PPS Mini Project
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K1

Mini Project with File management
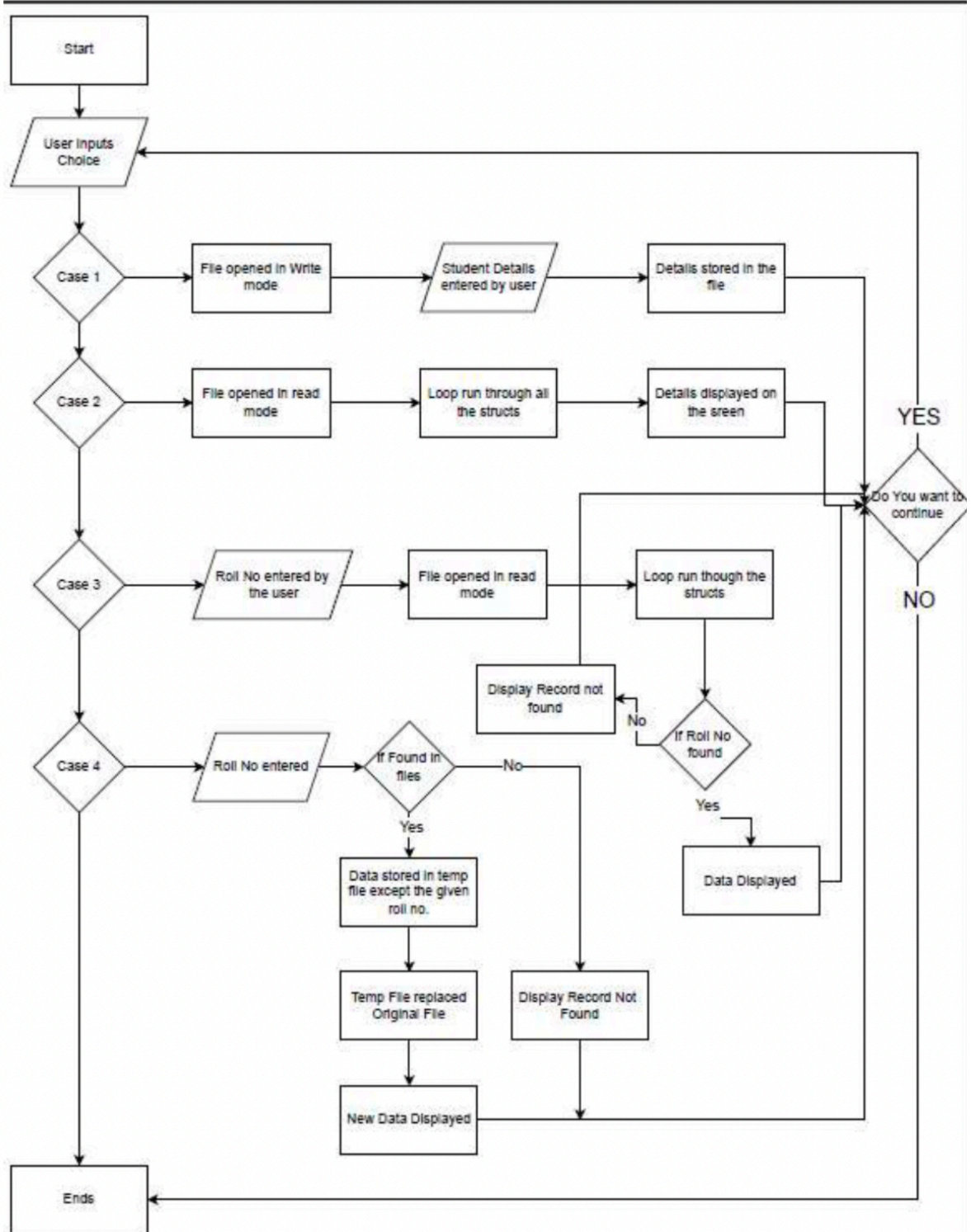

STUDENT DATA STORAGE MANAGEMENT SYSTEM

Mini Project with File management

STUDENT DATA STORAGE MANAGEMENT SYSTEM

FLOWCHART:

This is a basic program using file handling to store a student's data in a text file and manipulate it according to the choices provided to the user while running the program.

The data of the student contains basic information like first name, last name, roll number, address, course, etc.

