PB22111679 孙婧雯 第十次作业

思考与练习5 21

```
#include<stdio.h>
#define TotalStuNumber 3
struct strStudent{
    long int lNum;
    char stName[20];
    float fScore[3];
    float fAver;
};
void inData(strStudent stu[]){
    short int i;
    printf("请依次输入学生学号、姓名和三科成绩：\n");
    for(i = 0; i < TotalStuNumber; i++){
        scanf("%ld%s%f%f%f", &stu[i].lNum, stu[i].stName, &stu[i].fScore[0],
&stu[i].fScore[1], &stu[i].fScore[2]);
        stu[i].fAver = (stu[i].fScore[0] + stu[i].fScore[1] + stu[i].fScore[2]) /
3;
    }
    return;
}
strStudent *HighScore(strStudent stu[], FILE *fp){
    short int i;
    short int nWho = 0;
    for(i = 0; i < TotalStuNumber; i++){
        fread(stu + i, sizeof(strStudent), 1, fp);
    }
    fclose(fp);
    for(i = 0; i < TotalStuNumber; i++){
        if(stu[i].fAver > stu[nWho].fAver)
             nWho = i;
    }
    return stu + nWho;
}
void outData(strStudent *pstu){
    printf("成绩最高的学生:\n");
    printf("学号:%ld\n姓名:%s\n", pstu->lNum, pstu->stName);
    printf("成绩：%5.1f, %5.1f, %5.1f\n平均成绩：%6.2f\n",
           pstu->fScore[0], pstu->fScore[1], pstu->fScore[2], pstu->fAver);
    return;
}
void WriteFile(FILE *fp, strStudent stu[]){
    if(!(fp = fopen("student.dat", "wb"))){
        printf("Can't open the file!\n");
        return;
    }
    for(int i = 0; i < TotalStuNumber; i++){
        fwrite(stu + i, sizeof(strStudent), 1, fp);
    }
    fclose(fp);
```

```
    return;
}
int main(){
    strStudent stu[TotalStuNumber];
    strStudent *ps = stu;
    FILE *fp;
    inData(ps);
    WriteFile(fp, stu);//文件写入//
    if(!(fp = fopen("student.dat", "rb"))){
        printf("Can't open the file!\n");
        return 1;
    }
    outData(HighScore(ps, fp));//在此函数中增加了文件读取//
    return 0;
}
```

思考与练习5 22 错误： ①没有定义变量 j ---> int j ②没有初始化二维指针 pb = (double **)malloc(M * sizeof(double *)); ③对二维数组元素的引用错误 **(pb + i)+j ---> *((pb + i) + j) 代码：

```
#include<stdio.h>
#include<stdlib.h>
#define M 8
#define N 10
int main()
{
    double **pb;
    pb = (double **)malloc(M * sizeof(double *));
    int i, j;
    for(i = 0; i < M; i++)
    {
        *(pb + i) = (double *)malloc(N * sizeof(double));
        for(j = 0; j < N; j++)
        {
            (*(*(pb + i)+j)) = i * N + j;
        }

    }
    for(i = 0; i < M; i++)
    {
        for(j = 0; j < N; j++)
            {
                printf("%6.1lf", pb[i][j]);
            }
        putchar('\n');
    }
    free(pb);
    return 0;
}
```