MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Skill Based Project Report

On

STUDENT MANAGENENT SYSTEM

Submitted By:

Pratham Rajak

0901CA211041

Mentor:

Dr. Anshu Chaturvedi

(Professor)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE
GWALIOR - 474005 (MP) est. 1957

July-December 2021

I

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

CERTIFICATE

This is certified that **Pratham Rajak** (0901CA211041) has submitted the project report titled **Student Management System** under the mentorship of **Dr. Anshu Chaturvedi** (Professor), as the skills based mini project in 1st year of Master of Computer Application in Computer Science and Engineering from Madhav Institute of Technology and Science Gwalior.

Dr. Anshu Chaturvedi
(Professor)
Computer Science and Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

DECLARATION

I hereby declare that the work being presented in this project report, for the fulfilment of requirement of the skills based mini project in 1st year of Master of Computer Application in Computer Science and Engineering at **Madhav Institute of Technology & Science,** Gwalior is an authenticated and original record of my work under the mentorship of **Dr. Anshu Chaturvedi**, Professor, MITS GWALIOR.

I declare that I have not submitted the matter embodied in this report anywhere else.

Pratham Rajak
0901CA211041
1st year,
Master of Computer Application,
Computer Science and Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

ACKNOWLEDGEMENT

The full semester project has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** to allow me to continue my disciplinary project. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr.Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering, for allowing** me to explore this project. I humbly thank **Dr. Manish Dixit**, Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty coordinator. I am grateful to the guidance of **Dr. Anshu Chaturvedi,** Professor, Computer Science and Engineering, for his continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

Pratham Rajak
0901CA211041
1st year,
Master of Computer Application,
Computer Science and Engineering

ABSTRACT

Student Management System is based on the concept of managing student information. Before stepping into the main menu a user has to pass through a login system to get access, then the user can manage student information by adding, updating, removing, viewing and searching for details. This mini project contains limited features, but the essential one like add student record including (student name, student roll number, student age, student class), search record of specific student by student roll number and student name, admin can modify student information later.

                       Our project explains about the student management. This project mainly explains the various actions related to student details. This project shows some ease in adding, editing, modifying and deleting the student details. It also provides a less time consuming process for viewing, adding, editing and deleting the details of the students

.

CONTENTS

TITLE	PAGE NO.

1. INTRODUCTION

This is a simple student database management system developed in C++. It utilizes file handling and shows effective implementation of class and object of the programming language. This project can perform tasks such as add, list, modify and delete records in file in C++ language. It is very simple to understand, and the source code too is not that long, just under 200 lines.

Developed as a console application without GUI, this student database system project uses file to store the students' information mentioned in the features below. You need to compile the source code in Code::Blocks using the GCC compiler.

2. OBJECTIVES

Student Management System is software which is helpful for students as well as the school authorities. In the current system all the activities are done manually. It is very time consuming and costly. Our Student Management System deals with the various activities related to the students. Student Management System Project as the name indicates will be used for managing students records will be used for various purposes. Accepting correct data will results in generating the desired output in correct format without any delay. So this system has been enabled with validation data checkups while entering the data and before saving it to the particular file. Students will also able to check their data and modify their basic information as per their requirements. As each institution has various department which will used student records in order to carry out their task, so integrating task and sharing data among department can be easily achieved.

There will be only admin who will have to authority to make changes and modification while using this system. Admin will able to perform activities like, adding student records, modifying and deleting existing records, allowing authority to access particular section of student data by different departments.

3. CODING SCREENSHOTS

```c
C student_database.c > ⊕ add_record()

/*
Example of fprintf() and fscanf()
to maintain student details like roll,name and age
*/

#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>//for color
void add_record()
{
    FILE *fp;
    int roll,age;
    char name[20];
    printf("%45s","Addtion Of New Record\n");
    printf("%45s","=====================\n");


    fp=fopen("stud.dat","r");
    if (fp==NULL)
    {
        printf("File is not present, to be created ");
        fp=fopen("stud.dat","w");
    }
    else
    {
        fclose(fp);
        fp=fopen("stud.dat","a");
    }
    printf("%45s","Enter the roll number ");
    scanf("%d",&roll);
    printf("%45s","Enter the name ");
    fflush(stdin);
```

```c
C student_database.c > ⊕ display_all()

        printf("%45s","Enter the age ");
        scanf("%d",&age);
        fprintf(fp,"%d %s %d\n",roll,name,age);
        fclose(fp);
}
void display_all()
{
    FILE *fp;
    int roll,age,i;
    char name[20];
    fp=fopen("stud.dat","r");
    if (fp==NULL)
    {
        printf("Unable to open the file \n");
    }
    else
    {
        system("color 74");
        printf("%45s","Student Records\n");
        printf("%45s","================\n");
        for(i=1;i<=75;printf("="),i++);
        printf("\n");
        printf("%15s  %25s  %20s\n","Roll no","Name","Age");
        for(i=1;i<=75;printf("-"),i++);
        printf("\n");
        while((fscanf(fp,"%d %s %d",&roll,name,&age))!=EOF)
        {
            printf("%15d  %25s  %20d\n",roll,name,age);
        }
        for(i=1;i<=75;printf("-"),i++);
        printf("\n");
    }
    fclose(fp);
```

```c
68        rcLose(Tp);
69    }
70    void search_roll()
71    {
72        FILE *fp;
73        int roll,age,tr,z=0,i;
74        char name[20];
75        z=0;
76        printf("%45s","Searching Of Student Record\n");
77        printf("%45s","============================\n");
78        printf("\n\n\n\nEnter the roll number of the record to search ");
79        scanf("%d",&tr);
80        fp=fopen("stud.dat","r");
81        if (fp==NULL)
82        {
83            printf("Unable to open the file \n");
84            return;
85        }
86            system("color 47");
87            printf("%45s","Student Records\n");
88            printf("%45s","===============\n");
89            for(i=1;i<=75;printf("="),i++);
90            printf("\n");
91            printf("%15s  %25s  %20s\n","Roll no","Name","Age");
92            for(i=1;i<=75;printf("="),i++);
93            printf("\n");
94        while((fscanf(fp,"%d %s %d",&roll,name,&age))!=EOF)
95        {
96            if (tr==roll)
97            {
98                z=1;
99                printf("%15d  %25s  %20d\n",roll,name,age);
100               //break;
```

