[ 1 / 2 / 3 ]");
82     scanf("%d",&z);
83     switch(z){
84         case 1:disp=eqn1;break;
85         case 2:disp=eqn2;break;
86         case 3:disp=eqn3;break;
87         default:puts("\nWrong selection");
88     }
89     while(disp!=NULL) {
90         printf("%d X^ %d",disp->coe,disp->exp);
91         disp=disp->link;
92         if(disp!=NULL){
93             printf(" + ");
94         }
95     }
96 }
97
98 void main(){
99     system("clear");
100     while(y){
101         puts("select an operation \n\t1:create()\n\t2:add()\n\t3:display()
102 \n");
103         scanf("%d",&c);
104         switch(c){
105             case 1:create();break;
106             case 2:add();break;
107             case 3:display();break;
108             default:puts("wrong selection");;break;
109         }
110         puts("\nDo u wnt 2 continue operations[1=yes][0=no]");
111         scanf("%d",&y);
112     }
```