

```

1  #include <stdio.h>
2
3  int main()
4  {
5      struct date {
6          int      year;
7          unsigned month;
8          unsigned day;
9      };
10     struct person {
11         unsigned id;
12         char      name[20];
13         char      gender;
14         struct date birth;
15         float      score;
16         char      addr[100];
17     };
18     struct {
19         int      a;
20         float     b;
21         char      c;
22     } a1, a2;
23     struct {
24         int      a;
25         float     b;
26         char      c;
27     } b[2]={1, 1.1, '1'};
28     struct person zh3, li4={10001, "li si", 'M', {2000, 1, 1}, 88, "USTC"};
29
30     zh3 = li4;
31     b[1] = b[0];
32     printf("%s:%d,%c,%d-%d-%d,%f,%s\n", zh3.name, zh3.id, zh3.gender, zh3.birth.year, zh3.birth.month,
zh3.birth.day, zh3.score, zh3.addr);
33     printf("b[1]:%d,%f,%c\n", b[1].a, b[1].b, b[1].c);
34     a2.a=2, a2.b=2.1, a2.c='a';
35     printf("a2:%d,%f,%c\n", a2.a, a2.b, a2.c);
36
37     return 0;
38 }
39

```

```

1  #include <stdio.h>
2  #include <math.h>
3
4  struct student {
5      int    gid;
6      char   name[20];
7      char   gender;
8      float  score;
9  };
10
11 int main()
12 {
13     struct student stu[100];
14     int i, j, k, n, so, gid;
15     char name[20];
16     char gender;
17     float score;
18
19     printf("有几位同学?");
20     scanf("%d", &n);
21     printf("输入%d位同学的信息:编号  姓名  性别  成绩\n", n);
22     for (i=0; i<n; i++) {
23         scanf("%d%s", &stu[i].gid, stu[i].name);
24         getchar();
25         scanf("%c%f", &stu[i].gender, &stu[i].score);
26     }
27
28     printf("输入查找方式(0-编号,1-姓名,2-性别,3-成绩):");
29     scanf("%d", &so);
30     switch (so) {
31         case 0:
32             printf("输入学生的编号:");
33             scanf("%d", &gid);
34             for (i=0; i<n; i++)
35                 if (stu[i].gid == gid)
36                     printf("%d %s %c %f\n", stu[i].gid, stu[i].name, stu[i].gender, stu[i].score);
37             break;
38
39         case 1:
40             printf("输入学生的姓名:");
41             scanf("%s", name);
42             for (i=0; i<n; i++) {
43                 j = 0;
44                 k = 0;
45                 while (name[j] != '\0') {
46                     if (name[j] != stu[i].name[j]) {
47                         k = 1;
48                         break;
49                     }
50                     j++;
51                 }
52                 if (k==0)
53                     printf("%d %s %c %f\n", stu[i].gid, stu[i].name, stu[i].gender, stu[i].score);
54             }
55             break;
56
57         case 2:
58             getchar();
59             printf("输入学生的性别:");
60             scanf("%c", &gender);
61             for (i=0; i<n; i++)
62                 if (stu[i].gender == gender)
63                     printf("%d %s %c %f\n", stu[i].gid, stu[i].name, stu[i].gender, stu[i].score);
64             break;
65
66         case 3:
67             printf("输入学生的成绩:");
68             scanf("%f", &score);
69             for (i=0; i<n; i++)
70                 if (fabs(stu[i].score-score)<1e-6)
71                     printf("%d %s %c %f\n", stu[i].gid, stu[i].name, stu[i].gender, stu[i].score);
72             break;
73
74         default:
75             break;
76     }
77
78     return 0;
79 }
80

