第 10 章 对文件的输入输出答案

10-4

```
#include <stdio.h>
#include <stdlib.h>
int main ()
{
 FILE *fp;
 int i,j,n,i1;
 char c[100],t,ch;
 if ((fp=fopen("a1","r"))==NULL)
    { printf("\ncan not open file\n");
       exit(0);
    }
 printf("file A :\n");
 for (i=0;(ch=fgetc(fp))!=EOF;i++)
  {
    c[i]=ch;
    putchar(c[i]);
  }
 fclose(fp);

 i1=i;
 if ((fp=fopen("b1","r"))==NULL)
  {printf("\ncan not open file\n");
    exit(0);
  }
 printf("\nfile B:\n");
 for (i=i1;(ch=fgetc(fp))!=EOF;i++)
    {c[i]=ch;
      putchar(c[i]);
    }
 fclose(fp);

 n=i;
 for (i=0;i<n;i++)
    for (j=i+1;j<n;j++)
        if (c[i]>c[j])
            {t=c[i];
              c[i]=c[j];
              c[j]=t;
            }
 printf("\nfile C :\n");
```

```
  fp=fopen("c1","w");
  for (i=0;i<n;i++)
        {putc(c[i],fp);
         putchar(c[i]);
        }
  printf("\n");
  fclose(fp);
  return 0;
}
```

10-5.

方法一、

10-5-1

```
#include <stdio.h>
struct student
{char num[10];
  char name[8];
  int score[3];
  float ave;
  }    stu[5];

int main()
  { int i,j,sum;
     FILE *fp;
     for(i=0;i<5;i++)
     {printf("\ninput score of student %d:\n",i+1);
     printf("NO.:");
     scanf("%s",stu[i].num);
     printf("name:");
     scanf("%s",stu[i].name);
     sum=0;
     for (j=0;j<3;j++)
        {printf("score %d:",j+1);
         scanf("%d",&stu[i].score[j]);
         sum+=stu[i].score[j];
     }
     stu[i].ave=sum/3.0;
     }

      /*将数据写入文件*/
   fp=fopen("stud","w");
   for (i=0;i<5;i++)
       if (fwrite(&stu[i],sizeof(struct student),1,fp)!=1)
      printf("file write error\n");
```

```
   fclose(fp);

   fp=fopen("stud","r");
   for (i=0;i<5;i++)
      {fread(&stu[i],sizeof(struct student),1,fp);
       printf("\n%s,%s,%d,%d,%d,%6.2f\n",stu[i].num,stu[i].name,stu[i].score[0],
          stu[i].score[1],stu[i].score[2],stu[i].ave);}
   fclose(fp);
   return 0;
   }
```

方法二、

```
10-5-2
#include <stdio.h>
#define SIZE 5
struct student
{char name[10];
 int num;
 int score[3];
 float ave;
 }    stud[SIZE];

int main()
 { void save(void);
    int i;
    float sum[SIZE];
    FILE *fp1;
    for (i=0;i<SIZE;i++)
       { scanf("%s %d %d %d",stud[i].name,&stud[i].num,&stud[i].score[0],
           &stud[i].score[1],&stud[i].score[2]);
         sum[i]=stud[i].score[0]+stud[i].score[1]+stud[i].score[2];
         stud[i].ave=sum[i]/3;
        }
 save();
 fp1=fopen("stu.dat","rb");
 printf("\n name          NO.       score1    score2    score3      ave\n");
 printf("-----------------------------------------------\n");
 for (i=0;i<SIZE;i++)
    {fread(&stud[i],sizeof(struct student),1,fp1);
     printf("%-10s %3d %7d %7d %7d %8.2f\n",stud[i].name,stud[i].num,
     stud[i].score[0],stud[i].score[1],stud[i].score[2],stud[i].ave);
    }
 fclose (fp1);
 return 0;
```

```
}

void save(void)
{
   FILE *fp;
   int i;
   if ((fp=fopen("stu.dat","wb"))==NULL)
      {printf("The file can not open\n");
       return;
      }
   for(i=0;i<SIZE;i++)
      if (fwrite(&stud[i],sizeof(struct student),1,fp)!=1)
         {printf("file write error\n");
   return;
         }
   fclose(fp);
}
```

