```c
/* BY SUBMITTING THIS FILE TO CARMEN, I CERTIFY THAT I HAVE PERFORMED ALL OF
THE WORK TO CREATE THIS FILE AND/OR DETERMINE THE ANSWERS FOUND WITHIN
THIS FILE MYSELF WITH NO ASSISSTANCE FROM ANY PERSON (OTHER THAN THE
INSTRUCTOR OR GRADERS OF THIS COURSE) AND I HAVE STRICTLY ADHERED TO THE
TENURES OF THE OHIO STATE UNIVERSITY'S ACADEMIC INTEGRITY POLICY.
*/
/*
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** This program is a class grade computing system which processes and stores data in
order to calculate grades for a class.
*/
#include "lab4.h"
int main(int argc, char *argv[]) {
        FILE *fileName1; /*File to read from*/
        FILE *fileName2; /*File to write to*/
        char category_names[4][15]; /*The array to store category names*/
        /*Information to store the data for one student*/
        char name[40];
        int id;
        float a, b, c, d, e, f, g, h, i, j, k, l;
        int x; /*Loop control variable*/
        int records; /*Number of records*/
        int option; /*Option number*/
        Node *student; /*Node for a single student*/
        Node *list_head = NULL; /*The linked list head node*/
        /*Opens the file for reading*/
        fileName1 = fopen(argv[1], "r");
        /*Store the categories into categories array*/
        for (x = 0; x < 4; x++) {
                fscanf(fileName1, "%s", *(category_names + x));
        }
        /*Counts the records and creates the nodes for the students and then inserts
them into the linked list*/
        records = 0;
        while (fscanf(fileName1, " %[^\n] %d %f %f %f %f %f %f %f %f %f %f %f %f",
name, &id, &a, &b, &c, &d, &e, &f, &g, &h, &i, &j, &k, &l) != EOF) {
                student = read_student_data(name, id, a, b, c, d, e, f, g, h, i, j,
k, l);
                list_head = insertNode(list_head, student);
                records++;
        }
        /*Closes the input file*/
        fclose(fileName1);
        /*Confirms the user that the records were read in*/
        printf("A total of %d stuent records were read in from the file %s\n",
records, argv[1]);
        /*Opens the file for writing*/
        fileName2 = fopen(argv[2], "w");
        /*Does the options*/
        process_options(list_head, category_names, fileName2);
        /*Confirms the user that the records were written to output file*/
        printf("A total of %d student records were written to file %s.\n", records,
argv[2]);
        /*Closes the output file*/
        fclose(fileName2);
}
```