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#include <stdio.h>

#include <stdlib.h>

#include <string.h>


#define STUD_FILE "students.txt"
#define CRE_FILE "credentials.txt"


char currentUser[50];
char currentRole[20];


int login() {
    char u[50], p[50], r[20];
    char inUser[50], inPass[50];

    printf("USERNAME: ");
    scanf("%s", inUser);
    printf("PASSWORD: ");
    scanf("%s", inPass);

    FILE *fp = fopen(CRE_FILE, "r");
    if (!fp) {
        printf("Credential file missing!\n");
        return 0;
    }

    while (fscanf(fp, "%s %s %s", u, p, r) == 3) {
        if (strcmp(inUser, u) == 0 && strcmp(inPass, p) == 0) {
            strcpy(currentUser, u);
            strcpy(currentRole, r);
            fclose(fp);
            return 1;
        }
    }
}
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    }
}

fclose(fp);
return 0;
}

void addStudent() {
    int roll;
    char name[50];
    float mark;

    printf("Roll: ");
    scanf("%d", &roll);
    printf("Name: ");
    scanf(" %[^\\n]", name);
    printf("Mark: ");
    scanf("%f", &mark);

    FILE *fp = fopen(STUD_FILE, "a");
    fprintf(fp, "%d %s %.2f\\n", roll, name, mark);
    fclose(fp);

    printf("Student added!\\n");
}

void displayStudents() {
    FILE *fp = fopen(STUD_FILE, "r");
    if (!fp) {
        printf("No student file!\\n");
        return;
    }
}

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}

int roll;
char name[50];
float mark;

printf("Roll\tName\tMark\n");
printf("----\t----\t----\n");
while (fscanf(fp, "%d %s %f", &roll, name, &mark) == 3) {
    printf("%d\t%s\t%.2f\n", roll, name, mark);
}

fclose(fp);
}

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void searchStudent() {
    int find, roll;
    char name[50];
    float mark;

    printf("Enter roll to search: ");
    scanf("%d", &find);

    FILE *fp = fopen(STUD_FILE, "r");
    while (fscanf(fp, "%d %s %f", &roll, name, &mark) == 3) {
        if (roll == find) {
            printf("Found: %d %s %.2f\n", roll, name, mark);
            fclose(fp);
            return;
        }
    }
}

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fclose(fp);  
printf("Student not found!\n");  
}
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void deleteStudent() {  
    int delRoll;  
    printf("Enter roll to delete: ");  
    scanf("%d", &delRoll);  
  
    FILE *fp = fopen(STUD_FILE, "r");  
    FILE *temp = fopen("temp.txt", "w");  
  
    int roll;  
    char name[50];  
    float mark;  
    int found = 0;  
  
    while (fscanf(fp, "%d %s %f", &roll, name, &mark) == 3) {  
        if (roll != delRoll) {  
            fprintf(temp, "%d %s %.2f\n", roll, name, mark);  
        } else {  
            found = 1;  
        }  
    }  
}  
  
fclose(fp);  
fclose(temp);  
  
remove(STUD_FILE);  
rename("temp.txt", STUD_FILE);
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    if (found) printf("Student deleted!\n");  
    else printf("Roll not found!\n");  
}
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void updateStudent() {  
    int updateRoll;  
    printf("Enter roll to update: ");  
    scanf("%d", &updateRoll);  
  
    FILE *fp = fopen(STUD_FILE, "r");  
    FILE *temp = fopen("temp.txt", "w");  
  
    int roll;  
    char name[50];  
    float mark;  
    int found = 0;  
  
    while (fscanf(fp, "%d %s %f", &roll, name, &mark) == 3) {  
        if (roll == updateRoll) {  
            found = 1;  
            char newName[50];  
            float newMark;  
  
            printf("New Name: ");  
            scanf(" %[^\\n]", newName);  
            printf("New Mark: ");  
            scanf("%f", &newMark);  
  
            fprintf(temp, "%d %s %.2f\\n", roll, newName, newMark);  
        } else {  
            fprintf(temp, "%d %s %.2f\\n", roll, name, mark);  
        }  
    }  
}
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    }
}

fclose(fp);
fclose(temp);

remove(STUD_FILE);
rename("temp.txt", STUD_FILE);

if (found) printf("Student updated!\n");
else printf("Roll not found!\n");
}

void adminMenu() {
    int c;
    while (1) {
        printf("\nADMIN MENU\n");
        printf("1.Add\n2.Display\n3.Search\n4.Update\n5.Delete\n6.Logout\n");
        scanf("%d",&c);
        if(c==1)addStudent();
        else if(c==2)displayStudents();
        else if(c==3)searchStudent();
        else if(c==4)updateStudent();
        else if(c==5)deleteStudent();
        else return;
    }
}

void staffMenu() {
    int c;
    while (1) {

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printf("\nSTAFF MENU\n");
printf("1.Add\n2.Display\n3.Search\n4.Update\n5.Logout\n");
scanf("%d",&c);
if(c==1)addStudent();
else if(c==2)displayStudents();
else if(c==3)searchStudent();
else if(c==4)updateStudent();
else return;
}
}

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void guestMenu() {
    int c;
    while (1) {
        printf("\nGUEST MENU\n");
        printf("1.Display\n2.Search\n3.Logout\n");
        scanf("%d",&c);
        if(c==1)displayStudents();
        else if(c==2)searchStudent();
        else return;
    }
}

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int main() {
    if (!login()) {
        printf("Invalid login!\n");
        return 0;
    }

    printf("Logged in as: %s\n", currentRole);
}

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if (strcmp(currentRole,"admin")==0) adminMenu();  
else if (strcmp(currentRole,"staff")==0) staffMenu();  
else guestMenu();  
  
return 0;  
}
```