```

```

1  #include <stdio.h>
2
3  int main()
4  {
5      struct Time {
6          int hours;
7          int minutes;
8          int seconds;
9      } t0, t;
10
11     int delta;
12     int sec0, sec;
13
14     while (1) {
15         printf("请输入时,分,秒:");
16         scanf("%d,%d,%d", &t0.hours, &t0.minutes, &t0.seconds);
17         if (t0.hours >=0 && t0.hours <=23 &&
18             t0.minutes>=0 && t0.minutes<=59 &&
19             t0.seconds>=0 && t0.seconds<=59) {
20             sec0 = 3600*t0.hours + 60*t0.minutes + t0.seconds;
21             break;
22         }
23         printf("输入时间不符合要求, 请重新输入\n");
24     }
25
26     while (1) {
27         printf("请输入调整时间的秒数:");
28         scanf("%d", &delta);
29         if (delta == 0)
30             break;
31
32         sec = (sec0 + delta) % 86400;
33         if (sec<0)
34             sec += 86400;
35
36         t.hours = sec / 3600;
37         t.minutes = sec % 3600 / 60;
38         t.seconds = sec % 60;
39
40         printf("%02d-%02d-%02d调整%d秒后为:%02d-%02d-%02d\n",
41             t0.hours, t0.minutes, t0.seconds, delta, t.hours, t.minutes, t.seconds);
42     }
43
44     return 0;
45 }
46

```

```

1  #include <stdio.h>
2  #include <string.h>
3
4  struct candidate {
5      int    id;
6      char    name[30];
7      char    gender;
8      unsigned votes;
9  };
10
11 int main()
12 {
13     struct candidate cand[50];
14     int n, i, sel;
15     int id;
16     char name[30];
17
18     printf("有几位候选人:");
19     scanf("%d", &n);
20
21     printf("输入%d位候选人信息(编号,姓名,性别):\n", n);
22     for (i=0; i<n; i++) {
23         scanf("%d%s %c", &cand[i].id, cand[i].name, &cand[i].gender);
24         cand[i].votes = 0;
25     }
26
27     puts("开始投票:");
28     do {
29         puts("投票(0 编号,1 姓名,10 结束):");
30         scanf("%d", &sel);
31         if (sel==0) {
32             scanf("%d", &id);
33             for (i=0; i<n; i++)
34                 if (cand[i].id==id) {
35                     cand[i].votes++;
36                     break;
37                 }
38         }
39         else if (sel==1) {
40             scanf("%s", name);
41             for (i=0; i<n; i++)
42                 if (!strcmp(cand[i].name, name)) {
43                     cand[i].votes++;
44                     break;
45                 }
46         }
47     } while (sel!=10);
48
49     puts("投票结果:");
50     for (i=0; i<n; i++)
51         printf("%d,%s,%c:%d票\n", cand[i].id, cand[i].name, cand[i].gender, cand[i].votes);
52
53     return 0;
54 }
55

```

```
1  #include <stdio.h>
2
3  int main()
4  {
5      int c;
6      int count[6]={0};
7
8      while ((c=getchar()) != EOF)
9          if (c>='A' && c<='Z')
10             count[0]++;
11         else if (c>='a' && c<='z')
12             count[1]++;
13         else if (c>='0' && c<='9')
14             count[2]++;
15         else if (c == ' ')
16             count[3]++;
17         else if (c < 32)
18             count[4]++;
19         else
20             count[5]++;
21
22     printf("%d个大写字母,%d个小写字母,%d个数字,%d个空格,%d个制表符,%d个其它字符\n",
23           count[0], count[1], count[2], count[3], count[4], count[5]);
24
25     return 0;
26 }
27
```

```

1  #include <stdio.h>
2
3  int main()
4  {
5      int y, m, d, w;
6      int days[12]={31,28,31,30,31,30,31,31,30,31,30,31};
7
8      printf("输入一年的年份和1月1日是星期几(1~7):");
9      scanf("%d%d", &y, &w);
10
11     if (((y%4==0)&&(y%100!=0))||(y%400==0))
12         days[1]++;
13
14     for (m=1; m<=12; m++) {
15         printf("\n%d年%d月\n", y, m);
16         printf("星期一 星期二 星期三 星期四 星期五 星期六 星期日\n");
17
18         // printf("%*s", (w-1)*7, "");
19         for (d=1; d<w; d++)
20             printf("%7s", "");
21
22         for (d=1; d<=days[m-1]; d++) {
23             printf("%4d", d);
24             if ((w%7==0)||(d==days[m-1]))
25                 putchar('\n');
26             else
27                 printf("%3s", "");
28             w = w % 7 + 1;
29         }
30     }
31
32     return 0;
33 }
34