.

```c
100            //break;
101            }
102        }
103        for(i=1;i<=75;printf("="),i++);
104            printf("\n");
105        fclose(fp);
106        if (z==0)
107        printf("Record is not present\n");
108    }
109
110    void search_name()
111    {
112        FILE *fp;
113        int roll,age,z=0,i;
114        char name[20],tn[20];
115        z=0;
116        printf("%45s","Searching Of Student Record\n");
117        printf("%45s","============================\n");
118        printf("\n\n\n\nEnter the name  to search ");
119        scanf("%s",tn);
120        strupr(tn);
121        fp=fopen("stud.dat","r");
122        if (fp==NULL)
123        {
124            printf("Unable to open the file \n");
125            return;
126        }
127        system("color 47");
128            printf("%45s","Student Records\n");
129            printf("%45s","===============\n");
130            for(i=1;i<=75;printf("="),i++);
131            printf("\n");
132            printf("%15s  %25s  %20s\n","Roll no","Name","Age");
```

4

```c
        for(i=1;i<=75;printf("=",i++);
133
134         printf("\n");
135     while((fscanf(fp,"%d %s %d",&roll,name,&age))!=EOF)
136     {
137         if (strcmpi(tn,name)==0)
138         {
139             z=1;
140             printf("%15d  %25s  %20d\n",roll,name,age);
141         }
142     }
143     for(i=1;i<=75;printf("="),i++);
144         printf("\n");
145     fclose(fp);
146     if (z==0)
147     printf("Record is not present\n");
148 }
149 void delete_rec()
150 {
151     FILE *fp,*tfp;
152     int roll,age,tr,z=0,i;
153     char name[20];
154     printf("%45s","Deletion Of Student Record\n");
155     printf("%45s","-----------------------------\n");
156     printf("\n\n\n\nEnter the roll number of the record to delete ");
157     scanf("%d",&tr);
158     fp=fopen("stud.dat","r");
159     tfp=fopen("temp","w");
160     if (fp==NULL)
161     {
162         printf("Unable to open the file \n");
163         return;
164     }
165     system("color 47");
```

```c
167         printf("%45s","===============\n");
168         for(i=1;i<=75;printf("="),i++);
169         printf("\n");
170         printf("%15s  %25s  %20s\n","Roll no","Name","Age");
171         for(i=1;i<=75;printf("="),i++);
172         printf("\n");
173     while((fscanf(fp,"%d %s %d",&roll,name,&age))!=EOF)
174     {
175         if (tr==roll)
176         {
177             z=1;
178             printf("%15d  %25s  %20d\n",roll,name,age);
179         }
180         else
181         fprintf(tfp,"%d %s %d\n",roll,name,age);
182     }
183     fclose(fp);
184     fclose(tfp);
185     if (z==0)
186     printf("Record is not present\n");
187     else
188     {
189         for(i=1;i<=75;printf("="),i++);
190         printf("\n");
191         remove("stud.dat");//stdio.h
192         rename("temp","stud.dat"); //stdio.h
193     }
194 }
195 void modify_rec()
196 {
197     FILE *fp,*tfp;
198     int roll,age,tr,z=0,i;
199     char name[20];
```

5

4. OUTPUT SCREENSHOTS

```
Student Management System
        **************

    Main Menu
  ===========
1. Add a record
2. Display all the records
3. Search a record by roll number
4. search by name
5. delete a record
6. modify a record
7. Exit
Enter your choice _
```

Show All Records:

```
                    Student Records
                    ===============
======================================================================
    Roll no                   Name                      Age
======================================================================
      901                    PRATHAM                     24
      902                     RAM                         20
      903                     RAJU                        22
      904                    SHYAM                        22
======================================================================
--
```

Search Record by Name:

```
                Searching Of Student Record
                ===========================



Enter the name  to search raju
Illegal command: color.
                    Student Records
                    ===============
======================================================================
    Roll no                   Name                      Age
======================================================================
      903                     RAJU                        22
======================================================================
_
```

5. CONCLUSION

Student Management System is a basic C++ program for education establishments to manage student data and manage many other student-related data needs in a school. In this Student Management System project, the user can create, display, Modify.

Our project is only a humble venture to satisfy the needs in an Institution. Several user friendly coding have also adopted. This package shall prove to be a powerful package in satisfying all the requirements of the organization. The objective of software planning is to provide a frame work that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses.
.

6. BIBLIOGRAPHY

1. https://www.javatpoint.com
2. https://www.google.com
3. https://www.slideshare.net
4. https://www.tutorialspoint.com