The program allows the user to perform following tasks :

- Add record
- List out the Records
- Search for the records
- Delete a record
- Exit the portal

The following program creates a file to store the data and further manipulation is done with help of the information present in the file.

Code:

```c
1  #include <stdio.h>
2  #include <conio.h>
3  struct student
4  {
5      char first_name[100];
6      char last_name[100];
7      int roll_no;
8      char Class[100];
9      char Address[100];
10     float per;
11 };
12 // Main function
13 void main()
14 {
15
16     int choice;
17     while (choice != 5)
18     {
19         printf("\n\t\t\t         =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-");
20         printf("\n\t\t\t         = WELCOME TO SRMIST STUDENT DATABASE MANAGEMENT SYSTEM =");
21         printf("\n\t\t\t         =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-");
22         printf("\n\n\n\t\t\t       1. Add Student\n");
23         printf("\t\t\t\t     2. Students Records\n");
24         printf("\t\t\t\t     3. Search Student\n");
25         printf("\t\t\t\t     4. Delete Student\n");
26         printf("\t\t\t\t     5. Exit\n");
27         printf("\t\t\t\t     -----------------------------------------\n");
28         printf("\t\t\t\t         RA2111028010054 Lakshya Dhariwal\n");
29         printf("\t\t\t\t     -----------------------------------------\n\n\n");
30         printf("\t\t\t\t       Enter the provided choice: \n\n\n\n");
31         scanf("%d", &choice);
32
33         switch (choice)
34         {
35         case 1:
36             addstudent();
37             break;
38         case 2:
39             studentrecord();
40             printf("\t\t\t\tpress any key to exit..... \n");
41             getch();
42             break;
43         case 3:
44             searchstudent();
45             printf("\n\t\t\t\tPress any key to exit.......\n");
46             getch();
47             break;
48         case 4:
49             delete ();
50             printf("\n\t\t\t\tPress any key to exit.......\n");
51             getch();
52             break;
53         case 5:
54             printf("\n\t\t\t\tThank you, for used this software.\n\n");
55             exit(0);
56             break;
57         default:
58             printf("\n\t\t\t\t\tEnter a valid number\n\n");
59             printf("\t\t\t\tPress any key to continue.......");
60             getch();
61             break;
62         }
63     }
64     getch();
65 }
```

```c
65 }
66 // Function to create a new student
67 void addstudent()
68 {
69     char another;
70     FILE *fp;
71     int n, i;
72     struct student info;
73     do
74     {
75         printf("\t\t\t\t                    ======Add Students Info======\n\n\n");
76         fp = fopen("srmist_students_record.txt", "a");
77         printf("\n\t\t\tEnter First Name      : ");
78         scanf("%s", &info.first_name);
79         printf("\n\t\t\tEnter Last Name       : ");
80         scanf("%s", &info.last_name);
81         printf("\n\t\t\tEnter Roll-No (Integer Only)      : ");
82         scanf("%d", &info.roll_no);
83         printf("\n\t\t\tEnter Class(course) : ");
84         scanf("%s", &info.Class);
85         printf("\n\t\t\tEnter Address          : ");
86         scanf("%s", &info.Address);
87         printf("\n\t\t\tEnter Percentage      : ");
88         scanf("%f", &info.per);
89         printf("\n\t\t\t_____\n");
90         if (fp == NULL)
91         {
92             fprintf(stderr, "can't open file");
93         }
94         else
95         {
96             printf("\t\t\tRecord stored successfuly\n\n");
97         }
98         fwrite(&info, sizeof(struct student), 1, fp);
99         fclose(fp);
100        printf("\t\t\tYou want to add another record?(y/n) : ");
101        scanf("%s", &another);
102    } while (another == 'y' || another == 'Y');
103 }
```

```c
104    // Function to list out the pre stored records
105    void studentrecord()
106    {
107
108        FILE *fp;
109        struct student info;
110        fp = fopen("srmist_students_record.txt", "r");
111        printf("\t\t\t\t======SRMIST STUDENTS RECORD======\n\n\n");
112        if (fp == NULL)
113        {
114            fprintf(stderr, "can't open file\n");
115            exit(0);
116        }
117        else
118        {
119            printf("\t\t\t\tRECORDS :\n");
120            printf("\t\t\t\t_____\n\n");
121        }
122        while (fread(&info, sizeof(struct student), 1, fp))
123        {
124            printf("\n\t\t\t\t Student Name   : %s %s", info.first_name, info.last_name);
125            printf("\n\t\t\t\t Roll NO        : %d", info.roll_no);
126            printf("\n\t\t\t\t Class          : %s", info.Class);
127            printf("\n\t\t\t\t Address  : %s", info.Address);
128            printf("\n\t\t\t\t Percentage     : %f%", info.per);
129            printf("\n\t\t\t\t _____\n");
130        }
131        fclose(fp);
132        getch();
133    }
134    // Function to search any student
135    void searchstudent()
136    {
137        struct student info;
138        FILE *fp;
139        int roll_no, found = 0;
140        fp = fopen("srmist_students_record.txt", "r");
141        printf("\t\t\t\t======SEARCH SRMIST STUDENTS RECORD======\n\n\n");
142        printf("\t\t\tEnter the roll no : ");
143        scanf("%d", &roll_no);
144        while (fread(&info, sizeof(struct student), 1, fp) > 0)
145        {
146            if (info.roll_no == roll_no)
147            {
148                found = 1;
149                printf("\n\n\t\t\tStudent Name : %s %s", info.first_name, info.last_name);
150                printf("\n\t\t\tRoll NO        : %d", info.roll_no);
151                printf("\n\t\t\tClass          : %s", info.Class);
152                printf("\n\t\t\tAddress        : %s", info.Address);
153                printf("\n\t\t\tPercentage     : %f%", info.per);
154                printf("\n\t\t\t_____\n");
155            }
156        }
157        if (!found)
158        {
159            printf("\n\t\t\tRecord not found\n");
160        }
161        fclose(fp);
162        getch();
163    }
```

```c
164  // Function to delete a record/student
165  void delete ()
166  {
167      struct student info;
168      FILE *fp, *fp1;
169      int roll_no, found = 0;
170      printf("\t\t\t\t======DELETE STUDENTS RECORD======\n\n\n");
171      fp = fopen("srmist_students_record.txt", "r");
172      fp1 = fopen("temp.txt", "w");
173      printf("\t\t\t\tEnter the roll no : ");
174      scanf("%d", &roll_no);
175      if (fp == NULL)
176      {
177          fprintf(stderr, "can't open file\n");
178          exit(0);
179      }
180
181      while (fread(&info, sizeof(struct student), 1, fp))
182      {
183          if (info.roll_no == roll_no)
184          {
185              found = 1;
186          }
187          else
188          {
189              fwrite(&info, sizeof(struct student), 1, fp1);
190          }
191      }
192      fclose(fp);
193      fclose(fp1);
194      if (!found)
195      {
196          printf("\n\t\t\t\tRecord not found\n");
197      }
198      if (found)
199      {
200          remove("srmist_students_record.txt");
201          rename("temp.txt", "srmist_students_record.txt");
202          printf("\n\t\t\t\tRecord deleted succesfully\n");
203      }
204      getch();
205  }
```