10-6

方法一、

10-6-1

```
#include <stdio.h>
#include <stdlib.h>
#define N 5
struct student
{char num[10];
 char name[8];
 int score[3];
 float ave;
 } st[N],temp;

int main()
 {FILE *fp;
  int i,j,n;
       /*读文件*/
  if ((fp=fopen("stud","r"))==NULL)
     {printf("can not open.\n");
      exit(0);
     }
  printf("File 'stud': ");
  for (i=0;fread(&st[i],sizeof(struct student),1,fp)!=0;i++)
     {printf("\n%8s%8s",st[i].num,st[i].name);
      for (j=0;j<3;j++)
         printf("%8d",st[i].score[j]);
```

```
        printf("%10.2f",st[i].ave);
      }
   printf("\n");
   fclose(fp);
   n=i;

        /*排序*/
   for (i=0;i<n;i++)
      for (j=i+1;j<n;j++)
     if (st[i].ave < st[j].ave)
        {temp=st[i];
         st[i]=st[j];
         st[j]=temp;
        }

        /*输出*/
   printf("\nNow:");
   fp=fopen("stu_sort","w");
   for (i=0;i<n;i++)
      {fwrite(&st[i],sizeof(struct student),1,fp);
       printf("\n%8s%8s",st[i].num,st[i].name);
       for (j=0;j<3;j++)
          printf ("%8d",st[i].score[j]);
       printf("%10.2f",st[i].ave);
      }
   printf("\n");
   fclose(fp);
   return 0;
 }
```

方法二、

10-6-2

```
#include <stdio.h>
#include <stdlib.h>
#define SIZE 5
struct student
{
 char name[10];
 int num;
 int score[3];
 float ave;
 }   stud[SIZE],work;
int main()
 {
```

```
    void sort(void);
    int i;
    FILE *fp;
    sort();
    fp=fopen("stud_sort.dat","rb");
    printf("sorted student's scores list as follow\n");
    printf("-----------------------------------------------------\n");
    printf(" NAME          N0.        SCORE1     SCORE2     SCORE3       AVE       \n");
    printf("-----------------------------------------------------\n");
    for (i=0;i<SIZE;i++)
          {
    fread(&stud[i],sizeof(struct student),1,fp);
    printf("%-10s %3d %8d %8d %8d %9.2f\n",stud[i].name,stud[i].num,
             stud[i].score[0],stud[i].score[1],stud[i].score[2],stud[i].ave);
          }
    fclose(fp);
    return 0;
}

void sort(void)
  {FILE *fp1,*fp2;
    int i,j;
    if ((fp1=fopen("stu.dat","rb"))==NULL)
       {printf("The file can not open\n\n");
        exit(0);
       }
    if ((fp2=fopen("stud_sort.dat","wb"))==NULL)
       {printf("The file write error\n");
        exit(0);
       }
    for (i=0;i<SIZE;i++)
       if (fread(&stud[i],sizeof(struct student),1,fp1)!=1)
          {printf("file read error\n");
           exit(0);
          }
    for (i=0;i<SIZE;i++)
       {for (j=i+1;j<SIZE;j++)
           if (stud[i].ave<stud[j].ave)
              {work=stud[i];
               stud[i]=stud[j];
               stud[j]=work;
              }
        fwrite(&stud[i],sizeof(struct student),1,fp2);
       }
```

```
    fclose(fp1);
    fclose(fp2);
  }
```

10-11

```
#include <stdio.h>
int main()
  { int i,flag;
    char str[80],c;
    FILE *fp;
    fp=fopen("text","w");
    flag=1;
    while(flag==1)
       {printf("input string:\n");
        gets(str);
        fprintf(fp,"%s ",str);
        printf("continue?");
        c=getchar();
        if ((c=='N')||(c=='n'))
           flag=0;
        getchar();
       }
    fclose(fp);
    fp=fopen("text","r");
    while(fscanf(fp,"%s",str)!=EOF)
       {for (i=0;str[i]!='\0';i++)
           if ((str[i]>='a') && (str[i]<='z'))
                str[i]-=32;
        printf("%s\n",str);
       }
    fclose(fp);
    return 0;
  }
```