```



```

1  #include <stdio.h>
2  #include <string.h>
3
4  struct abook {
5      char    name[50];
6      long long mobile;
7      char    wechat[50];
8      long long qq;
9  };
10
11 int main()
12 {
13     struct abook ab[100];
14     int    i, n=0, op, so;
15     char    name[50];
16     long long mobile;
17     char    wechat[50];
18     long long qq;
19     FILE *fp;
20
21     while (1) {
22         printf("选择操作(1-输入,2-显示,3-添加,4-查找,5-存入文件,0-退出):");
23         scanf("%d", &op);
24
25         switch (op) {
26             case 1:
27                 printf("待输入的联系人数量:");
28                 scanf("%d", &n);
29                 printf("输入%d个联系人信息(姓名 手机号 微信号 QQ号):\n", n);
30                 for (i=0; i<n; i++)
31                     scanf("%s%lld%s%lld", ab[i].name, &ab[i].mobile, ab[i].wechat, &ab[i].qq);
32                 break;
33
34             case 2:
35                 for (i=0; i<n; i++)
36                     printf("%s %lld %s %lld\n", ab[i].name, ab[i].mobile, ab[i].wechat, ab[i].qq);
37                 break;
38
39             case 3:
40                 puts("输入待添加的联系人信息(姓名 手机号 微信号 QQ号):");
41                 scanf("%s%lld%s%lld", ab[n].name, &ab[n].mobile, ab[n].wechat, &ab[n].qq);
42                 n++;
43                 break;
44
45             case 4:
46                 printf("输入查找方式(1-姓名,2-手机号,3-微信号,4-QQ号)和联系人信息:");
47                 scanf("%d", &so);
48                 switch (so) {
49                     case 1:
50                         scanf("%s", name);
51                         for (i=0; i<n; i++)
52                             if (!strcmp(ab[i].name, name))
53                                 printf("%s %lld %s %lld\n", ab[i].name, ab[i].mobile, ab[i].wechat, ab[i].qq);
54                         break;
55                     case 2:
56                         scanf("%lld", &mobile);
57                         for (i=0; i<n; i++)
58                             if (ab[i].mobile==mobile)
59                                 printf("%s %lld %s %lld\n", ab[i].name, ab[i].mobile, ab[i].wechat, ab[i].qq);
60                         break;
61                     case 3:
62                         scanf("%s", wechat);
63                         for (i=0; i<n; i++)
64                             if (!strcmp(ab[i].wechat, wechat))
65                                 printf("%s %lld %s %lld\n", ab[i].name, ab[i].mobile, ab[i].wechat, ab[i].qq);
66                         break;
67                     case 4:
68                         scanf("%lld", &qq);
69                         for (i=0; i<n; i++)
70                             if (ab[i].qq==qq)
71                                 printf("%s %lld %s %lld\n", ab[i].name, ab[i].mobile, ab[i].wechat, ab[i].qq);
72                 }
73                 break;
74
75             case 5:
76                 fp = fopen("abook.txt", "w");
77                 for (i=0; i<n; i++)
78                     fprintf(fp, "%s %lld %s %lld\n", ab[i].name, ab[i].mobile, ab[i].wechat, ab[i].qq);
79                 fclose(fp);
80                 puts("已存入文件abook.txt");
81                 break;
82
83             case 0:
84                 return 0;
85         }
86     }
87 }
88

```