Output

```
                    = WELCOME TO SRMIST STUDENT DATABASE MANAGEMENT SYSTEM =
                    =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-


                          1. Add Student
                          2. Students Records
                          3. Search Student
                          4. Delete Student
                          5. Exit
                    ------------------------------------------
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                    ------------------------------------------



                       Enter the provided choice:
```

1
```
                             ======Add Students Info=======


        Enter First Name      : akshya bajaj

        Enter Last Name       :
        Enter Roll-No (Integer Only)     : 12

        Enter Class(course) : CSE

        Enter Address        : Abode,Chennai

        Enter Percentage     : 95.6


        _____
        Record stored successfuly

        You want to add another record?(y/n) : n

                    =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
                    = WELCOME TO SRMIST STUDENT DATABASE MANAGEMENT SYSTEM =
                    =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-


                          1. Add Student
                          2. Students Records
                          3. Search Student
                          4. Delete Student
                          5. Exit
                    ------------------------------------------
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                    ------------------------------------------



                       Enter the provided choice:
```

2
```
        ======SRMIST STUDENTS RECORD=======


        RECORDS :
        _____


         Student Name  : akshya bajaj
         Roll NO       : 12
         Class         : CSE
         Address  : Abode,Chennai
         Percentage    : 95.599998
        _____
        press any key to exit.....
```